

## Supplemental file – 2 miRNA putative coding genes and structures

### Group 1 --- miRNAs with one putative coding gene

>aae-miR-283\_R-2  
CAATATCAGCTGGTAATTCTGG

Identified by Sequence similarity  
Loop-structure:

```
UUG GU UG UGC G -- G UGUG U- -- AUC
  UG G GUUG UCG AAUUCAG AU GGCUGGU ACU GAUUG CC A
  AC U UAGC AGU UUUGAGUU UG UCGACUA UGG UUAGC GG U
UAA UG GU --- G AA G UA-- UU AA CUU
```

>aae-miR-283\_R-3\_1ss10CT  
CAATATCAGTTGGTAATTCTG

Identified by Deep-sequencing  
Loop-structure:

```
AG-- C CA A U CUUUUAUG
  CAUUU GAAAAGU AUAUCA UUGG AAUUCUGGG \
  GUAAA UUUUUCG UAUAGU AACC UUAAGGCUU A
CCUA - CA C - UUGAUUGU
```

>ame-mir-3477-p3\_1ss9AC  
AATTGTAACAGCTCA

Identified by Sequence similarity  
Loop-structure:

```
CC- AA A AUU-- A- CG
  AAU UGG AGC CGGU AUGCC A
  UUA ACC UCG GUUA UACGG A
GGU G- - ACAAU AC CC
```

>dsi-mir-983-p5\_1ss14AG  
CTTGCGTAATTTGG

**Identified by Deep-sequencing  
Loop-structure:**

```
CA      AUUUUA      CU
ACAAAUAUU      UAAGAU  \
UGUUUAAUGA      GUUCUG  C
--      C-----      UA
```

>der-mir-276b-p3\_1ss2CA

GATCTTGAGGACTG

**Identified by Sequence similarity  
Loop-structure:**

```
      G---      G      UG AGG      AAGUGGA      G
UAAUC      AAU AUUCU      G      ACUG      GAA G
GUUAG      UUG UAUAGA      U      UGAC      CUU G
      GUAA      G      GU GG-      AAGUGUG      U
```

>ame-mir-87-1-p3\_1ss1AT

TGTTTCAGGTGTGTG

**Identified by Sequence similarity  
Loop-structure:**

```
GU      UUA      UUU      UAU      UG
UAU      ACGCUU      GCUGA      CA      \
GUG      UGUGGA      UGAUU      GU      U
--      UG-      CUU      UUU      UG
```

>bmo-mir-3252-p3\_1ss2TG

AGTACATTGGACTCT

**Identified by Sequence similarity  
Loop-structure:**

```
AGA      G      G      GGA-      GAA
AUUUU      AAGCU      UACAUU      CUCUU      A
UAAAA      UUUGA      AUGUAA      GAGAA      A
--      A      -      AACG      GAU
```

>nvi-mir-13b-p3\_1ss6GT

GAGTTTGATCATGGCT

### Identified by Sequence similarity

#### Loop-structure:

```
UUU  UUU  CG          AC--  U-  -  ACAACUGU  AAGAAA
    UUG  GUG  AUAUUCAAUU  AGU  UGAUCA  UGGCA  GCAU  A
    AAC  UAC  UGUUAAGUUAA  UUA  AUUAGU  ACCGU  UGUA  G
UU-  UC-  AU          AUUA  UC  C  GCCGUAAU  GCAAUU
```

>bmo-mir-2817-p3\_1ss4GT

CGATCTTATGACCT

### Identified by Sequence similarity

#### Loop-structure:

```
  C  UA  UUCA  AU  A  GCAAU
AA  AUCUU  UGACC  GUUG  UG  UAAUUU  \
UU  UGGAG  AUUGG  CAAC  AC  GAUUAAA  U
  U  UG  ----  --  G  AACAA
```

>tca-miR-3815-p5\_2ss6CA17AT

ATTTGAGATTGGGGTT

### Identified by Deep-sequencing

#### Loop-structure:

```
    AAU    GAU  G  C  AUAU-  AU
GUUGAUGG  GAUUUGA  UGGG  GUU  UGU  UGG  \
CAGCUACU  UUGAAUU  GCCU  CGA  ACA  ACC  G
    AC-    AC-  G  U  GUUGU  UG
```

>bmo-mir-2745-p5\_2ss10AG17GA

GAAATTCCGGATTTTAA

### Identified by Deep-sequencing

#### Loop-structure:

```
U  AU  -  A  AC---  C---  AAAA  AUUU  AA
UUU  CA  GC  CCA  GGA  GAUC  AUUUC  UCA  \
AAA  GU  CG  GGU  CCU  UUAG  UAAAG  GGU  A
C  C-  A  A  AUAGA  AAUU  GCCU  CCAU  AA
```

>tca-miR-9e-p5\_2ss15TA17TG  
TGGTGATCTAGTTGAAG

**Identified by Sequence similarity**

**Loop-structure:**

```
AA-      CGA      --  UGUCAU  UUU      A      A  AC-  U      AAG
AGUGGC  ACACACU  GGU      GGUGA  AGUUGA  GAUGAUUU GC  CG GUUU  \
UUAUUG  UGUGUGG  CCG      UCGCU  UCAACU  UUAUUGAG CG  GC CGAA  A
GAA      UCG      AA  UAAACC  ---      G      A  AUU  -  ACA
```

>bmo-mir-3316-p3\_1ss15AC  
CATGTGTTAGCTGCCT

**Identified by Sequence similarity**

**Loop-structure:**

```
UUCCAUU-  -  UU  C  AAUU
CACUUAUU  AU AUGUG  AGCUG  UGUC  \
GUGGAUAA  UA UGCGC  UUGAU  ACAG  A
CUUAAACU  C  U-  -  ACAC
```

>dps-mir-2568a-p3\_1ss2AC  
GCGGATGTTGCTTAT

**Identified by Sequence similarity**

**Loop-structure:**

```
AGAA  AG  GAA  AU  AAAACU  UAAAUG  U  AAG  UC
GA  GA  GA  GAUA  AC  AAUAAGUG  CAU  G  \
CU  CU  CU  UUAU  UG  UUAUUCGU  GUA  C  A
CC--  AA  AAA  CG  AAAGU-  UUAUUA  U  GG-  AU
```

>tca-miR-11-p5\_2ss7GC17CT  
CATTCTCGGATTCTGATT

**Identified by Sequence similarity**

**Loop-structure:**

```
U  AA  AU  AAAA  UU  C  CU  UG
UUUAA  UGU  UGGGA  GC  UACA  CU  UGAUU  GAU  C
AAGUU  ACA  AUUCU  CG  GUGU  GA  ACUAG  UUG  C
C  --  --  ----  UC  U  UU  UC
```

>cqu-mir-375-2-p5  
CGAAACTGGCTCTG

**Identified by Sequence similarity**  
**Loop-structure:**

```
GA A AA A CAAUAUC GAA
UUG UUU UCACUGA GC CAA UUUCG G
AAC AAA AGUGACU CG GUU AAAGU C
AA - -- - CAAAGCU GGU
```

>tca-miR-3828-p5\_1ss5TC  
AAACCCGGTTCTGAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CUCA CCCG AACAUC
AUGC AAA GUUCUGA G
UACGUUU CGAGAUU A
C--- CGAG AAAAUA
```

>aga-mir-7-p5\_2ss2AT17CT  
ATCATTGTATGGAAGAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CA--- U U G AUGAU --- UGA
AUCA UG AUGGAA AUUUG UCCA AUUUAGG \
UAGU AC UGCCUU UGAAU AGGU UAAGUUU A
CAACC C - A ----- AAU UAG
```

>aga-mir-1174-p5\_1ss15CA  
CTGGCATTGTAAGGA

**Identified by Sequence similarity**  
**Loop-structure:**

```
C- G U --- - AGGAA
AUGU GGUGC CA AAAUGG CAU UGUA U
```

```
UACA CUAUG GU UUUACU GUG ACAU C
AA A - ACA G GUAAA
```

```
>mse-mir-137-p5_1ss1CT
TCTGCACTGTAGGA
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
A A - UG C AG CA
U U U C CA UUGU GGG A
A A A G GU AAUA UCC U
A A C GU A GU AG
```

```
>tca-miR-3884-p3_1ss1TG
GACTTGTCCCGGAT
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
CA U C U A UUUUG- UCUAUUCGUU C A A UACUU C
UUUCAUUCG UCC GGA CAA UGGGA UUAGG CC UA AAAU UCC GUU C
AAAGUAAGC AGG CCU GUU AUCCU AAUCC GG AU UUA AAGG UAG C
C- U C U C UAUAAA UUGC UUAUCU A G - UAAGC G
```

```
>dvi-miR-286-p3_1ss15AG
ATACCATTATCTATG
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
AU CAUU U
UAUAC AUCUA U
AUGUG UGGAU C
-- AAUU C
```

```
>isc-mir-285-p5_1ss7GA
ATCCTTAGGTCCTG
```

**Identified by Sequence similarity**

### Loop-structure:

```
    UA  C-   --  A-  G-   C  A-   GA
CCUUCGA  GCU  AGUUGG  CAG  GC  GUGGA  UGU  GUAU  U
GGAAGCU  UGG  UCAGCU  GUC  UG  UACCU  ACA  UUAU  A
    --  CC      UG  AC  GA      -  GA  AC
```

>dsi-mir-975-p3\_1ss8TC

TTGCACCCGATACA

### Identified by Sequence similarity

#### Loop-structure:

```
AAA      UGUCA  AC      UACAUCAACAAAU      GGA      AAC
  GAUGA      UUGC  CCGA      AAUG  AUUUG  \
  CUACU      GACG  GGCU      UUAC  UAAAC  A
UUA      UAAAA  CA      CU-----      AAG      AAC
```

>dan-mir-306-p5\_1ss2AC

CCCTGGTAGCTCAG

### Identified by Sequence similarity

#### Loop-structure:

```
GAUAUUCA      -  UAUGAUCA      GG      AAAAA
  ACAUUG  GCU      AUUGCUA  GUAG      \
  UGUGAC  CGA      UAACGAU  CAUC      A
-----      U  UGGUUCGA      A-      GAUUU
```

>dme-miR-10-5p\_R+4

ACCCTGTAGATCCGAATTTGTTTTT

### Identified by Sequence similarity

#### Loop-structure:

```
      CU  -  G  U      -----      A
AUGUUCUACAU  ACC  CU  UAGA  CCGAAUUUGUU      UGAC  U
UACAGGUGUG  UGG  GA  AUCU  GGCUUAAACAG      AUUG  A
      UU  A  G  U      CAUAAA      A
```

>dsi-mir-1012-p5\_1ss6TG

TAATAGTGCTTGA

**Identified by Sequence similarity**  
**Loop-structure:**

```

ACAA      AUU      C  AAUACAC  AAACU
UUAUCAUA  UUCAA  CG      UGCC  \
AAUUGGUAU  AAGUU  GU      AUGG  A
-----      GCU      C  GAUA----  CUCAA

```

>cqu-mir-100-p5\_1ss10TG

CTGCCCTTTGTACAC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      CUGC-   UG  C  CCGCCC  CUA
GAUUACGUCC  CCUU  UA  ACA      GUCG  \
CUAGUGCAGG  GGAG  AU  UGU      UAGC  C
      CCUCU   UG  U  UAAGU-  CAU

```

>ame-mir-3049-p5

GCGGATTTGGTCA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

  G  GUGUA  U  CAGU-----  --  GU
GUGU CU      UGA UCC      UCAGUA  AGAA  U
CACA GA      GUU AGG      AGUCAU  UCUU  C
  G  ACUG-   U  CGAAAAAU      CA  AA

```

>aae-miR-7-p5\_1ss2GC

CCCAATATTTGTAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AUUGUCAAGUC      A  UUU  A  -  -  -  A  UUU  G
      ACCCA  UAU  GU  UUUCU  UAAUG  UG  G  UUAAUU  AAA  A
      UGGGU  AUG  CA  AAGGA  GUUAC  AC  C  AAUUAG  UUU  A
ACU-----  -  U--  G  A  U  U  A  CU-  A

```



>hme-mir-279a-p5\_1ss5GC

CAAACGTCAATTCTT

**Identified by Deep-sequencing**

**Loop-structure:**

```
A      GG      U-      C      UCGAUAAC      A      CA      UC
UCA AUUUU  UACU  GAGAA GUUGGC      UGC CA  UUUUAAA  A
AGU UAAAA  AUGG  UUCUU UAACUG      ACG GU  AAAGUUU  A
C      --      CU      -      CAA-----  -  CA      UU
```

>bmo-mir-3272-p5\_1ss2TC

CCAATTTCTTATAAT

**Identified by Deep-sequencing**

**Loop-structure:**

```
U      UUC      -      AAACC-      UU-----      GC
GU GACGC  CAUAA UCG      AAG      CGGA  C
CA UUGCG  GUGUU AGU      UUC      GCCU  C
C      UU-      A      AUAUA  UUAACC  AC
```

>tca-miR-279b-p3\_1ss3AT

TTTATCATGACTAGA

**Identified by Deep-sequencing**

**Loop-structure:**

```
A      -      GCAAUA-      AA
AGGAAGC AUUUUGG CG      AAC  A
UUUUUCG UAAGAUC GU      UUG  A
A      A      ACUAUUA  AG
```

>tca-miR-3809-p3\_1ss15TA

TTGGTTATGAATTCAG

**Identified by Deep-sequencing**

**Loop-structure:**

```
CACAUUGAAC      UAUGU      UAAU      A      AAG
      GCUGAAUUCAU      UCGA      UGAA  GA  C
      UGACUUAAGUA      GGUU      ACUU  CU  U
U-----      UU---      CU--      G  GAA
```

>ame-mir-3764-p3\_2ss2AT17CT

ATTTTAAATTGTAATCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUCA  A      UAAUCUU      UG      ----      U
      UUAG  UUUUUAAUUG      GAAUGAA  GUUUAAUG  AGAUAAAG  C
      AAUC  AAAAAUUGAU      UUUUUUU  UAAGUUAU  UUUUUUUU  U
----  G      UU-----  --      AGUA      U
```

>tca-miR-3819-p3\_1ss2AG

TGTTCTTATGTAAAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C  -  CU  CUUAUGUA-  -  --  A  CA
GUU  AAAAA  GUU      AAAUGGA  AAA  UCAGGA  UUC  \
CGA  UUUUU  UAA      UUUACCU  UUU  AGUUCU  GAG  G
-  C  UU  UUUAAUCC      C  CA  -  UC
```

>bmo-mir-3427-p5

TTAAATCATCAATTGT

**Identified by Sequence similarity**  
**Loop-structure:**

```
UAAAUUUUCCA  GAU  ---  ACAAGCAAACAA
      GAAA  AUGAU  AUUUU  \
      CUUU  UACUA  UAAAA  A
-----  AAC  AAU  AAAUAAAACAUUA
```

>bmo-mir-3219-p3\_1ss11TC

CATGCATTTTCAATC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUCUUUUCC  AAAA  A  AAU  ----  G
      AACAA  AACCAA  UA  UUGA  GCAUG  A
      UUGUU  UUGGUU  AU  AACU  CGUAC  U
C-----  A---  -  GACU  UUUA  G
```

>ame-mir-3716a-p5\_1ss6TC

TTTTACATATTTCGCAATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
--      --      CCU      A      UUUCGC      U      A      AAUCCGAAC      AUC
AUUUC  UAGGUUUAA  UUUU CAUA      AA UUUGA UGU      GUCUUU  \
UGAAG  AUCUAAAUU  GAAA GUAU      UU AAGCU ACA      CGGAAG  C
GG      CC      UU-      C      -----  U      A      GUAUAAUAAC      GUA
```

>aga-mir-263b-p3\_1ss4CA

CATAGTTCAGATTTG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AAAAUAUAG      UAU      AA      AAC      UU-      CAA      G
AAGAGUAAA      UUAUGU      GCA      CU      CU      GG      GUA  \
UUCUCGUUUA      GAUACA      CGU      GA      GA      CC      CAU  A
      GACUU-----      ---      A-      GCA      UUU      UAG      U
```

>dmo-mir-1-p5\_2ss11TG18AT

TTCAATAGTAGTTATATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CUA      AA      C      U      -----      GU      GU      UC--      A      AGUU
UGAAACU  GUUU  GGGAGU  UAAU      GUCUU  CC  UCG      UCGAGAA  UUUCA  G
GUUUUGA  UAAA  CUCUUA  AUUG      UAGAG  GG  AGU      AGCUUUU  AGAGU  C
A--      --      -      U      AUGAUAACU      --  AU  UAAA      -      GGCC
```

>tca-miR-34-p3\_1ss7TA

TTTTTTAGATCACGA

**Identified by sequence similarity**  
**Loop-structure:**

```
AA      -      AUU      UA      U      A
AUAGC  UAA      UUU      GA  CACA  A
```

```
UAUCG GUGU AAA CU GUGU U
-- U AGU GC - U
```

>PC-5p-12191

TGTATTATTTATTGGATTAC

Identified by sequence similarity

Loop-structure:

```
AAAAUGGA- U G U CU- G
      UA UC GAU AAAUA UGGU U
      AU AG UUA UUUAU ACCA U
UAGUAAUUA U G - UAU U
```

>dse-mir-311-p3\_1ss14TC

TTTCTTTTTCGAACAT

Identified by Deep-sequencing

Loop-structure:

```
UUU-- -- C CC C U ACAUCUA U UU - UU- CU A
      AUCUAG CCAA UGUA GAUUUUU UU UUCGA AU CAUUA GC CGC UUUG GUG A
      UAGAUU GGUU AUAU UUAAGAA AA AAGUU UG GUGUG CG GUG AGAC UAC U
UUUUU UA - UA - C CAC---- C U- U UUU CU U
```

>bmo-mir-3372-p3\_1ss6AT

TTACATTAATTTGAGC

Identified by sequence similarity

Loop-structure:

```
AAAACAAACA CG C U G G
      UUCAG UGA GU GU AUCG U
      GAGUU AUU CA UA UAGC G
AAGCAGGAAG UA A U G A
```

>dps-mir-2510-p3\_1ss9CG

TGCAAATTGTATTGTT

Identified by Deep-sequencing

Loop-structure:

```

AA  AAA      AC  CAA--      G      GA
CG  AACAA  CAA      AAUGA  CAGUC  \
GU  UUGUU  GUU      UUAUU  GUUAG  U
--  GUA      AU  AAACG      G      GA

```

>tur-mir-745-p5\_1ss1AT

TTTGCAATTTATTTTG

**Identified by Deep-sequencing  
Loop-structure:**

```

CAC-----  A  CA-  -  U  A---  A  A
AACAC UUG  AUUUG CAAUU GCA  UUU UUUUG \
UUGUG AAC  UAAAC GUUAA CGU  AAA AAAAC U
UCAACUU  C  UUG  A  -  CGCC  C  U

```

>tca-miR-252b-p5\_1ss7GA

GGTGATATTTTGAAT

**Identified by Deep-sequencing  
Loop-structure:**

```

U  A  A  UU GC  UCAAU  A-  AC-  UCGCA-  AA
CCC AAC GAA  G  UGUUGU  GA  GCCAAUC  UUCGGA  GCC \
GGG UUG CUU  C  AUAACG  CU  CGGUUGG  AAGUUU  UGG  U
-  -  -  CC UA  UAAU-  AC  AUA  UUAUAG  AA

```

>dgr-mir-13b-2-p5\_1ss3TA

TAAGTTGTTGCAGTT

**Identified by Deep-sequencing  
Loop-structure:**

```

AA--      U  U  U      CGAAAU
UUAGGA  CU  UA  CAACUUAUGC  \
AAUUUU  GA  GU  GUUGAAUACG  A
GCCA      -  C  U      UAUUCA

```

>bmo-mir-3353-p5\_1ss10AG

TTTTTTCCCGAGATT

**Identified by Deep-sequencing**

### Loop-structure:

```
UC-- U   UUU----- U   AUC       ACA   A   AAA
    GU UCAA       UUUCCCGAGA UUU   GUUUUCAU   UUUUU UGUU   \
    CA AGUU       AAAGGUUUU AAA   CAGAAGUA   AAAAA GCGA   C
UUUA U   CUUUUUUCCC       C   A--       GCG   -   AAA
```

>dme-miR-4945-p3\_1ss9TG

TTGACTTTGACTTT

### Identified by Sequence similarity

#### Loop-structure:

```
AAAUAGA----- CUAU - CACU ----- UA   UAAU
          CUGAA   UUUGA CUUUGA   UGACAU   AUA  AUAA   \
          GGCUU   GGACU GAGACU   AUUGUGU   UAU  UAUU   G
UUAAAAGUACAA   UGCG   A   ACCC   AAUACU   GC   UACU
```

>bmo-mir-3405\_L-5R-5\_1ss19CT

TGTGTTCTTGAAATT

### Identified by Deep-sequencing

#### Loop-structure:

```
GA   G   -   U   U   AU-   U   AU
  GAUG AU UAUGUG UCU GAA   UUC GA   G
  CUAC UA AUAUAC AGG CUU   AGG CU   U
CG   G   U   U   U   AGU   U   AA
```

>dwi-mir-308-p5\_1ss8TC

TGTTTTGCTCAATTT

### Identified by Deep-sequencing

#### Loop-structure:

```
AGAAAUUUA       UUUU U   A   U   GCU
          CCAUUUG   GC CA UUUCG AA   U
          GGUAAGC   CG GU AAAGC UU   U
UAGCUAUCA       UAU- C   -   -   AGC
```

>tca-miR-3836b-p5\_1ss4GC

TTTCAAATGTCTGCC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUCU  AAA  C    UAU-    UUGA    GUC
      UUC  UGU  UGCC  CAACUA  AGGUAAU  \
      AAG  GCA  AUGGG  GUUGGU  UCCAUA  U
U---  GG-  -    CAAC    ----    GGU
```

>dps-mir-2531-p3\_1ss9AT

ATTTGGTCTTGGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C  CA-  A  -  C  -  GU--  CAAA  -  A
UUUG  UUUGGU  UUG  CGU  UUCG  UGGUG  AUG  UUUUCG  UCAA  A
GAAC  GAACCG  AAC  GUA  AAGU  ACCAC  UAC  AAAGGC  AGUU  C
-  CUA  G  U  A  U  AGAC  CAAG  C  A
```

>aae-miR-14-p5\_1ss8TG

TTGCTGGGCATTAT

**Identified by Sequence similarity**  
**Loop-structure:**

```
-  U  C  -  AU-  UUG  UAA  UA
UAGUC  AA  UAAUAA  UGU  GCAU  CAAGUGC  UC  A
AUUAG  UU  GUUUUU  ACG  CGUA  GUUCAUG  AG  G
C  U  A  U  GGU  UG-  UA-  UU
```

>aae-miR-2943-2-p5\_1ss1AT

TTTTGTAGCTTTAAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U  CC  AUA-  G  ---  ---  -----  GUAUUA  G
UCAGU  UUG  AGGAC  AUUU  CCU  AUUGAA  AAAACA  UUUC  A
AGUCG  GAC  UCCUG  UAAG  GGA  UAAUUU  UUUUGU  AAAG  A
-  UA  GUUC  -  UAU  AAG  CGAUG  AUUA---  C
```

>bmo-mir-3423-p3\_1ss10TG

TGCTATTTAGTGATC

**Identified by Deep-sequencing  
Loop-structure:**

```
G G UCUAAAAU- UA UGAU G U
UA UGA GC UUUAG CUG AAU \
GU ACU CG AAGUC GAC UUA U
A G CUAAGAAC UA UAGU G G
```

>dpe-mir-274-p5\_1ss14CG

TTTCATTTTGTGAGC

**Identified by Deep-sequencing  
Loop-structure:**

```
A U- AUUU
GCUCGUA AUGAAGC C
CGAGUGU UACUUUG A
- UU ACUA
```

>bmo-mir-2791-p5\_1ss7TG

TCGATGGATTTTTCAT

**Identified by Deep-sequencing  
Loop-structure:**

```
GCA UG AUC U CAUG
CU GUGGA GA GGAUUUUU \
GA UACUU CU UCUAGAAA U
--- GU AA- C ACAC
```

>dps-mir-1010-p3\_1ss15TC

TGTGTTGGATTGTTC

**Identified by Deep-sequencing  
Loop-structure:**

```
U U GC GU- G G- UG AUU UCAUA
UGUUGGUAU GUUU ACUGCA GU UGUUG AU UUC GGU \
AUAUUUAUUA UAAA UGACGU UA ACAAU UA AGG UCG U
U U AU AUU A AG GU C-- UUUAC
```



>dvi-miR-263b-p3\_1ss3TC  
AACATTCTGTGGTTCT

### Identified by Sequence similarity

#### Loop-structure:

```
AAUAAAA----- UUC-- AAA CA UCAUUUACAAA  
          AAACA UGUGUUU CUAU UCA \  
          UUUGU AUACCAA GAUA AGU U  
AACCUAAAAGAAACCACA UUUCU AG- AG CUGACUUACCUU
```

>tca-miR-3813-p5\_1ss11CG

AATTTTATTGTGCTC

### Identified by Deep-sequencing

#### Loop-structure:

```
AC C- -- UCACCGAA- AAU  
GCA UGUUUG CAGU ACAGUGAAAA \  
CGU ACAAAU GUUA UGUUUUUUUU A  
-- UA CA UAUUCUUCG AAC
```

>tca-miR-3822-3p\_R-6\_1ss2TA

AAATTTCTGTGTGA

### Identified by Deep-sequencing

#### Loop-structure:

```
AU - A CAU --- A-- CA  
UGC CC UCGA UUUUC CAGGAAA AAAAU \  
ACG GG AGUU AAAAG GUCUUUU UUUUA A  
-- U C UCC UGU AAA AA
```

>bmo-mir-3338-p3\_1ss14AC

TGTTTGTCTGATCCA

### Identified by Deep-sequencing

#### Loop-structure:

```
UA--- UU-- CU AGACAA  
CCA AUGUUUGUU GAUCCA U  
GGU UACGAAUAG CUAGGU U  
CUCAA UACU UU AUAAGU
```

>PC-3p-280\_5219

TGACTAGATTTACTCATCCA

**Identified by Deep-sequencing**  
**Loop-structure:**

>bmo-mir-279b-3p\_2ss10CT21GC

TGACTAGATTTACTCATCCA

>hme-mir-279c\_2ss12TG17TC

TGACTAGATTTGCACTCATCCT

UGACUAGAUUUACACUCAUCC

**Identified by Sequence similarity**  
**Loop-structure:**

```
UUU  A      U      G      ---  AUU
GGU  UGC AUGGAUGAGUGU AGUUUGGU CAUA  UUCA  \
CCA  ACG UACCUACUCACA UUAGAUCA GUAU  AAGU  A
UAU  G      U      -      UAA  AGA
```

>bmo-mir-279d-3p\_R-1\_2ss17TC21CT

TGACTAGATTTTCACTCATCT

>PN-279d-3p-22236

TGACTAGATTTTCACTCATC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AG      U  C  U      G  UUUUAU
UAAUUUU CGGUGGAUG GUG AA UCUAGU CAUG  \
AUUAAAG GCUAUCUAC CAC UU AGAUCA GUAC  U
AA      U  U  U      -  UUACAG
```

>api-miR-100-p3\_1ss7AC

TTTAGTCTCACAAGTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUUA  -  UU-  UU  CACA  U  UC-  AGA  A  UU  U
```

```

CAA   CAUU CA   UUA CU   AGUUUU UUUU   GAAUAUUUUA   AUCUGAU UUUUU   UUU \
GUU   GUAA GU   AAU GA   UUAAAA AAAA   UUUGUAAAAGU   UAGACUA AAGAG   AAG A
      UUAC   A   UUC   UC   C---   U   CCU           ---   C   UU   C

```

>PC-3p-33695\_39

TAGAATTCTCCATCGGATTGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      GA   U   C   U   A   -   GCA
GACC  UUAG GAGGU UAGUCCG UGGAGAGA UCUAUU GU   A
CUGG  AAUC UUUCA GUUAGGC ACCUCUUU AGAUAA CA   A
      --   U   A   U   A   A   A   AAC

```

>dme-miR-927-5p\_1ss21CT

TTTAGAATTCTACGCTTTATC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AGU  UG   G           CU   AU   AUUAAACG   AUA
      UU  UUUG UUUGC UUUAGAAUUC  ACGCUUU  CA   AUGAAA  \
      AA  AAGC AAACGAAGUCUUAGG  UGCGAAA  GU   UAUUUU  A
AUU  GU   A           UU   CG  CGCUAA--   GCA

```

>PC-5p-52274

ATGTATCGCACCTTCTCTTTC

**Identified by Sequence similarity**  
**Loop-structure:**

```

-      UC--      AU  A--  GC  C--  AC
CU AAUCUC      AGAGAA  UUC  ACA  CA  UGAG  U
GA UUAGAG      UCUCUU  AAG  UGU  GU  ACUC  U
C      UUUU      CC  CUA  AA  CUU  CA

```

>PC-5p-16339\_91

TAGGATTTGTTTCATTTGTATA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CAUACAUUUUU GA UU --- G UGUUUU
      AG UUUG CAUUU GUAUAU GAA U
      UC AAAU GUAAA UAUUAU UUU A
CUUUC----- UC GG ACU G UUUUAU

```

>bmo-mir-71-3p\_L-1R+1  
TCTCACTACCTTGTCTTTCATG

**Identified by Sequence similarity**  
**Loop-structure:**

```

AUGC GA CU U A- UC U A- CA
      CUAC UG AUUUC UU GUUUUAU GUAG AUU U
      GAUG AC UAGAG GA UAAAAUA CGUU UAA A
----- UU U CC UA C GA AA

```

>tca-miR-3901-p3\_5ss16TC19CT21TC24AG25TC  
TTTTTATTATTCTTTACT

**Identified by Sequence similarity**  
**Loop-structure:**

```

UU----- --- U U C ACU AAC
      UUGAAU UAUUGUUUU AUUA UU UUU GC A
      AACUUA AUAACGGAA UGGU AA AAA UG A
UUGUUU AUU U U U AUU CAA

```

>dme-miR-1-5p\_2ss5GT19AG  
CCATTCTTCCTTGCATTGATA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CUCA A- U C G GUCUU A
      CGAA GUUCCAUC CUUC UUGCAUUC AUA ACA A
      GCUU CGAGGUA GAAG AAUGUAAG UAU UGU U
----- AG U A G GC--- A

```

>dme-miR-4945-p5\_1ss3AG  
TCGTTGTTTTTCTCTTCTTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U      U      CUUCUU  UG
AAU CGUUG UUUUCU  UUA  \
UUG GUAGC AAAGGA  AGU  A
      U      U      UAUGUU  UG
```

>ame-mir-3746-p5\_2ss10TC19AC  
TTGTTTTTCTTCTTTTC

**Identified by Sequence similarity**  
**Loop-structure:**

```
      A  AUG---  U  U  AC      U  A
UAGACA UCA      AU GAA AA  AGAAAG AUA A
GUCUGU AGU      UG CUU UU  UCUUUU UGU A
      A  AUCGUA  C  U  CU      U  A
```

>dme-miR-184-5p\_R+1\_1ss13CA  
CCTTATCATTCTATCGCCCGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U  UA      -  A  -  CCG  GAAU
CG  CCCUUAUCA UUCU UCG CC  UGU  \
GC  GGGAAUAGU AAGA GGC GG  ACG  U
U  UC      C  -  A  UCA  AGUU
```

>bmo-mir-3248-p3\_1ss6TC  
CATCACTCTGCACCT

**Identified by Sequence similarity**  
**Loop-structure:**

```
      CAAU---  C  AU  ACUU  -  A  UU  A
AAUCGGU      UUGGCU AG  UG  GGGG GGGCGAG GC  CUC  C
UUAGUCG      GAUCGA UC  AC  UCUC CUCGCUC CG  GGG  U
      CUGCAUU  -  C-  GU--  A  -  C-  C
```

>PC-3p-26107\_53

ACAAATTTGATCTCCGGTAT

**Identified by Deep-sequencing  
Loop-structure:**

```
G   A  UG  UC  U   CCCU   --  GUC
UUGU GC  AU  CC GAGA   AAUUUGUGA  CU  G
AACA CG  UA  GG  CUCU   UAAAACACU  GA  A
-   G  GU  U-  C   AGCU           UU  AUU
```

>cqu-miR-281-3p\_R+2\_1ss9AC  
TGTCATGGCATTGCTCTCTTTTA

**Identified by Deep-sequencing  
Loop-structure:**

>tca-miR-281-3p\_L+1\_1ss11GT  
CTGTCATGGATTGCTCTCTTT

**Identified by Deep-sequencing  
Loop-structure:**

```
A   UGAAA   UA-   C   A   AU
CGAAUA   AUGAAGAGAGC   UCCGU  GACAGU  GGG  U
GCUUGU   UAUUUCUCUCG   AGGUA  CUGUCA  CUU  U
-   CAUC-   UUA   -   -   AG
```

>aae-miR-1175-3p\_R-3  
TGAGATTCTACTTCTCCGACT

**Identified by Sequence similarity  
Loop-structure:**

```
AAACAAGUAA---  GA  AC---  AAUA  AA
                UGA  UUCU  UUCUGCAU  GUG  \
                ACU  AAGA  GAGAUGUA  CAC  G
CCUCCAUAAAAUC  G-  AAAAA  CAAA  UA
```

>aga-miR-14\_L+5R+1  
CGTGGTCAGTCTTTTTCTCTCTCTAT  
>hme-mir-14\_R+2\_1ss22TA  
TCAGTCTTTTTCTCTCTCTCTAAAA

**Identified by Sequence similarity**  
**Loop-structure:**

>dme-miR-14-3p

TCAGTCTTTTCTCTCTCTAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UCAAAAAG      U      C      UC      U      GUCAAU      U
      CUAUUGUUAU CGAUGGGAG GAGA  GGGGCU ACU      UGAAAU \
      GGUAACGUA  GUUAUCCUC CUCU  UUCUGA UGA      ACUUUA U
UAUAAA--      -      U      UU      C      -----      U
```

>PC-5p-5771\_286

CGAGACUUCAUCUUCAUUUUUAUGAAC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
      CU  UA      UU  ACAA  A      GCG
AUGA  AU  UUAUAAA  UGG      GGA  UGAAGUC  C
UACU  UA  AGUAUUU  ACU      UCU  ACUUCAG  G
      UC  CA      UU  ----  -      AGC
```

>PC-3p-187763\_5

TGGGATATTTAAAAACAGACACTTCATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
ACACAUUCAC      UA-      C---      AA
      UAAAUGAA  UUUGUUU  AUAUCCAUA  A
      GUUUACUU  AGACAAA  UAUAGGGUA  A
C-----      CAC      AAUU      AU
```

>PC-5p-103923\_10

TCCAGAACCAGCTTGACTTAAATAATATTC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C  AA  C  C  CU  AC  -  A  UAA
```

```
GCUUC A UC AGAA CAG UG UAAAAU AAUAUUC GUA A
CGAAG U AG UCUU GUU AC AAUUUG UUGUAGG CGU U
- GA U U CU C- C - CUA
```

>PC-3p-177620\_5

ATGGGAAACATTGATTTTTGAAGA

**Identified by Deep-sequencing  
Loop-structure:**

```
AAG----- UUAU C GG AAA
CUUUAA GA UCAAUG UCUUA G
GAAGUU UU AGUUAC AGGGU A
UAUACCUCACUUAA ---- U AA AAG
```

>PC-5p-149157\_6

CTATAACACATTTTTCTTGACCT

**Identified by Deep-sequencing  
Loop-structure:**

```
UCACCAA C UU ACC U
ACUAUAA ACAU UUCUUG UGC C
UGAUGUU UGUG AAGAAC ACG G
ACUC--- A C- CAA G
```

>aga-miR-2\_L-2R+5

TCACAGCCAGCTTTGATGAGCAATTT

**Identified by Sequence similarity  
Loop-structure:**

```
A A G- U AU U- G
GAA AUGUGU UUG CAUCAAU UUGCUGU UAG GUU C
CUU UAUACA AAC GUAGUUU GACCGACA AUC UAA C
C A GA C CU UU A
```

>PC-3p-76028\_14

TAGACATTTCAATGTGTGATGAACGGATT

**Identified by Sequence similarity  
Loop-structure:**



```

AA - U --- - U UUU AUCU
UGCA CAAG GUUUG AUCA AC UUGGA GUGUUUAUC G
ACGU GUUC UAGGC UAGU UG AACUU UACAGAUAG U
-- A U AAG G U --- AUGU

```

>PC-3p-45501  
TATCACAGCCATTTGATGAGCTA

**Identified by Sequence similarity**  
**Loop-structure:**

>PN-13a-3p-1076  
TATCACAGCCATTTGATGAGCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

U-- UG G UCA A A UUG U
GAU ACUUU G UUAAGCUC AAAUG CUGUGA AUG AU C
CUA UGAAA C GGUUCGAG UUUAC GACACU UAC UA C
UCU GU - UAG C A UUA U

```

>tca-miR-13b-3p\_L+2R-1  
GTTATCACAGCCATTTTGACGAG  
>PN-13b-3p-48011  
TATCACAGCCATTTTGACGAGTTG  
>cqu-miR-13\_R+5  
TATCACAGCCATTTTGACGAGTAAAA

**Identified by Sequence similarity**  
**Loop-structure:**

>dme-miR-13b-3p\_R+1  
TATCACAGCCATTTTGACGAGTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

UUUGU UA- G CA CUAU AA
UUCUGUUAUCA UCGU AAAAUGGUUGUG AUG UC A
AAGACGGUAGU AGCA UUUUACCGACAC UAC GG U
----- UUG G UA UU-- AA

```

>PC-5p-2348\_732  
TCGCAATACTTTGTAAGAGCT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AAAGAC   G---   U   U   AG---   G
GAUUAU   UCUCAA ACU UGUA   AGCUG \
CUAUA    AGGGUU UGG ACAU   UUGAC A
A----- AAUA    -   U   GAUAG   A
```

>PC-3p-76373\_14

TGCGTCAGTTTGAAACGTCTGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
-   AUC   -   CU   U   U   UCUCUA
AACGU  CUUCUU CAGAUGUUUU ACU GAC GCAG   U
UUGCA  GAAGAA GUCUGCAAAG  UGA CUG CGUU   A
C   AC-   A   UU   -   -   UCAUCA
```

>dmo-bantam-p3\_3ss12TG22TA23TA

TGAGATCATTGAAAGCTGAAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
U   CAUC   AAUCA-   AAC   C   UU   U   GUU
UGU   AUUUGUAUUC   UUUAU   ACGAAA CAGUUUUCGA  UGAUUUUA CUUU   U
ACG   UAAACAUUAG   AAAUA   UGUUUU  GUCGAAAGUU  ACUAGAGU GAAA   U
U   C---   CCACAA   ---   A   UU   -   AAA
```

>hme-bantam\_R-1\_2ss20AT21AC

TGAGATCATTGTGAAAGCTTCT

**Identified by Sequence similarity**  
**Loop-structure:**

```
U   CAUC   AAUCA-   AAC   C   UU   U   GUU
UGU   AUUUGUAUUC   UUUAU   ACGAAA CAGUUUUCGA  UGAUUUUA CUUU   U
ACG   UAAACAUUAG   AAAUA   UGUUUU  GUCGAAAGUU  ACUAGAGU GAAA   U
U   C---   CCACAA   ---   A   UU   -   AAA
```

>PN--3p-16167  
 TGAGATCATTTTGAAAGCTGATTAT  
 >dme-bantam-3p  
 TGAGATCATTTTGAAAGCTGATT  
 >ame-bantam\_L+2R+1\_1ss13GT  
 TCTGAGATCATTTTGAAAGCTGATT

**Identified by Sequence similarity**  
**Loop-structure:**

```

U  CAUC          AAUCA-   AAC      C          UU      U      GUU
UGU  AUUUGUAUUC   UUUAU   ACGAAA  CAGUUUUCGA  UGAUUUUA  CUUU  U
ACG  UAAACAUUAG   AAAUA   UGUUUU  GUCGAAAGUU  ACUAGAGU  GAAA  U
U   C---        CCACAA   ---     A          UU      -     AAA
  
```

>PC-5p-76675\_14  
 TCAGTTCATTTTAAATTCTGTACCGAGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      G          U  A  ---   UC  A
GAUCA  UUCAUUUUUAAAUUC  GU  CC   GAGA  UGU  C
CUAGU  AAGUAAGAAUUUAAG  CG  GG   CUCU  AUA  G
      G          C  -  AUA   UC  U
  
```

>dme-miR-998-p5\_2ss12AG19TA  
 ATTCATTTTGGGACTGAAA

**Identified by Sequence similarity**  
**Loop-structure:**

```

GUGUG  U  GU-   G  AU   CG  G  G  UG  UAUUUUCUGUG  G
      UGUG  GUGU   GUGUG  UC  GUGA  AUUU  AUU  C  G          AAAC  A
      GCGC  CGCG   CAUAC  AG  CACU  UAAA  UAA  G  U          UUUG  A
-----  -   AGU    G  AC   AA   G  G  GU  UUACUUA---  A
  
```

>PC-5p-23727\_60  
 TCTTTGGTGGTTTTAGCTGAAA

**Identified by Sequence similarity**  
**Loop-structure:**

>dme-miR-9b-5p\_R-1\_1ss10AG

TCTTTGGTGGTTTTAGCTGTAT

**Identified by Deep-sequencing  
Loop-structure:**

```
UU      U-  C      UU      UUGAAAU
AGCUAUC  GU  UUUGGUGGUU  AGCUGUAUG  U
UCGGUAGU  CA  AAACCACCAA  UUGAUUAUAC  U
UU      CC  -      U-      UAAAGUA
```

>bmo-mir-6497-p5\_1ss10AG

TAACTTCGGGATAAGG

**Identified by Deep-sequencing  
Loop-structure:**

```
A  UA  GAUA  C  C--  -  CC  GG  AA  G-  AG  G  GA
CCG  CC  UCCG  AG  CGG  UCU  AA  UG  GA  UCUCU  UC  AUA  A
GGU  GG  GGGC  UC  GCC  AGA  UU  AC  CU  AGGGA  GG  UGU  U
C  UA  AAUA  U  AAU  U  --  AA  GG  GA  AU  A  AA
```

>PC-5p-72545\_15

TTACTACTTGATGCTTTGTTGATTGT

**Identified by Deep-sequencing  
Loop-structure:**

```
U      U      -  -  UG  GU
AC  UACUAC  UGUUG  CU  UAGU  AUU  \
UG  AUGAUG  GUAGC  GA  GUUA  UGA  G
C      U      A  A  GU  AC
```

>aae-miR-9a\_L+4R-2

GATCTCTTTGGTTATCTAGCTGTAT

>ngi-miR-9a\_R+3

TCTTTGGTTATCTAGCTGTATGATT

>bmo-mir-9a-5p\_L+1R-2

ATCTTTGGTTATCTAGCTGTAT

**Identified by Sequence similarity  
Loop-structure:**

> dme-miR-9a-5p

TCTTTGGTTATCTAGCTGTATGA

**Identified by Deep-sequencing  
Loop-structure:**

```
AA      CC      U      U      G      G      AUA
GAUGCUA GUUG CUUUGGUUA CUAGCU UAUGA UGU \
CUGC GAU UAAU GAAGCCAGU GAUCGA AUACU GCA A
A-      UA      U      U      A      -      GGU
```

```
>aga-miR-9c_R+3
TCTTTGGTATTCTAGCTGTAGAAAA
>dwi-miR-9c_L+2R+1
ATTCTTTGGTATTCTAGCTGTAGAT
```

**Identified by Sequence similarity  
Loop-structure:**

```
A A CUU- UU - A AU
UUUGUCA CA ACUU UGGUG CUAGCUU AUGAUG AU \
AAACAGU GU UGAG ACUAC GGUCGAA UACUAC UA C
G C UGUC CG A A AG
```

```
>cqu-miR-79_R-8
GCTTTGGCGCTTTAG
```

**Identified by Deep-sequencing  
Loop-structure:**

```
AC      CGC      G      UAGAA
UUU AUGCUUUGG UUUAGCU UAUGA A
AAA UACGAAACC AGAUCGA AUACU C
U-      AUU      A      UUAUA
```

```
>dps-mir-2574a-p5_1ss11TA
TTCTGGACTCACCAT
```

**Identified by Deep-sequencing  
Loop-structure:**

```
AA--      UU      ACGUA      UC-      AGAAAGAACAAG      AUA
UGGAUGU      UGAAU      UC UAAUG      UCCA      UGA      GAGUUU      U
ACCUAUA      ACUUA      AGGUUAC      AGGU      ACU      CUUAAA      A
ACAA      --      CACUC      CUU      AUAUUAUAAGA      GAA
```

>bmo-mir-989b-p3\_1ss2TG  
TGCTTAACTCTCGA

**Identified by Sequence similarity**  
**Loop-structure:**

```
      AAUC          CAU-  GU    GA
CGAA   GGUUAAGC   CG  UGAU  \
GCUU   UCAAUUCG   GC  AUUA  U
      C---          UAAC  AU    AG
```

>dme-miR-1000-5p\_1ss20GT  
ATATTGTCCTGTCACAGCATT  
>PN-1000-5p-219  
ATATTGTCCTGTCACAGCATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
  -  -  UA    UAUAU    UC    UUUG  A
GGA GGC UUGA ACAAU    UGUCCUG ACAGCAUUAG GAU \
CUU UCG AACU UGUUA    ACAGGGC UGUUGUAAUU UUA U
  G  U  C-    CAAUU    UU    UCAA  A
```

>der-miR-305\_R+4  
ATTGTA CTTCA TCAGGTGCTCTGTTGT  
>tca-miR-305-5p\_R+13  
ATTGTA CTTCA TCAGGTGCTCTGGTATGTTTTTT  
>aae-miR-305-5p\_R+5  
ATTGTA CTTCA TCAGGTGCTCTGGTATGTTTTTT  
>tca-miR-305-5p\_R+5  
ATTGTA CTTCA TCAGGTGCTCTGGT

**Identified by Sequence similarity**  
**Loop-structure:**

>dme-miR-305-5p\_R+1  
ATTGTA CTTCA TCAGGTGCTCTGG

**Identified by Deep-sequencing**  
**Loop-structure:**

```

-      CUAU      U G      CU      AAUA
CCAUGU      UGUACUUA CA GUGCU      GGU      U
GGUGUA      ACAUGAGGU GU CACGG      CCA      U
U      ACUC      U G      C-      ACGU

```

```

>ame-mir-12-p5_1ss20GT
TATTACATCAGGTACTGGTTTGA
>PN-12-3p-563
TGAGTATTACATCAGGTACTG

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

      UUU      U      C      CCUUUUAA
CUAUCG      UUGAUGUGAGUAU ACAU AGGUACUGGU      \
GAUAGC      AAUUACGCUCGUA UGUA UUCGUGACCG      U
      UC-      U      -      AUCUUUAA

```

```

>ame-mir-3772-p5_1ss1TC
CCCGGGTTCGATTCCC

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      ACU      -      ----      -      AU      AAU-      GUAAA--      C      UCC
CAUACC      GAA CGAGC      GUC UUUUG      UGAGA      AAUA      CAUU GACC      C
GUGUGG      CUU GCUUG      CGG AAAGC      ACUCU      UUAU      GUGA CUGG      A
      CC-      A      GGCC      U      C-      CGCU      AGGAUUG      U      UAU

```

```

>bmo-mir-3367-p3_2ss4GC17TA
TTTCTTTGGGTGACGCA

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

A-      -      A
UUUUCUUUG GGUGACGCA U
AAAAGAAAC CUACUGCGU U
AA      U      U

```

>PC-3p-1786\_935  
TCACTGGGCTTTGTTTGTGCGAA

**Identified by Sequence similarity**  
**Loop-structure:**

>dme-miR-318-3p\_R-1\_2ss17AG20TG  
TCACTGGGCTTTGTTTGTGCGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
          U          U      UAAAUU
UUGUGCGACGAAC AGGUUCAGU GAUG      U
AACACCGCUGUUUG UUCGGGUCA CUAC      U
          U          -      UAAAGU
```

>aae-miR-12-p3\_2ss6AG21TG  
CCAGTGCTTATGTTATGCTCGC

>PC-3p-13166  
CAGTGCTTATGTTATGCTCGCA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
      UUU          U      C      CCUUUUAA
CUAUCG  UUGAUGUGAGUUAU ACAU AGGUACUGGU  \
GAUAGC  AAUUAACGCUCGUA UGUA UUCGUGACCG  U
      UC-          U      -      AUCUUUAA
```

>aae-miR-137-2-p5  
ACGCGTATTCTTGGGTTATTAAC

>PN-137-5p-18228  
ACGCGTATTCTTGGGTTATTA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UG C  C      UG  UAU      C  AU
GC ACG GUAUUCU GGU  UAACA ACA  \
UG UGC CAUAAGA UCG  AUUGU UGU  U
GU A  A      GU  UU-      -  AA
```

>cqu-miR-375\_R-7



TTTGTTGTTTGGCT

**Identified by Deep-sequencing  
Loop-structure:**

>dme-miR-375-3p\_R+4\_1ss17AG  
TTTGTTGTTTGGCTTGAGTTAATTA

**Identified by Sequence similarity  
Loop-structure:**

```
- - AAUU U UUU UGCG A
GAU GAUG ACUUA CCAAUGAA CAAACUG UUUA \
CUA CUAC UGAGUU GGUUUGCUU GUUUGGU AAGUU C
U U GUAU C --- UA-- A
```

>dme-miR-973-5p\_L-7R-2\_1ss15AG  
TGGTTGAGCTTCGATT

**Identified by Sequence similarity  
Loop-structure:**

```
A-- UUCG CUUCA
UGGUUG GC AUG G
ACCGAC CG UAC A
ACA CACA ACAAC
```

>ame-mir-263b-p5\_1ss9GA  
TCTGGCGGATCTTGGC

**Identified by Sequence similarity  
Loop-structure:**

```
GUAGAUAAAA U A- UUAUU ACUG- UC
GCA UUGU CCA UCUG CA \
CGU AACG GGU AGGC GU A
ACA----- - AA UCU-- GGUCA UU
```

>PC-3p-5986\_275  
TATTCTAGCTGCTATTGGAGC

**Identified by Deep-sequencing  
Loop-structure:**

```

UUA--- -- C U CUCUUA GUAC A G
      GCGGC AAUU AUGUU GU UCCAA GGUA GUUGGAA C
      UGCCG UUGA UACAA CG GAGUU UCGU CGAUCUU U
UAGACAG GG C U AUAUC- A--- - A

```

>PC-3p-9319\_170

TGACTAGATTCAATGCTCATCT

**Identified by Deep-sequencing  
Loop-structure:**

```

----- A U - ----- GUUU
      GCUUC UUCAGU GGUGAGCAU GAAUUUGGUU CAC A
      CGAGG GAGUUA CUACUCGUA CUUAGAUCAG GUG U
ACAAG C U A UUCUU AAAA

```

>tca-miR-3882-p5\_2ss3CT17GT

TGTAGTTCCTCTGTGCT

**Identified by Deep-sequencing  
Loop-structure:**

```

- UU--- UA U GUGCUU AG UUUUU U GA
UCUAA CGAUUG CUGUAGU CCUCU GAUUG UG GAGAAA AUU \
AGGUU GCUAAC GACGUUA GGAGA UUAAC GC UUCUUU UGG A
U UCAUC -- - GUUUUAU CU CAC-- C GU

```

>PC-5p-134824\_7

AGCTGACGTTCGTCTTATTGGTA

**Identified by Deep-sequencing  
Loop-structure:**

```

      A UC U UUGAAUG
CAUUGCCGUAGCUG CGU GUCUUUAU GGUA A
GUAGCCGGUAUCGGC GCA CAGAAUA CUAU U
      - CA - UAAAACA

```

>PC-5p-86864\_12

TCCGAGTTGATCAGTTTCTGTGCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      UU      UC AAA  AA-      GA  G  -      GC  UCU
AUUUUG  UUUUUUU  UUG  AUGAAUUCC  GUU AU CAGUUUCUGU  UUGA  U
UAAAGC  AGAAAAA  AAC  UACUUAAGG  UAA UA GUUAAAAGUA  AGCU  A
      CU      UA---  GAA      --  G  U      AA  UUU

```

>dme-miR-11-3p\_R+1

CATCACAGTCTGAGTTCTTGCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

U      UA-      GC      C      C      UUUUUUUUUUUUGAA      A
AUGG  GAAACU  CUGAGCGGGAACUC  GAUUGUGA  UGCG      ACAAUUGC  U
UACU  CUUUGA  GACUGGUUCUUGAG  CUGACACU  ACGC      UGUUAACG  A
C      UUA      GU      U      -      UAC-----      U

```

>PC-5p-33179

TAAGTATCTGTTGTTGTTGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CA  U      CGGUCU  U  U  UGUU
UGA CGCCGC  AAGUA  CUGU  GUUGU  G
ACU GCGGCG  UUUAU  GACG  UAGCG  C
A-  -      -----  U  U  UUGG

```

>hme-mir-34\_R+2\_1ss22GT

TGGCAGTGTGGTTAGCTGGTTTAT

**Identified by Sequence similarity**  
**Loop-structure:**

```

AA      UAAA      U      U  U  C      ---  A
AAGGU  CGCG  UGGCAG  GUGG  UAG  UGGUUGU  GUG  A
UUUCG  GCGU  ACCGUC  CGCC  AUC  ACCGACA  UAC  U
AC      UACG      U      C  U  -      AUA  A

```

>dps-mir-2525-p5\_1ss2CG

GGTGCTGGTTCTGCT

### Identified by sequence similarity

#### Loop-structure:

```
A      -   UUCCUU      AC   UU   CCAACUUC      U
UCAGG GGA      AGGCGGA ACC   CAU      AACGGUU G
AGUUC UCU      UUCGUCU UGG   GUG      UUGUCAU U
-      U   UCU---      --   UC   CUCU----      C
```

>dme-miR-281-3p\_R-2\_1ss9AC

TGTCATGGCATTGCTCTCTTT

### Identified by Deep-sequencing

#### Loop-structure:

```
A      UGAAA      UA-   C   A   AU
CGAAUA      AUGAAGAGAGC   UCCGU GACAGU GGG   U
GCUUGU      UAUUUCUCUCG   AGGUA CUGUCA CUU   U
-      CAUC-      UUA   -   -   AG
```

>dme-miR-994-p3\_2ss8AG21TG

AUAUCACGGUUGCUGUUUCUGU

### Identified by Sequence similarity

#### Loop-structure:

```
G      U   A-   AAAAA      CA      AUU-   CA
UGGUU GUCGU   UUU      CCAUAUCA   GUUGCU   UCUGU   G
ACCAA CAGCG   AAA      GGUUAUAGU   CAACGA   AGGCG   A
-      -   AG   GAA--      UA      GCUU   UA
```

>dme-miR-994-p5\_2ss14GA20TG

TATCACAGTTGCTATTTCTG

>PC-5p-55665\_21

TATCACAGTTGCTATTTCTGTC

### Identified by Deep-sequencing

#### Loop-structure:

```
U      A-   AAAAA      CA      AUU-   CA
UGGUU GUCGU   UUU      CCAUAUCA   GUUGCU   UCUGU   G
ACCAA CAGCG   AAA      GGUUAUAGU   CAACGA   AGGCG   A
-      AG   GAA--      UA      GCUU   UA
```

>aae-miR-193-p5\_2ss10GT22AT  
TGGGATTTTTGGACCAGAAGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
      CA      A      UU      A      A      ---  GAU
AACUUUU  AUUGAG  UGGGAUUU  UGG  CCAG  AGU  CA  A
UUGAAAA  UAACUC  ACCCUGAA  AUC  GGUC  UCG  GU  U
      AG      A      UC      C      A      UAC  AAA
```

>aae-miR-1174-p5  
CTGGGTATTTAGATCCTTGCA

**Identified by Sequence similarity**  
**Loop-structure:**

```
GAAGUU  U  AG-----  GU      UUUAUUUUU      UUA
      GG  UC      U  CAUUUUUUGAA      ACUGAAA  U
      CC  AG      A  GUAAAAAAUUU      UGAUUUU  U
AACUUU  U  AUUUUAUUA  UG      -----      UAU
```

>tca-miR-965-3p\_R+5\_1ss9TG  
TAAGCGTAGAGCTTTCCCCTTTGTT  
>dps-mir-965-3p\_R+6\_1ss9TG  
TAAGCGTAGAGCTTTCCCCTTAAAAAT

**Identified by Sequence similarity**  
**Loop-structure:**

```
-  U      CAC  A  U      UUGCCAG
GAA  CA  UAUCGAAGGGG  GGCU  UACG  CUUAUG  U
CUU  GU  AUAGUUUCCCC  UCGA  AUGC  GAUAC  U
      C  C      UUU  G  -      UUAUAAG
```

>dme-miR-927-3p\_L-1\_1ss21AG  
AAAGCGTTTGGATTCTGAAGC  
>dme-miR-927-3p\_1ss21AG  
CAAAGCGTTTGGATTCTGAAGC  
>PN-927-3p-49006

CAAAGCGTTTGGATTCT

**Identified by Deep-sequencing  
Loop-structure:**

```
AGU  UG  G          CU      AU  AUUAAACG      AUA
GAA  UU  UUUG  UUUGC UUUAGAAUUC  ACGCUUU  CA      AUGAAA  \
CUU  AA  AAGC  AAACGAAGUCUUAGG  UGCGAAA  GU      UAUUUU  A
AUU  GU  A          UU      CG  CGCUAA--  GCA
```

>mse-miR-317\_R+5\_1ss22CG  
TGAACACAGCTGGTGGTATCTGATTTGT

**Identified by Sequence similarity  
Loop-structure:**

```
--  U-----  UC      UG      -  --      G      UAUUUUUAA  AA
AUG      UG  CAAU  CUGGGUACU  CC  CUGUG  UCGCUU      AUGU  \
UAC      AC  GUUAA  GACUCUAGG  GG  GACAC  AGUGAA      UACA  U
AC  UAAAAU  GA      GU      U  UC      A      -----  AC
```

>PC-5p-77274\_14  
TGAGAGTAGAGTGTGTTTTCGAATATA

**Identified by Deep-sequencing  
Loop-structure:**

```
GUACG      ----      GUGU      U  -  U      UUUC
AUGAGA      GUAGA      GUUU  CG  AAUA  AGUA      \
UACUCU      CAUCU      UAGA  GC  UUAU  UUAU      A
AACAA      CUUA      AUUC      C  C      U      UCGG
```

>PN-2838-5p-38776  
TACGGGTGAAATGGTTTAAATTCAG

**Identified by Deep-sequencing  
Loop-structure:**

```
ACCAAACC      A      AAUGGU      A      U
GUAU  CGGGUUGA      UUAU  UUCAGCCUU  A
CGUA  GUCCGACU      AAUU  AAGUCGGAG  U
AUCCAGA-      A      AU-----  A      A
```

>PC-5p-130776\_7

ATTCCAATGGTGAAGATTTGTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CCAC    ----    UAUUCA    A    GUUACA
  GCC    AAAGA    UCCAAUGGUGA GAUUUGUU \
  CUGG    UUUCU    AAGGUUGCUCU CUGAACAA A
AAC-    GAUU    UAACA-    A    ACUAAC
```

>PC-3p-21315

TCAATGCAAATCGTTTGT

**Identified by Sequence similarity**  
**Loop-structure:**

```
A    AA    ----    --    --    UC    UUG    U    A    UU    CGA
UGUU  GGU    GAGCA  AUG  AUAAGGAU  GU  AAACGAUUU  GUAU  UG  AUU  \
AUAA  CCG    UUUGU  UGC  UAUUUUUA  CA  UUUGCUIAAA  CGUA  AC  UAA  U
A    --    AGUU    AA  GU    CA  UG-    -    -    UU  ACA
```

>PC-3p-22645\_63

AACAAAAATAATCGTTTGGTCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UU    A-    A    GA--    GC---    U    CU    ---    UUUCAAA
UAUUGAUU  AAUA  AAU    UUCGU    ACUAAA  CGAU  UUUUUG  GCGC  \
AUAAUUAA  UUGU  UUG  AGGUA    UGGUUU  GCUA  AAAAAC  CGUG  A
U-    AC    C    AUUA    AAAUC    -    AU    AAG  UCAUUAA
```

>PC-5p-156706\_6

GATGAGTGTTAGTTTGGTGCATA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUU    A    U    G    ---    AUU
GGU    UGC  AUGGAUGAGUGU  AGUUUGGU  CAUA  UUCA  \
CCA    ACG  UACCUACUCACA  UUAGAUA  GUAU  AAGU  A
```

UAU G U - UAA AGA

>PC-5p-171481\_5  
CGAATGTCGGTTTGACT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
ACA      U      AA--  -      A      UUGCAAU
UUUAUAAG CAGGGCG  UGU CGGUUUGGU ACUG      A
AGAUAUUU GUCCUGC  ACA GCCAGAUCA UGAC      A
---      U      GCUC  A      G      CUAUAAU
```

>isc-let-7\_R+1\_2ss12GT18TC  
TGAGGTAGTAGTTTGTACAGTT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AA      U  UAA---  CAG  U  U
GG  GUUUCG AG  UUUGUA  UUA UUUCG A
CC  UAAAGC UC  AAACAU  AGU GAAGC U
CG  -  UUACGA  UA-  C  U
```

>dvi-let-7\_R+7  
TGAGGTAGTAGTTGTATAGTATTTTT  
>dmo-let-7\_R+3  
TGAGGTAGTAGTTGTATAGTTT

**Identified by Sequence similarity**  
**Loop-structure:**

```
UU-      UG  G      CG----  CA
AGGC  UUGC GAUG  AG  UAGUAGGUUGUAUAGUA  GAUA  U
UUCG  AGCGUUAU  UC  AUCGUCUAGCAUGUCAU  UUAU  A
CUU      GU  A      CAUACA  AA
```

>PC-5p-49558\_24  
TCGTGAAAATGTTGTGCAATG

**Identified by Deep-sequencing**



**Loop-structure:**

```
UU  U          UA-   G          CA   CUAU  AA
UG  UUCUGUUAUCA  UCGU  AAAAUGGUUGUG  AUG   UC  A
AU  AAGACGGUAGU  AGCA  UUUUACCGACAC  UAC   GG  U
UU  U          UUG   G          UA   UU--  AA
```

>PC-5p-98932\_10  
TGGAAAATCGTTGAATGATGTATTGGCAAC

**Identified by Deep-sequencing  
Loop-structure:**

```
UAAUG   U   UG          U   CG  GCCAAAU
GAAAA  CGU  AAUGAUGUAU  GGCAA  GG   \
CUUUU  GCG  UUACUAUAUA  CCGUU  CU    U
-----  -   GU          -   AU  AGAACAU
```

>bmo-mir-3268-3p\_L-2R-8\_2ss18AG19TG  
GTTTGTGCGATGAATTGGT

**Identified by Deep-sequencing  
Loop-structure:**

```
AGAAACAACAG          G   GAA   GAA  UG  G
          CUGUUU  UCGAU   UUGGU  AU  GU  \
          GAUAAA  GGCUA   AACCG  UG  UA  A
AAAAAAAAA--          G   AGA   G--  GU  A
```

>aae-miR-13-p5\_2ss5AG19TA  
TCGTGAAAATGGTTGTGCA

**Identified by Deep-sequencing  
Loop-structure:**

```
UU  U          UA-   G          CA   CUAU  AA
UG  UUCUGUUAUCA  UCGU  AAAAUGGUUGUG  AUG   UC  A
AU  AAGACGGUAGU  AGCA  UUUUACCGACAC  UAC   GG  U
UU  U          UUG   G          UA   UU--  AA
```

>PC-3p-82789\_13  
TTGGTGTATATCTTACAGTGAG

**Identified by Deep-sequencing  
Loop-structure:**

```

-   -   U   U   G           A   ACA   UUGUAAA
AUA CGCUA UC GCU GCUGUAAGA AUAA CAGGC \
UAU GUGGU AG CGA UGACAUUCU UAUU GUUCG U
A   A   U   U   G           A   GUG   UUGAAAC

```

>PC-5p-5408  
TTAGATCATTTTTGTGGTAATCGGCC

**Identified by Deep-sequencing  
Loop-structure:**

```

AUUUUC UU GA U-- U-- GAAC
GA UUA UCAUUU UGUGGUAA CGGC A
CU GAU GGUAAG GCACUAUU GUCG U
AA---- UU AA UUU CAC AAAC

```

>PC-3p-19577\_74  
ACGTTTAGAACTTTGTATCCGAGAA

**Identified by Sequence similarity  
Loop-structure:**

```

-   AGCC   -   -   GUAC   G
AUGUG CUGCUAUC CGGA ACAA UUCUAAACGCUU AAC G
UACAC GGC GGUGG GCCU UGUUU AAGAUUUGCGAA UUG A
U           AAGA A C           AAA- A

```

>PC-5p-18767\_78  
TTAAGTAGGTATTTGTAGGCGT

**Identified by Deep-sequencing  
Loop-structure:**

```

GAACAA A G C U UUU GC AUUUUAU
UUGAUUU UG UG UGU AAGUAGGUA GUAG GUUU \
AACUAAA AC AC ACA UUCAUUCGU CAUC CAAA A
ACAA-- - A A C UCU UA CCGUUA

```

>aae-miR-2c-p5\_2ss15TC19TA  
GGCATCAAATTTGGCTGTATT

**Identified by Deep-sequencing  
Loop-structure:**

```
A      A      G-      U      AU      U-      G
GAA AUGUGU UUG CAUCAAA UUGGCUGU UAG GUU C
CUU UAUACA AAC GUAGUUU GACCGACA AUC UAA C
C      A      GA      C      CU      UU      A
```

>PC-3p-121229\_8  
TCGGAATGTTGTTGATGCG

**Identified by Deep-sequencing  
Loop-structure:**

```
GGAA--      CA      UG      U      GA-      AG
      AUUCCAC      GUAU      GC      GCA      CGG      C
      UAAGGUG      CGUA      UG      UGU      GCU      G
GUUAAA      --      GU      U      AAG      AA
```

>PC-3p-4126\_408  
CACGTTGCAGATTGGGGTTACT  
>aae-miR-1889-p3\_2ss7AG20TA  
CACGTTGCAGATTGGGGTTA

**Identified by Deep-sequencing  
Loop-structure:**

```
A      U      G      A      A      U      -      AA      UGU
UGCAUU UAU GAG AAUCUCAA UUGUAAU GUGGG CG UA \
ACGUGA AUG CUC UUGGGUU GACGUUG CACCU GC GU A
-      U      G      A      A      -      A      GA      UAA
```

>PC-5p-64118  
TGTTATTGTTTTATCGGAATGGTATT

**Identified by Deep-sequencing  
Loop-structure:**

```
UCU      UU-----      U-      UG      UUU      U
GGUGUUA      GUU      UAUCGGAA      GUA      GUGUUG \
UUAUAAU      CAA      GUAGCCUU      UAU      UAUAU U
```

--- UUUGUU UC UU --- C

>dwi-mir-10-p3\_2ss24AT26GT  
CAAATTCGGTTCTAGAGAGGTTTAT

**Identified by Sequence similarity**  
**Loop-structure:**

```
CUAAUUU   CGAACC           CU  -  G  U           - - - - -   A
   UCAU     AUGUUCUACAU  ACC CU UAGA CCGAAUUUGUU   UGAC U
   AGUA     UACAGGGUGUG  UGG GA AUCU GGCUAAAACAG   AUUG A
AACUAU-   - - - - -           UU  A  G  U           CAUAAA   A
```

>PC-5p-172341\_5  
TCAGATTGGATTGATGTATTTGTTGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUU  UGCAA  -  G  UG  - - - - -  UU  UAUUG  GA  UU
   UUG  UGGCU  UAA  UUUCUU  AU  GUAU  UC  UCGAU  GAGGA  \
   AGC  AUCGG  AUU  AGAGGG  UA  UAUG  AG  GGUUA  CUUCU  U
UUU  UCAAG  U  G  GU  GUGUUUGUU  U-  UUA--  GA  UG
```

>dpu-miR-34\_R+2\_2ss22GT24GT  
TGGCAGTGTGGTTAGCTGGTTTAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
AA  UAAA  U  U  U  C  - - -  A
  AAGGU  CGCG  UGGCAG  GUGG  UAG  UGGUUGU  GUG A
  UUUCG  GCGU  ACCGUC  CGCC  AUC  ACCGACA  UAC U
AC  UACG  U  C  U  -  AUA  A
```

>aae-miR-11-3p\_R+1\_2ss20GT21CT  
CATCACAGTCTGAGTTCTTTTTT

**Identified by Sequence similarity**  
**Loop-structure:**

```

U   UA-      GC              C      C      UUUUUUUUUUUUGAA      A
AUGG   GAAACU   CUGAGCGGGAACUC GAUUGUGA  UGCG              ACAAUUGC U
UACU   CUUUUGA   GACUCGUUCUUGAG  CUGACACU  ACGC              UGUUAAACG A
C     UUA      GU              U      -      UAC-----      U

```

>PC-5p-120878\_8  
TCGGTTTTGTAGTAATGCTTTTATGATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

G   CGUU--      AUCGAG      U   GUA-      - U      U
GCGG      GUGAAAAU      UUCGGU  UUU      GUA AUG C  UUU AUGA  U
CGCC      CAUUUUUG      AAGCUA  AAA      UAUUAC  G  AAGUAUU  A
-   CUUCUU      CUUUAA      U   AGUG      C  C      U

```

>bmo-mir-3345-p3\_1ss16AT  
TCCGAATTCTGTTTGTATG

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AAA      UG UUC      UCCAUG      UGCU
AGUCAUA  A   AUGG      CGG      C
UUAGUAU  U   UGUC      GCC      U
---      GU ---      UAAA--      UAAC

```

>PC-5p-39054  
TGTTTCAGATTCGTCGCGATTATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CCUCGUG  -   CACU-   UU   AU   G   A   UUAUUCA   A
      UUC AUGGG   GGU  CAG  UCGUC  UCG  UUA   UCUAUG  A
      AAG UGCCU   UCA  GUU  AGUAG  AGC  AGU   AGAUAU  G
ACUAAA-   U   UAGUU  GG   --   A   A   UG-----   A

```

>PN-190-5p-26  
AGATATGTTTGATATTCTTGTTG  
>dme-miR-190-5p\_R-1  
AGATATGTTTGATATTCTTGTT

**Identified by Deep-sequencing**  
**Loop-structure:**

>tca-miR-190-5p\_R+5  
AGATATGTTTGATATTCTTGGTTAAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
GCCAAUCUC      U      -      AU      U      UUUUUUA
      AUGAUUAC  GUAA  GAUAUGUUUGAU  UCUUGG  UG      \
      UACUGGUG  UAAU  UUAUACAAACUA  AGGACC  AC      U
CCA-----      U      A      --      C      UUAUAAA
```

>nvi-mir-190-p3\_2ss23CA25GA  
CCAGGAATCAAACATATTATTA AAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
      U      -      AU      U      UUUUUUA
AUGAUUAC  GUAA  GAUAUGUUUGAU  UCUUGG  UG      \
UACUGGUG  UAAU  UUAUACAAACUA  AGGACC  AC      U
      U      A      --      C      UUAUAAA
```

>PC-5p-138405\_7  
TAGGCGATTTTGGTATTTCCGGTGACT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UCGGUGUUCUAG      UU      CG      AAUG      CA
      GCGAUU  GGUUUU  GGCGACUC  GGUU  G
      UGCUAG  CUAUGAA  CUGCUGGG  CCAA  U
-----      --      CG      ----      UG
```

>tca-miR-3808-p3\_2ss3TG20AT  
ATGTTGGATTAAATAAAATTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AACCAAU----      AU      A      UCC      UUU      -  U      UC  G
ACGAA      GUUGG  UAAAU  AAUU  GAUGAA  GAUUGAUG  AA  UGU  UG  A
```

```
UGCUU          CAGCU  GAUUA  UUUA  UUACUU  UUAACUAC  UU  ACA  GC  A
  AUUUUUUUUU  CU    C    CU-    UAU    C  U  UU  U
```

>PC-3p-76247\_14  
AGAAATGTGAATTCAATGAAAAAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUUUA-  -  A  U          U  A  UG  U
  AUCA  UUU  AAUAA  UUUUUUAUUG  GA  UCG  UU  A
  UAGU  AAA  UUAUU  AAAAAGUAAC  UU  AGU  AA  G
UUCUUA  U  C  U          -  A  GU  A
```

>PC-3p-2810\_614  
AGAGATTCCACTTTTCTAACTTAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C---  A  CAGCUUCAG          GUGA  -  C  UC  A  G  AGU
  GCCA  UG          UGUGUAC  AGUAAGU  GGAG  AGUGG  UC  UC  CUUU  U
  CGGU  AC          ACACAUG  UUAUUCA  UCUU  UCACC  AG  AG  GAAA  U
CUUU  -  CUACUAUAA          GAGG  A  U  UU  -  A  AAG
```

>PC-5p-161292\_6  
TTGGACCTCGTTCGAATTATTTTTCGAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUGGAC-  UUC  AUUU  AAUUU
  CUCG  GAAUU  UUUCGA  \
  GAGU  UUUA  AAAGCU  U
UAAGUCA  UC-  GC--  ACAA
```

>dpu-mir-283-p3\_2ss8TG19CT  
TTGGACTGGATTAATAATATAA

**Identified by Sequence similarity**  
**Loop-structure:**

```

AA      AAU-  G   ----  UAAAAAU--  --      AAAAAACAC
AUGUCA  UU GACU  GGA      AUG  AAUGAAA  \
UACAGU  AG CUGG  CCU      UAC  UUACUUU  A
--      AAGU  G   UACA  UACUCACUU  AG      CAACUCAU

```

```

>nvi-miR-277_R+5
TAAATGCACTATCTGGTACGACATTTT

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

A      A-      -      UAAAAAU
UU  GUUUUGGAGU  CGUAUCAGA  AGUGCGUUUGCA  \
AA  CGAGACCUCA  GCAUGGUCU  UCACGUAAAUGU  U
A      CA      A      UCAUAAC

```

```

>tca-miR-304_R-1_2ss17AT22TG
AAATCTCAAATTGTAATTGTGG
>PC-5p-121263_8
AAATCTCAAATTGTAATTGTGGG

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

A      U  G  A      A      U      -  AA  UGU
UGCAUU  UAU  GAG  AAUCUCAA  UUGUAAU  GUGGG  CG  UA  \
ACGUGA  AUG  CUC  UUGGGGUU  GACGUUG  CACCU  GC  GU  A
A      U  G  A      A      -      A  GA  UAA

```

```

>PC-5p-46557_26
TCCACACCAAACATTGACTGTATT

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AG      U  CC  C  U-  A      -  C      UAUUUGU
UUGG  CG  CA  CA  UCC  CACCAAACA  UUGA  ACUG      G
GACC  GC  GU  GU  AGG  GUGGUUUGU  AACU  UGAU      U
--      C  A-  U  UU  A      C      C      UUCUGGU

```

```

>PC-3p-91476_11
CTCGTTTTTGCGATCACAACCACT

```



**Identified by Deep-sequencing  
Loop-structure:**

```

A      G      UU--      C A CU      GUG- UA
UUCGU GCAGUUUUA      UUGUGA CG CA AACGGGUA      AUU U
AAGCA CGUAAAAGU      AACACU GC GU UUGCUCAU      UAG U
-      A      CACC      A - UU      AUCA UU

```

>PC-3p-128424\_7  
TGCATTCGGAAATTGATAATGACATCACT

**Identified by Deep-sequencing  
Loop-structure:**

```

ACAU---      -      AA C A      -----      UAAUAA
      UGUCAUU UCAAUU      CG AA GUA      GUUUA \
      ACAGUAA AGUUAA      GC UU CGU      CAAGU      U
AUUCACU      U      AG - A      AUAUA      UAUAAA

```

>PC-3p-87371\_12  
TCGGATTTTGATTAGAAGCAA

**Identified by Deep-sequencing  
Loop-structure:**

```

A      GUUA----      UGA
UUCGUUGU      AGAAUCU C
AGGUAACG      UUUUAGG A
-      AAGAUUAG      CUA

```

>PC-3p-80336\_13  
TTACATAGAATTTCGAGCATCAATAATAGA

**Identified by Deep-sequencing  
Loop-structure:**

```

- AUUG      - A      GGU      CAU A
UGGG GC      AUUAUUGA GUUC AAUUC      UAUGUGG      ACU C
ACCC UG      UAAUAACU CGAG UUAAG      AUACAUU      UGA A
A      GAGA      A      C      ---      --- A

```

>PC-3p-30157\_45  
TAAATTCGATTTTGTCTTGCAG

**Identified by Sequence similarity**  
**Loop-structure:**

```
AA      A--      -      A
AAA AAUUCG  UUUUGU CUUGA A
UUU UUAGGC  GAGGCA GAACU C
AG      AAG      U      A
```

>PC-5p-146988\_6  
TTCGCTTGAATTCACAACGTTATGTACGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AA UAUU      AAACGUUUUU  UG  -  ACAA  AUG  GUU
AU      UUCUCUUUG      CGCU  AAU  UUC  CGUU  UAC  A
UG      AAGAGAAAC      GCGA  UUG  AAG  GCAA  AUG  U
AC UC--      GU-----  GU  U  CA--  AA-  ACG
```

>PC-3p-6708\_243  
TAGTGAATTTTGAATGTATTATCGATT

**Identified by Sequence similarity**  
**Loop-structure:**

```
UU      UU      AAUG      A
UUUGUGAA  UUCG      UAUU  G
AAGCACUU  AAGC      AUAG  G
--      C-      AGCA      C
```

>ame-miR-29b\_R+1\_1ss18AG  
TAGCACCATTTGAAATCGGTT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AAAAUA--  ---  GA  UGAA  U  AAAUCG  GA
      GUU  UCC  CUACA  CCAU  UG  GUUC  A
      CAA  GGG  GAUGU  GGUG  AU  UAAG  G
AAUGAUGG  AAU  AG  UAAC  C  GA----  AA
```

>isc-miR-7\_L+3R+1

ATCTGGAAGACTAGTGATTTTGTGTT

Identified by Sequence similarity

Loop-structure:

>dme-miR-7-5p\_R-2

TGGAAGACTAGTGATTTTGTI

Identified by Deep-sequencing

Loop-structure:

```
U U U U -- - GC
GGCA AU UUGUA GGAAGAC AG GAUUU UGUUGU UUU U
UCGU UG AACAU CUUUCUG UC CUAUA ACAAUA AAG U
U U - U U AA U UU
```

>api-miR-315\_R+2

TTTGATTGTTGCTCAGAAAGCCTC

Identified by Sequence similarity

Loop-structure:

```
AG CA UCG A
CCAUUUU UUUG AACAGUC \
GGUAAA AGAC UUGUUAG U
-- -- UCG U
```

>PC-3p-75494\_14

TGTTTCAACTGAATTGACTGGCTCGGT

Identified by Deep-sequencing

Loop-structure:

```
U CC C U - U GU A U UCG
CG CGGUGUCGUUG UUCAUUGAA CGACUG GC CGGUU UUCA UUGGA UAAUGGCA A
GU GCUACGGUAAU AGGUUAACUU GUUGGC CG GUCAG AAGU AACUU GUUGCCGU C
U CA U U U - UU C U UGU
```

>PC-5p-124898\_8

TGCTCTTAACTGGTCAATTCGATTGTT

Identified by Deep-sequencing

### Loop-structure:

```
GCUUUGAUUUGCUC      -      UU      -      UUU-  UG G      UGU
                UUAACUG GUCAA CGA UUG      AG U GAACU  U
                AAUUGAC CGGUU GUU GAC      UU G UUUGG  G
UAGUUUUU-----      A      UG  U      UUGU  GU G      UUU
```

```
>aae-miR-137_1ss21AT
TATTGCTTGAGAATACACGTTG
```

### Identified by Sequence similarity Loop-structure:

```
UG  C  C      UG  UAU  C  AU
GU  GC  ACG  GUAUUCU  GGU  UAACA  ACA  \
CA  UG  UGC  CAUAAGA  UCG  AUUGU  UGU  U
GU  A  A      GU  UU-  -  AA
```

```
>PC-3p-142703_6
TTGGAAGTAAGTTCTGAATGTGG
```

### Identified by Deep-sequencing Loop-structure:

```
A      UAC      G      --      G      A
CGAU  UUUCA      CCACA  UCGGAG  UGC  UUUAAG  \
GCUA  AAAGU      GGUGU  AGUCUU  AUG  AGGUUU  G
C      ---      A      GA      A      U
```

```
>PC-5p-93054_11
TTGGAGAATATTTCTGATTGAATGCCT
```

### Identified by Deep-sequencing Loop-structure:

```
G  U  AA  -      U      AA  C  UG--  C
A  UU  CU  UUGGAGAAUAAUUUC  GAUUG  UGC  UC  UAAA  U
U  AA  GG  AGCUUUUUUAAUAAAG  CUGAC  ACG  AG  GUUU  U
U  U  GA  C      -      --  U  UUCA  C
```

```
>bmo-mir-2808a-1-p3_1ss2GA
CACGATCCACTGAGA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUC      U      U      -  ---  CAUUUUU
UCAGU  CUUGUUCU  CAAUC  GU    UCG      A
AGUUA  GAACAAGA  GUUAG  CA    AGC      C
---      U      C      U  CCU  ACCUUUU
```

>bmo-mir-2854\_L-6\_1ss12TA  
 AAAACAGCAGGACGG

**Identified by Sequence similarity**  
**Loop-structure:**

```
C--      C  --      A      AAC-  C  GAC--  AGCAAAA  ACACGA
UCGAA  GU  AUAGA  CAUUAA  AG  AG  GAAUA  GCGA  C
AGCUU  CA  UGUCU  GUAAUU  UC  UC  CUUAU  CGCU  A
GCA      U  GU      G      CAAU  U  AACAA  AAAAG--  AGAAGA
```

>bmo-mir-3368-p3\_1ss2CA  
 AATAAGCGGCCGAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AU      UUAC-      A  ---  GAGCAA
CCAA  UUGCAU  UUUGGUC  GC  AUUCGAA  C
GGUU  AACGUG  AAGCCGG  CG  UAAGUUU  A
C-      UCUUA      -  AAA  AAUAGC
```

>ame-mir-3779-p3\_2ss9CA17TG  
 TCGATCAAACGGCATGG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CUU      UC  UUCACUUUU  ACAU      U      AA-----  U  U  A
GGUUCAA  AC      AACA  GUAAUUCG  CGAUCA  CGGCA  GG  GG  A
CCAAGUU  UG      UUGU  CAUUAAGC  GCUAGU  GUUGU  UC  CC  U
UCU      C-  UAACCUCU-  GGC-      U      GUUUCUUA  -  -  U
```

>ame-miR-3731\_R-6\_1ss1GC  
CAACATCGACCAAAGCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AAAGCUACA  C  CAAA  --  AU-  UACAA
          ACAU GAC  GCU  ACG  UCA  \
          UGUA UUG  CGA  UGC  AGU  A
-----  C  A---  AC  CAU  CACAA
```

>aae-miR-285-p3\_1ss7CG  
CGAAATGAGTACTGAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AG---  G  U  UU  A--  A  U  AAAUACAG
      GGU CUU UUU  UUG  UCAG AUUU UUUC  C
      CCA GAA AGG  GAC  AGUC UGAG AAAG  A
GAAGA  A  U  UU  AAA  A  U  CCAAUAU
```

>dpu-miR-263b\_L-7R+1  
CTGGAAGAATTCACAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
----  -  -  CA  G  UG A  AU  UUG  U
      CCA UCAC AUGG  AUG CAC  G AGA  UCACGGG  AU U
      GGU AGUG UACU  UAC GUG  U UCU  AGUGCCC  UA U
AUUA  G  A  AC  G  GU C  --  UUA  A
```

>bmo-mir-3294-p3\_1ss15TA  
CTGAACACAGATATA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UCACUUAA  AAA----  A  -  A  A  U
      AAAUGC  UGU UUCA UGUUUG AU UUUAU  \
      UUUGCG  ACA AAGU  ACAAU UA AAGUA  U
-----  AAUAUAG  C  C  A  A  U
```

>tca-miR-981-p5\_1ss10TC  
TACAAGACTCATATCT

UACAAGACUCAUAUC

**Identified by Sequence similarity**  
**Loop-structure:**

```
AAAAUAUAC      CUC      UUCUUCG      U
      AAGA      AUAUCA      UCG      U
      UUCU      UAUAGU      AGC      U
-----      ---      UAAUA-      U
```

>tca-miR-6007-p5\_1ss15AC  
AACAGGACTACGAACT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUCUG      CAGGAC      ACU
      AAACAA      UACGA      G
      UUUGUU      AUGCU      U
UCAA-      AGGC--      AAG
```

>tca-miR-3895-p3\_1ss4CA  
AATAGGAACCGGAAC

**Identified by Sequence similarity**  
**Loop-structure:**

```
A      C      -----      AA-      AA      ACA      CA
GUG      CA      CGGGAG      CUG      UUC      AUUU      \
CGC      GU      GCCCUU      GGC      AAG      UAAA      U
-      C      AAAAA      AAA      C-      GA-      CU
```

>dme-miR-2494-p5\_1ss8CA  
AAAGCTGAAACTTAA

**Identified by sequence similarity**  
**Loop-structure:**

```
UUCA-      ACU      A-      A-      UAA-      C      GG
```

```

UACAU      UG      UUCGC  UCU  AAUA      UC  GUUU  A
GUGUA      AC      AAGCG  AGA  UUAU      AG  CGAA  G
          UAAUG  GC-      CG  GC      UCAA  U      AA

```

```

>tca-miR-31-p3_1ss16GT
ATCCGGCCA ACTTAAT

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

AUAAUACCC  C      UUC  AA  AU  CC  GUAC
          GGC AACUUA  AUGU  AUA  CUUAC  AAU  \
          CCG UUGAAUU  UACG  UGU  GAGUG  UUA  U
U-----  U      UA--  GA  CC  U-  AAUG

```

```

>bmo-mir-3264-p5_1ss13GC
AGGGGTGAAAGGCTA

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      U  -  UU  GGG  G  A      UU  ---  U-  GAA
GAGUGG GAUU UUG  CU  UA  CUUU AACUCGAU  UGA  UGGU  CC  \
CUCACC UUAG AAU  GA  GU  GGA  UUGAGUUG  GUU  GCCG  GG  U
      -  U  CG  AA-  G  A      UU  UUA  UU  AUU

```

```

>api-miR-14-p5_1ss3AG
AGGGATAACAGGCTT

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

CGACUA-----  UG  -  A  C  C
          CU  AA  UCG  UAA  AGG  U
          GA  UU  AGU  AUU  UUC  U
GACAGUAAAAUAA  GU  U  C  -  G

```

```

>ame-mir-3728-p3_1ss14CG
CGAAGGTAGGATAGG

```

**Identified by Sequence similarity**  
**Loop-structure:**



```

      U      G      U      UG      U
GGAGUC CUAUCCUG UUU AG GAUCU C
UUUUAG GAUAGGAU GAG UU UUAGG A
      -      G      U      UU      G

```

>aga-mir-9a-p3

TAAAGCTAGCATACCGAAGTTA

**Identified by Sequence similarity**

**Loop-structure:**

```

UG  -  UU  AUCU  G      CUU
GCA CG  CUUC  UG GCUCGGUAUG  \
CGU GU  GAAG  AC UGGGUCGUAC  C
--  A  U-  CCAU  G      UAA

```

>bmo-mir-2780a-1-p3\_2ss2GT17AT

CTGGCATATCGAAGAAT

**Identified by Deep-sequencing**

**Loop-structure:**

```

GACUGCUG  UC-----  UAAACUAACU  A      UUCGAUUU  UU  U
      GCAUA      GAAGAA      AUGU AUAUGUGU      CUA  UAAA C
      UGUAU      UUUCUU      UAUU  UGUUAUAU      GGU  AUUU G
UUUA----  UUUUAAU      UUAUUUUAAU  -      UUUCCUU-  U-  U

```

>dps-mir-958-p5\_1ss15AC

TTGGCAAGTAGAATCG

**Identified by Deep-sequencing**

**Loop-structure:**

```

AA  U  AUU  U-  AA---  AAUCG-  A  A  UG      AU
ACG UGA  AUGGU  UUGGC  GUAG  GC  UUU  U  CGUCAGGA  \
UGC GCU  UACCG  AACUG  UAUC  UG  AAA  A  GUAGUCUU  C
A-  -  C--  UU  GCUAC  GCACUA  -  A  GU      CA

```

>bmo-mir-3388-p5\_1ss11AG

CTGACAAGTCGAACA

**Identified by Sequence similarity**  
**Loop-structure:**

```
AUAU   A   UUCAU   --   AACUUA
GGAAC  CAAG AUGCA  UUCGG  UGUU   \
CCUUG  GUUU UACGU   AAGCU  ACAG   U
----- A   CAC--  GA   AAAUCG
```

>ame-let-7-p3\_2ss1TA17CA  
AACGAAGTCCACTGTAAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
ACCCACCAA----- C   AAUCCAAUACUCCACAA
                UGCAG GGGC   A
                AUGUC CCUG   A
CCAACAAAAGUAACAA A   AAGCAAACCAUAAUAAU
```

>PC-5p-18400\_79  
AAGTACGGTAAATTGGAAGCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUGUUU   UG   CAAG   A-   ---   GA   UUC   GCU
          GUUUUCU  UUU   UACGGU  AAU   UG   AGCUA  UAGCU  A
          UAAAGA  AGA   GUGCCG  UUG   AC   UCGAU  AUCGA  U
-----   GU   CA--   GG   AUU  AA   ---   GGU
```

>bmo-mir-3364-p3\_1ss7TA  
AAATGAATCGTATGG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
-   U   UU   AAAA   GUUAAA   A   AAG
GUUG  AAG  AUU  CUC   AUU   UGAAUCGU  UGG  \
CGAC  UUU  UAA  GAG   UGA   GCUUAGUA  ACU  U
      A   U   GG  AGG-  AUUUAG   A   GCU
```

>dps-mir-2513a-p5\_1ss15AG

**AAGGAATAATATGAGA**

**Identified by Sequence similarity  
Loop-structure:**

```
C      --      -      GG
CGAA  AAGGAU  AAUAUGA  GUG  \
GUUU  UUUUUUA  UUAUGCU  CAU  G
      A      GC      A      AA
```

**>bmo-mir-2753-p3\_1ss1GT  
TGAAGAAGCTGGTATT**

**Identified by Deep-sequencing  
Loop-structure:**

```
GAUCAAACGUGAA      GG      UA
      GAAGCU  UAUU  \
      CUUCGA  AUAG  U
CAUAAA-----      AA      AG
```

**>bmo-mir-3429-p3\_2ss1CT17TG  
TGGACAAACGTATGATGT**

**Identified by Deep-sequencing  
Loop-structure:**

```
CAAU      U  -  -  AAA  A  GU
UUUCAGAU  CA  UG  GAC  CGU  UGAU  U
AAGGUCUA  GU  AC  CUG  GCA  GUUA  G
UCUU      U  C  G  GUG  A  AA
```

**>tca-miR-190-p3\_1ss8AT  
AGGAGTCTAACATAT**

**Identified by Sequence similarity  
Loop-structure:**

```
UA      G      -      GUCGUAA  GC---  CUU
GGAUGCU  GCGUA  AUG      UCC      CCGU  G
CUUGUGA  CGUAU  UAC      AGG      GGCA  A
--      G      C  AAUCUG-  AACCA  CAA
```

```
>PN-190-3p-12142
CCCAGGAATCAAACATATTATTA
>dme-miR-190-3p
CCCAGGAATCAAACATATTATI
```

**Identified by Deep-sequencing  
Loop-structure:**

```
GCCAAUCUCA      U      -      AU      U      UUUUUUA
      UGAUUAC  GUAA  GAUAUGUUUGAU  UCUUGG  UG      \
      ACUGGUG  UAUU  UUAUACAAACUA  AGGACC  AC      U
-----      U      A      --      C      UUAUAAA
```

```
>PC-5p-73230_15
TGGAAACTAAAAGATATGACA
```

**Identified by Deep-sequencing  
Loop-structure:**

```
A      UUUUAUCUA  UG      AC      G      AC      --      U  CC
UAAUUUAUUA      AU  UGGAA  UAAAA  AUAUG  AUGGAAUUUAG  UGCAU  GC  \
GUUGGUAGU      UA  AUUUU  AUUUU  UAUAC  UAUUUUAAGUU  GCGUA  CG  G
A      UUUCUUA  GU      GC      A      A-      UG      U  UU
```

```
>ame-mir-2944-p5_2ss10GA17CT
AAAGAATTCAGAGGAAT
```

**Identified by Sequence similarity  
Loop-structure:**

```
GA      G      CG      A-      ACAA      CA      AA
AGGUUC  AUGUU  CUUC  AAUU  UUUC  GAAUUU  \
UCCAGG  UAUA  GGAG  UUA  AAAG  CUUAAA  U
--      -      AA      AC      GAA-      A-      AA
```

```
>api-miR-317-p3_2ss8CT19CT
ATGAAATTAGAGTGAACAT
```

**Identified by Sequence similarity  
Loop-structure:**

```
U      ---      CA      GUAACA      CUAU      A
AC  CGG  UGUUCAC  UAAU      AUUAU      UCG  A
```

```
UG GCU ACAAGUG AUUA UAAUA AGC A
U UUA AG AAC--- UU--- U
```

```
>PC-3p-87515_12
TGAGACTGAATGCTAATGAA
```

**Identified by Deep-sequencing  
Loop-structure:**

```
AC AAU- -- -- UAAACA
CUCGUUCG UAUUU UUUC GAAAUUU \
GGGUAGU GUAAG AGAG CUUUAAG U
UA AAUC UC UU CAAAGC
```

```
>PC-3p-75283_15
TAGTCAGTAGAAACAAGTTCAAATT
```

**Identified by Deep-sequencing  
Loop-structure:**

```
CCUUUAUAAAAG A A --- CGAAUG
AAUU UGAAUU GU UAUUGACUAU \
UUA ACUUGA CA AUGACUGAUA C
----- A A AAG AAAAA
```

```
>PC-5p-112338_9
GGGTTCAAAGGAGAGCATGTA
```

**Identified by Deep-sequencing  
Loop-structure:**

```
AAA A C C UGUAUUA
GUUUAUC GUGGGUU AAAGGAGAG AUGUA \
UAAAUAG UACUCUAG UUCCUCUC UACAU U
C-- C C A UAGGAGU
```

```
>api-miR-184b_R-1_2ss20GA21GC
TGGACGGAGAACTGATAAAC
```

**Identified by Sequence similarity  
Loop-structure:**

```

U UA - A - CCG GAAU
CG CCCUUAUCA UUCU UCG CC UGU \
GC GGGAAUAGU AAGA GGC GG ACG U
U UC C - A UCA AGUU

```

>bmo-mir-2768-p5\_1ss11GA  
CGGGCGACCGATGAA

**Identified by Sequence similarity**  
**Loop-structure:**

```

U UACGGCGAG C GAU UU-- CU GG C-- AAG
UGG GUUUU AUGC AUG UG UG GCGA CGAUG \
GCU CAAAG UACG UAC AC AC UGUU GCUAC A
U UACAUAUA- C AU- CUUU UU A- AUA CGU

```

>PC-5p-46942  
TAGGAGAATGCAAACATGATTCATGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CA - A C ----- U A UUCAACC
UUUU AUUCGUA GG GAAUG AAACA UGAU CAUGCAA UAU \
AGUGG UAAGCAU CC CUUUA UUUGU GCUA GUAUGUU GUG U
AC A C - CCUUUGUCC - C UACUAAA

```

>ame-mir-3717-p5\_1ss2AG  
GGGAGGTGAGAGAAA

**Identified by Sequence similarity**  
**Loop-structure:**

```

A - AAAG UA - GUUUUGUG
GAG GAGAGGUGAGA GAAAA CGA CCGA CAC C
CUU UUCUUUACUCU CUUUU GUU GGUU GUG A
A A AAUG UC U AAUUUUUA

```

>dpu-miR-1\_R-3\_1ss4AG  
TGGGATGTAAAGAAGTATG

**Identified by Sequence similarity**  
**Loop-structure:**

```
AUUUU      U      A
GACU      UCGA GUAAGA G
CUGG      AGUU UAUUUU U
GGAC-     C      A
```

```
>dme-miR-1-3p_1ss6TN
TGGAANGTAAAGAAGTATGGAG
>PN-1-3p-1
TGGAATGTAAAGAAGTATGGAG
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
A-      U      C      G      GUCUU      A
CGAA    GUUCCAU CUUC  UUGCAUUC AUA      ACA A
GCUU    CGAGGUA GAAG  AAUGUAAG UAU      UGU U
AG      U      A      G      GC---     A
```

```
>bmo-mir-263a-5p_R-6_1ss5GA
AAUGACACUGGAAGA
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
GAC      GA-      UAAUUG      U
GAAUUUC  UGUU      UAGAAUU U
CUUGAAG  ACAG      GUUUUAG U
---      GUC      UAA---     G
```

```
>api-miR-263a_R-9
AATGGCACTGAAAGA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U      GGGC      CAAAA
GGAUC  CGGUGCCA  U
UUUAG  GUCACGGU  A
-      AAA-      AACU
```

>ame-mir-3735-p3\_2ss2CG17AC  
TGGACGAACAAAACCACT

**Identified by Sequence similarity**  
**Loop-structure:**

```
UUA   C   AA   A   CGA
  UUGA GAACA ACC CU  \
  AACU UUUGU UGG GA   G
---   -   CG   C   AUG
```

>PC-5p-179810\_5  
CGAGAATTGAAGACAATTGATGGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
---   -   -   AAGA   GA   CA   GUG   AA
  CAUCGUUU CGAG AAUUG   CAAUU UGGU  GUU   UGA   C
  GUAGUAAA GUUC UUAAC   GUUGA ACCG  CGA   GCU   A
CAC           A   A   ----   AG   UC   AGA   AU
```

>dme-miR-4917-p5\_1ss9TA  
GATGGCCGAGGAAGA

**Identified by Sequence similarity**  
**Loop-structure:**

```
-   CA AA CCG   A   -   G   CC   UC   AUUACGC   C-   C
GC GUCAC UC CC   UCGGCCAG GUG GC UG GU GACAAGU   CGAU AGGC G
CG CAGUG AG GG   AGCCGGUC CAC CG AC CA UUGUUCG   GCUA UCCG A
C   A- AA ---   -   G   G   --   CU   GGA----   CA   C
```

>api-miR-316-p3\_2ss9GC18AG  
ACAGCAAACCTGAAAGAGGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U   CU   UGCUUAC   C   --   UA
UCUAU GAU GUCUUUUUC   UGC GUC UAUU C
AGAUG CUA CGGAGAAAG   ACG CAG AUAA U
```



```
- CU UCAA--- A CU UU
```

```
>mja-mir-6490-p3_1ss15CT  
GAAACGGGAAGAGCTCAGC
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
-- A GGG UGCU AG UUU UUU--- UA  
GCAA AC AAGAGC GCA CGAU UCAUU GC \  
CGUU UG UUUUCG UGU GCUG AGUAG UG U  
AU G AA- UUAU G- UU- UUGUUU AU
```

```
>rmi-mir-5326-p5_2ss10TA18AC  
CGGAAGAACATCAAGAACA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
GAAC AUA AAAA--- CA AUG  
AUG UUGAU CG UC A  
UAC AACUA GC AG A  
GUA- AAG CAAGAAG AA AAC
```

```
>bmo-mir-6496-p3_2ss5GA18AC  
AGTAACGGCGAGCGAACC
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
G - C G AACA UA CCAG  
UCCUUUA UAG CGG GA CGA GGA AGC C  
AGGAGAU GUC GUC CU GCU CCU UCG A  
G A - - GG-- C- AAUC
```

```
>ame-mir-3757-p5_1ss3AC  
GACAGAGAAAGAAGA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

GAUA      AGACAGA      AGAA      AG      G-  UAU  UG  UG
      UAGAG      GAAAGA      UGUGGCA  UAUUUU  UG  UU  GA  \
      AUCUC      CUUUUU      ACGCCGU  GUGAAA  AU  AA  UU  A
AAA-      -----      GC--      AA      GA  UGU  GU  CA

```

>dme-miR-4939-p3\_1ss14AG  
AAGAGGACGACGAGAAC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AAAGAGGACGA      ACAAAA      AAUACAG
      CGAGA      AUGCA      A
      GCUCU      UGCGU      C
UAGAAAAAA--      CCAG--      AAAGAAG

```

>PC-5p-162349\_6  
TACACACTGGAGAATACAAGCGGATGATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

UCCAAA      ---      AC-      G      U
      UACA      CACUGGAGAAU      AAGC  GAUGAUU  \
      AUGU      GUGAUCUUUUA      UUUG  UUACUAG  A
-----      UUA      GCA      G      G

```

>dme-miR-4911-p5\_1ss9AG  
GGAGGAGCGAAGTGGC

**Identified by Sequence similarity**  
**Loop-structure:**

```

      G      G  C      GUU-----  U  AA  A--  -----  CAAG  A
GCA  CGAGAAG  AG  GAAGU      UUG  UUU  AUUU  UGAUCG      UCGU  UUCA  U
CGU  GCUCUUU  UC  UUUUA      AGC  AAA  UAAG  AUUAGC      AGCG  AAGU  G
-      G  U      AUAUGAU  U  AG  AAA      UUAAAAG  AAA-  U

```

>ame-miR-3741\_L-3R-3  
AGAGGGGGAGAGAGAA

**Identified by Sequence similarity**

## Loop-structure:

```
AGGGACAAA  A-  GG  AG      GAG
          GAG  GAG  GG  AGAGA  U
          CUC  CUU  CC  UUUCU  A
UUA-----  AA  A-  GA      ACA
```

```
>dme-miR-252-5p_L+3
ATCCTAAGTACTAGTGCCGCAGGAG
>dme-miR-252-5p_R+1
CTAAGTACTAGTGCCGCAGGAGT
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
>aae-miR-252-5p_L+1
CTAAGTACTAGTGCCGCAGGAG
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
GAAAA      UC      AGU  C      AGAGAU
      CGAUUCUUU  UAAGUACU  GC  GCAGG  \
      GUUGAGAAA  AUUCGUGA  CG  CGUCC  A
-----      CU      ACC  U      CCAAAU
```

```
>dme-miR-4977-p3_2ss5AG17GA
GTGGGGCGACGAGAACA
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
AUC      A  UAAU  C      AG  ----  CG  U  UUUUUCCAU
      GUUC  UC      G  UUGCC  AC      AU  UG  GC      C
      CAAG  AG      C  AGCGG  UG      UA  AC  CG      G
A--      -  ----  -      AA  AAU  AU  U  UUUACCUA
```

```
>PC-5p-167220_5
TTAAGTAGGCCGTAGTAGGCAC
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
A      UCC-      U      GC  AGU      C-  UG
```

```

UUGC    UGUUGU AAGUAG CGU  AGGCA AUU  U
AACG    AUAGCA UUCAUC GUA  UCCGU UAG  U
-   CAUC      U      UA  GCU    AU  UU

```

```

>dme-miR-995-p3_1ss16AC
TTCGTGGTACAGGATC

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

UCC    A-  A   AGA  AGGA  -  -   GAA
GUU    GAAA AC UCUG  UGA  CCGU CU UGAA  \
CAA    CUUU  UG AGGC  ACU   GGCA GG GCUU  U
      UUA    AG  -   GCG  AG--  U  U   ACG

```

```

>tca-miR-3874-p5_1ss11TG
AAGTGGCAGAGTGGC

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

AGAG    CAA-   GC  AG  C  -----  UGU
GUGGA   UGG   AGUG AA  UGG AGA   GUGGAAGAG  \
CGCCU   ACU   UCAC  UU  AUU UCU   UACUUUUUU  A
      ACA-   AAAG   AA  CU  -   AUUAAG   UAU

```

```

>tca-miR-3811a-p3_1ss15TC
TGGAGACCTGGGGGC

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

AUCC-   C    AC    U    UUUUAUAG  -   UU  AC-   GAA
      UGU GAUAA  AUAAGU UUUUUUUG      CGAU AUUCA  GCC  GUC  U
      AUA CUAUU  UAUUUU AAAAAAU      GUUA UAAGU  UGG  CAG  U
AUUUU  A    AU    U    UA-----  C    CG  GUC  AGG

```

```

>dsi-mir-137-p5_1ss4CA
TGGACACGTGTATGCT

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

      AUGUUG-      A GAA- AA- AUG ACG U      A
AUUGGCCGGA      AGCGA UU      AG AC GAC UG AUGCUC \
UAACUGGUCU      UCGCU AG      UC UG CUG GC UGUGAG A
      GUUAUCA      A AAGG GAA CAA CUA -      A

```

>tca-miR-3840-5p\_L-2R-4\_1ss16TC  
GGGGTACTGTAAGCA

**Identified by Sequence similarity**  
**Loop-structure:**

```

AUUUAC-      GA
      UAUUUUAUAGUCU \
      AUGAAUGUCAUGG U
ACUUUAC      GC

```

>dsi-mir-957-p3\_1ss4TG  
CTGGGAGGCGTGAGC

**Identified by Sequence similarity**  
**Loop-structure:**

```

AUGGGA - GUC UCUG - U UU
      GCGC UGA UGU GGUG C GU \
      CCGC ACU ACA CCGC G CA U
CGG--- A --- UCCA C C UU

```

>aae-miR-286b-2-p3\_1ss6CG  
AACTGGTGTGCAGTT

**Identified by Sequence similarity**  
**Loop-structure:**

```

AACUCCAAACUG      CA AC UAACU UG AG
      CCAUU AUCG UGUU GG UGC \
      GGUAA UAGU ACAA CC ACG U
AAAAACAUGUA-      C- A- UU--- CG UG

```

>ame-mir-6040-p3\_2ss13CT17GT  
GTACGGGCGAGTATTGGTA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U      G  A  -  AC-  UA
AGUAC GGC GUAU UGGU  GGU  A
UUAUG CCG CAUA ACCA  CCA  U
-      A  -  U   CAA  CU
```

```
>tca-miR-3888-p3_1ss5GA
TTCCACGTGACGTAG
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
-  C  -  A-----  AAA  C  GU  -----  CAACUU
UAU GGUU UACUACG      UGAUUC  UU  CAC  GACG      UAGCUG  \
AUA CCGG AUGGUGC      AUUAAG  AA  GUG  CUGU      AUCGAC  U
U  A  U      CGAGCAGA      AUG  A  AU  GAGAGG      CACCAG
```

```
>api-miR-275_L+3
AAATCAGGTACCTGAAGTAGCGCG
>ngi-miR-275_R+2_1ss23GC
TCAGGTACCTGAAGTAGCGCGCCAT
>der-miR-275_R+7
TCAGGTACCTGAAGTAGCGCGCGTGGGCC
>aga-miR-275_R+5
TCAGGTACCTGAAGTAGCGCGGCTATA
>aae-miR-275-3p_R+7
TCAGGTACCTGAAGTAGCGCGGTTAT
>dme-miR-275-3p
TCAGGTACCTGAAGTAGCGCGCG
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
U      G  AGAAUA      UU  U
GU UCUU AGG      UGAAAGU  AUAG  U
CA AGAA UCC      ACUUUCG  UGUU  A
U      G  AUGG--      U-  A
```

```
>PN-970-3p-29472
TCATAAGACACACGCGGCT
>dme-miR-970-3p
```

TCATAAGACACACGCGGCTAT

**Identified by Deep-sequencing  
Loop-structure:**

```
      A   UC       U   UUGAAUG
CAUUGGCCGUAGCUG CGU  GUCUUUAU GGUA      A
GUAGCCGGUAUCGGC GCA  CAGAAUA  CUAU      U
      -   CA       -   UAAAAACA
```

>PC-3p-122413\_8

TATAGTTAACCACCAAACCC

**Identified by Deep-sequencing  
Loop-structure:**

```
UUUCUUCUUUUUUUU  UU       U- C       UU       UUGAAAU
      UAA  AGCUAUCA  GU  UUUGGUGGUU  AGCUGUAUG  U
      AUU  UCGGUAGU  CA  AAACCACCAA  UUGAUUAC  U
UUUUACUUU-----  UU       CC -       U-       UAAAGUA
```

>PC-3p-78294\_14

TCGGTACGTAATAGCCAACACAATGACGT

**Identified by Deep-sequencing  
Loop-structure:**

```
C  A      GC      U  A  C      CCU      CGC      UCA
AA  GUCAUUG  UGUU  G  CU  UUAU  CCGAU  UGC      G
UU  CAGUAAC  ACAA  C  GA  AAUG  GGCUG  ACG      U
U   G      --      -  C  U      CAU      AC-      CUU
```

>PC-5p-190912\_5

TGCCGGAATAATCTTGAACCACAGTCT

**Identified by Deep-sequencing  
Loop-structure:**

```
UU--      AUAA  U      CA  -  U  -  GU
      UUGACGGA  UC  UGAACCA  GU  CU  UC  AU  \
AAUUGCCU      AG  AUUUGGU  UA  GA  AG  UA  U
UGAU      ----  U      AA  C  U  A  AA
```

>PC-3p-25832\_54  
TGCAGTAAAAACGACGAATGTTTGAGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AA  UAUU      -----      U   C   GA   U   C   UA
AU   UUCUCUUUG      AAACGUUU UCG UU  AUU CA AACGU  \
UG   AAGAGAAAC      UUUGUAAG AGC AA  UGA GU  UUGCA  U
AC  UC--      GUGCGAG      C   A   AA   C   A   UG
```

>dme-miR-277-3p  
TAAATGCACTATCTGGTACGACA

**Identified by Sequence similarity**  
**Loop-structure:**

>der-miR-277\_L+3  
ATCTAAATGCACTATCTGGTACGACA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUUA      A-      -      UAAAAAU
GUUUUGGAGU CGUAUCAGA AGUGCGUUUGCA  \
CGAGACCUCA  GCAUGGUCU UCACGUAAAUGU  U
AA--      CA      A      UCAUAAC
```

>PC-3p-91570\_11  
TATGATTGCCGGCAAAGCGCAAACCTTTGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AGUAAA      C   U   G   U   GCAA      CGU   CA
CAUUGUUUGAA CUGC AGGUU G CGCU      CGGCAAUCAUA GUGUGA  A
GUAUUAAACUU GACG UUCA  C  GCGA      GCCGUUAGUAU  CACACU  A
-----      A   U   A   -   AACG      AC-   AG
```

>PN-124-3p-18  
TAAGGCACGCGGTGAATGCCAA

**Identified by Deep-sequencing**



### Loop-structure:

```
UUGC  AAAAA  UU  C      C      AG  G      UUCGA
      GC     CGUUU  CUC  UGGUUAU  CACUGU  GCCU  UAUG  U
      CG     GCAAG  GAG  ACCGUA  GUGGCG  CGGA  AUAC  A
----- AAUA-    C-   A      A      CA      -      UUAAA
```

>dme-miR-193-3p

TACTGGCCTACTAAGTCCAAC

### Identified by Deep-sequencing Loop-structure:

```
CUUACC      CA      A      UU  A      A      ---  GAU
      AACUUUU  AUUGAG  UGGGAUUU  UGG  CCAG  AGU  CA  A
      UUGAAAA  UAACUC  ACCUGAA  AUC  GGUC  UCG  GU  U
-----      AG      A      UC  C      A      UAC  AAA
```

>PC-3p-188305\_5

TTGGCAACTGAAGACACCACAGATGT

### Identified by Deep-sequencing Loop-structure:

```
A      CC      A  UC      UU  UUU
GCGUUU  GGUGUU  UU  UUGUCGA  GUU  \
UGUAGA  CCACAG  AG  AACGGUU  CGG  U
-      CA      A  UC      U-  UUU
```

>dme-miR-263b-5p\_R+2

CTTGGCACTGGGAGAATTCACAG

### Identified by Sequence similarity Loop-structure:

>hme-mir-263b\_R+2\_1ss23GA

CTTGGCACTGGGAGAATTCACAAAA

### Identified by Deep-sequencing Loop-structure:

```
UA  G      CU      UG      A      U-  AU
UUGU  UG  UGAAU  UGGCAC  GGAGA  UUCACAG  UGUU  U
AACA  AC  ACUUA  ACCGUG  UUUCU  AGGUGUC  AUAA  U
      UC  A      AC      UU      -      UU  GU
```

```

>tur-mir-263a-p5_2ss19GA20GA
CACTGGAAGAATTCACGGAAA
>ame-miR-263a_L-1R+1_1ss2TA
AAAATGGCACTGGAAGAATTCACG
>dan-mir-263a_1ss2TA
GATAATGGCACTGGAAGAATTCAC
>aae-miR-263a-5p_L+3
CCTAATGGCACTGGAAGAATTCACGG
>isc-miR-263a_L+3R+4
ATCAATGGCACTGGAAGAATTCACGGGA

```

**Identified by Sequence similarity**

**Loop-structure:**

```

>dme-miR-263a-5p
AATGGCACTGGAAGAATTCACGGG

```

**Identified by Deep-sequencing**

**Loop-structure:**

```

----  -  -  CA  G  UG A  AU  UUG  U
      CCA UCAC AUGG AUG CAC G AGA UCACGGG AU U
      GGU AGUG UACU UAC GUG U UCU AGUGCCC UA U
AUUA  G  A  AC  G  GU C  --  UUA  A

```

```

>tca-miR-2796-3p
GTAGGCCGGCGGAAACTACTTGC

```

**Identified by Deep-sequencing**

**Loop-structure:**

```

      U  -  U  CCA  U
AAGAGUC GUGGCAGG GGUUUCU UCGGCCU GCAGAUU \
UUUUUAG UACCGUUC UCAAAGG GGCCGGA UGUCUAA G
      C  A  C  ---  A

```

```

>cqu-mir-79-p3
TAAAGCTAGATTACCAAAGCAT

```

**Identified by Deep-sequencing**

**Loop-structure:**

```

AC  CGC  G  UAGAA

```

```

UU  AUGCUUUGG  UUUAGCU UAUGA  A
AA  UACGAAACC  AGAUCGA AUACU  C
AU  AUU  A  UUAUA

```

>PC-3p-10416\_151  
TAAATCGAGACAAGAGAAGAATTCGCCCT

**Identified by Sequence similarity**  
**Loop-structure:**

```

U      UUAGUU      U  ----  ACC      CCCACGUUA-      C      CAA
GAACU      UAAGUU GCU      UGG  UUUUUC      UUGAUU AAUU  \
CUUGA      AUUUAA CGG      ACU  AAAAAG      AGCUAA UUA  G
-      CUACUU      C  CUUU  AAA      AAGAGAAAAG      A      AAA

```

>PC-5p-27661  
TGAAATCGTACAGCGCATTGAAGATA

**Identified by Sequence similarity**  
**Loop-structure:**

```

CUGG-----      A      AAA      G      G
      CAGUGU GUUG      ACGAGU CGU  \
      GUUACG CGAC      UGCUCA GUA A
ACUUUAUAAA      -      A--      A      A

```

>PC-5p-107918\_9  
TCGAGAAACACTCTGCACAAATGAGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CAUA      U      U      AGAC      ---  C      GC      G
      UUCAGAAU UGA AUCG      AUCGAGA  AA ACUCU  ACAAU A
      GAGUUUUU ACU UGGU      UAGCUUU  UU UGAGA  UGUUUU G
AA--      C      -      AU--      AAU  U      AU      A

```

>dme-miR-957-3p\_R-1  
TGAAACCGTCCAAAACCTGAGG  
>PN-957-3p-2138  
TGAAACCGTCCAAAACCTGAGGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
GAAUCGAUA--- C   UG   G       A   G   UG   A   C   A
          CA UCUG GGC UUAGUUUUG ACGG UUU  GU  UG AUUU U
          GU AGAC  UCG AGUCAAAAC UGCC AAA  UA  AC UAAA U
AACAAACAUGCG -   GU   G       C   -   GU  A   -   A
```

>PC-3p-30842  
TAGAGATTGACCATACGGAGAGCAGT

**Identified by Sequence similarity**  
**Loop-structure:**

```
UAU--  GC   --   GAAC  A       GGG--  U  AC
      GGC  UGCCAU AAAUU  AU  CGGAGAGCC  GUA GC  A
      CCG  GCGGGUA UUUAA  UG  GUCUUUUGG  CAU  UG  U
AAUAU  GU   AC   AAA-  A       AUAUA  -  CA
```

>aga-miR-286\_R+4\_1ss21GT  
TGACTAGACCGAACACTCGCTTCCAAA

**Identified by Sequence similarity**  
**Loop-structure:**

>PN-286a-3p-8969  
TGACTAGACCGAACACTCGCGT  
>dme-miR-286-3p\_3ss20TC22CT23TC  
TGACTAGACCGAACACTCGCGTC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U      AA--  -       A   UUGCAAU
CAGGGCG  UGU  CGGUUUGGU ACUG      A
GUCUGC   ACA  GCCAGAUCA  UGAC      A
U      GCUC  A       G   CUAUAAU
```

>tca-miR-279d-3p\_R-4\_2ss18GA19TG  
TGACTAGATCCATACTCAGCT

**Identified by Sequence similarity**  
**Loop-structure:**

```

C           A  AA  ----- G  UGA
AUUGUUUUUGAUGAGUG GGG  UAGUU  UC CAUUA  A
UAAUAAAAUUACUCAC  CCU  AUCAG  AG GUAUU  U
A           A  AG  UGUUCA  -  CCA

```

>PC-3p-4533\_369  
CAAGTACGGACATATGGGGATC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CA  UUUU-- C  AA  GA  A  CUGA  G
UUUCA  AC GA  CCCGUA  UCCG ACUUGUG  AUU A
AAAGU  UG CU  GGGUAU  AGGC UGAACAU  UGA U
--  UUUAGU  C  AG  AC  A  UG--  A

```

>isc-miR-184\_L+2R-1  
CATGGACGGAGAACTGATAAGGG  
>cqu-miR-184\_R+4  
TGGACGGAGAACTGATAAGGGCGTGG  
>dme-miR-184-3p\_R+1  
TGGACGGAGAACTGATAAGGGCA  
>hme-mir-184\_R+4  
TGGACGGAGAACTGATAAGGGCATT

**Identified by Sequence similarity**  
**Loop-structure:**

>api-miR-184a  
TGGACGGAGAACTGATAAGGGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AUCUC  CC  U  UA  -  A  -  CCG  GAAU
      GGC  GC  CG  CCCUUAUCA  UUCU  UCG  CC  UGU  \
      CCG  UG  GC  GGGAAUAGU  AAGA  GGC  GG  ACG  U
-----  C-  U  UC  C  -  A  UCA  AGUU

```

>dme-miR-970-3p\_R+4  
TCATAAGACACACGCGGCTATAAAC

**Identified by Sequence similarity**  
**Loop-structure:**

```

UUCC      -      AUGAU          A   UC      U      UUGAAUG
      GAAA CGAUA      CAUUGGCCGUAGCUG CGU   GUCUUAU GGUA      A
      CUUU GCUAU      GUAGCCGGUAUCGGC GCA   CAGAAUA CUAU      U
UACA      A      -----      -   CA      -      UAAAAACA

```

>PC-5p-38482\_33

TAAGAACAACAAGGTGACAACGGATCT

Identified by Sequence similarity

Loop-structure:

```

AA   C   AG   -   CU-   CCUUU
  GAA ACA GUGACA ACGGAU   UCCAUC   C
  CUU UGU UACUGU UGCUUA   AGGUGG   A
A-   U   --   C   UAC   UCCUC

```

>PC-5p-89075\_12

ACAAAACAACCTGAACGGTGCT

Identified by Deep-sequencing

Loop-structure:

```

-      AAA G   AACAAAA   AAC U U   A   -----   GAU   AGAAAAC
CGUGU  GU UGU      CAACUG   GG GC   UCGU CUUG      GUUGU   UGUG   \
GUACA  CG GUA      GUUGGC   CU UG   GGCG GAAU      UAACA   GCAU   A
G      GC- G   AAGAG--   AAA U -   A   UUAGAAGG   ACU   CAAAAUA

```

>aae-miR-2944b-5p\_L-1\_1ss23AG

AAGGAACTCCCGGTGTGATATG

Identified by Deep-sequencing

Loop-structure:

```

      C   A   AA   -   CC   -   UU   C
GUAUAC AG UA   AGG AACU   CGG UGUGAUAUG   CAA A
CAAUAG UU AU   UCC UUGA   GUC ACACUAUAC   GUU U
      A   A   CG   A   A-   G   C-   U

```

>aae-miR-11-5p\_L+2

CGAGAACTCCGGCTGTGACCTGTG

**Identified by Sequence similarity**  
**Loop-structure:**

```
A      A      U      C-     GCG
UACCGA GCCGGC GUGA  CUGGC  \
GUGGCU CGGCCG CACU  GGCCG  C
-      G      -      UC     GUC
```

>PC-5p-113098\_9  
ATCGATTGAAAACACCCGGGAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
AA      AAAA- GA      A      CCG  - C  UA
GGCCG      UC  UUGGA AACAC  GG AA UGC  \
UCGGC      GG  AGCCU UUGUG  CC UU AUG  A
--      GAAAA AC      G      AGA  A  C  GU
```

>aae-miR-2940-3p\_L+1  
TGTCGACAGGGAGATAAATCACT

**Identified by Sequence similarity**  
**Loop-structure:**

```
GGCU      U  G-  U  AUCC  A      ACG
AUCCAUU UG  UA  UGA  AUUUC AAUGUC  \
UAGGUAA AC  GU  ACU  UAGAG UUAUAG  U
----      U  GA  C  AAA-  G      CUU
```

>PC-3p-87214\_12  
TCGGGCTCGAGATCAACTGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AA      AUUA  C      UG  U      GA  A      UUG
GAU      UA  ACAUGACUUU  A  UUGAUUUUG  UUC  AAAUUU  C
CUUA      AU  UGUUAUUGAAA  U  AACUAGAGC  GGG  UUUAAA  A
AA      ACG-  A      GU  C      UC  C      CAA
```

>PC-3p-67091\_17

TCAGGATTCAGATCAGGAAGATC

**Identified by Deep-sequencing  
Loop-structure:**

```
      UUU-  ---      CA A  ---      A  GCUGCA      AAUU
UAAUGU   CCA   CCUGGUU  CC GAUUU  UCCUGG UUC   CCAGAUGCA  C
GUUACA   GGU   GGACUAG  GG CUAGA  AGGACU GAG   GGUCUGCGU  A
      UAACA  UCA      AA  A  CUU      A  -----  GCCA
```

```
>api-miR-281-p5_1ss24TA
AAGAGAGCTATCCGTCGACAGTAAAA
>bmo-mir-281-5p_R+4
AAGAGAGCTATCCGTCGACAGTATTT
>dme-miR-281-2-5p_R+2
AAGAGAGCTATCCGTCGACAGTAC
>tca-miR-281-5p_R+5
AAGAGAGCTATCCGTCGACAGTATATT
>PN-281-5p-61569
AAGAGAGCTATCCGTCACAG
```

**Identified by Sequence similarity  
Loop-structure:**

```
>tca-miR-281-5p
AAGAGAGCTATCCGTCGACAGT
```

**Identified by Deep-sequencing  
Loop-structure:**

```
A      UGAAA      UA-  C  A  AU
CGAAUA      AUGAAGAGAGC  UCCGU GACAGU GGG  U
GCUUGU      UAUUUCUCUCG  AGGUA CUGUCA CUU  U
-      CAUC-      UUA  -  -  AG
```

```
>bmo-mir-71-5p_R+4
TGAAAGACATGGGTAGTGAGACG
```

**Identified by Sequence similarity  
Loop-structure:**

```
GUUCGC  A  -----  U
      UCA UACUCA      AUGUCG A
      AGU AUGGGU      UGCAGC U
-----  G      ACAGA      G
```



>aae-miR-375-p5

ACTTAAGCCCAACGTACAGAACT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AUCUAUAUUUUGCA--      A-      UU
                        GUGUG  UUGG  \
                        CACAU  AACC  C
AAAGAAAAAAUUCAAA      GC      CU
```

>PC-3p-183826\_5

GTGAAACATATCGAGAAGCCTGCC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U      AAA  A-      AAGCC  CAG
GUGUG  CAU  UCGAG      UGC  A
UACAC  GUA  AGUUC      ACG  A
-      GUA  AA      AUUA-  UUG
```

>PC-5p-14103\_108

CCGGATGACAGTCTCAAACGGTC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AAAC--      -  A  AU  C      CA  G  CC      C      AA      GU  A
      GCGAU  UUA  AUA  UU  AAUAAG  UG  UACA  CGGAUGA  AGUCUCA  CGGUC  UAU  A
      CGUUA  AAU  UAU  AA  UUAUUC  AC  AUGU  GCCUGCU  UCAGGGU  GCUAG  AUA  U
AUACUA      U  A  AC  C      --  A  UU      U      G-      AC  U
```

>PC-5p-121318\_8

GCCCGGAACAAATTCTAAACGCTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
-      AGCC  -  -      GUAC  G
AUGUG  CUGCUAUC      CGGA  ACAA  UUCUAAACGCUU  AAC  G
UACAC  GCGGUGG      GCCU  UGUUU  AAGAUUUGCGAA  UUG  A
```

U AAGA A C AAA- A

>PC-5p-92404\_11  
CTTCGGAACCAATGACACTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
      C      UUU  UU      UAC  -   CA      CUCCC
UGAUU AUUCGG  AA  UUGGG  AGUG CAUU  UUCCG  \
AUUAA UAAGCC  UU  AACCU  UCAC GUAA  AAGGC  A
      U      ---  UU      ---  A   CC      UUCUU
```

>PC-3p-4679\_359  
ACTGCGATCCACTGAAACT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U-  -   U---  GUA      UAGA      CUG
GC  UAGG      GUU  AGUGG      GCAG  C
CG  AUCC      CAA  UCACC      CGUC  C
UU  U      UAAU  AG-      UAG-      AUA
```

>dme-miR-8-5p\_L-2R+2  
TCTTACCGGGCAGCATTAGACC  
>aae-miR-8-5p\_R+3  
CATCTTACCGGGCAGCATTAGAT  
>dpu-mir-8-p5\_1ss1TA  
ATCCATCTTACCGGGCAGCATTAGA

**Identified by Sequence similarity**  
**Loop-structure:**

>aae-miR-8-5p  
CATCTTACCGGGCAGCATTAGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUUUAAA      G  UGUUC      -   G      C      ACUA  GAA
      AAGGGC  UC      ACAUCUU  ACC  GGCAG  AUUAG  AU  \
      UUCUCG  AG      UGUAGAA  UGG  CUGUC  UAAUC  UA  U
CAA-----  -   CCUGC      A   A      A      GCA-  AAU
```

>dme-miR-285-3p\_1ss21GC  
TAGCACCATTTCGAAATCAGTCC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
  A  U  A  GG      AA  UUG-----  C  --      GCAAAU
AUCCG UU GAG ACUGA UCGAGUGGUG UAGA          UUG CAUUUG UUGAAU  \
UAGGC AA UUC UGACU AGCUUACCAC AUCU          AAC GAAAC AACUUA  A
  -  U  C  AA      G-  UAAAGGUUUUAA  -  UU      AAGUAA
```

>dme-miR-956-3p\_2ss15TC18TA  
TTTCGAGACCACTCCAAACCATT

**Identified by Sequence similarity**  
**Loop-structure:**

```
A-----  G  A  ACGAA  AAAAAAGAAAAGA
      AAC AAUG GU      UGUG  \
      UUG UUAC CA      ACAC  G
AAUCACA  -  -  AACC-  CAAAAAAGAAC
```

>aae-miR-965-p5  
GGGGGAAATCCTGTACGCTGTATG

**Identified by Sequence similarity**  
**Loop-structure:**

```
      AGAAGUC-  CUGUUU  UU U  --  U  AUCAUUC-  AUUCUUU
AUAUAUUUA      AGCGU  UUUU  C UUUG  UACAUU  CAC      GC  \
UGUUUUUAGU      UCGCA  AAAG  G AAAC  AUGUAU  GUG      CG  C
      AUGUAAAA  AGUCCU  GG U  CU  -  ACAAAAUA  AAUUUA
```

>PC-3p-140735\_7  
TCGGAAAGGTTGGACTTTAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUC  GAUU  A  UG  GUA  UUUGU  GAG-  U
```

```

UUCA   GG U  AU   UUUG   GAUUGGG   AGU A
AGGU   UC G  UG   AGGC   UUAGCUC   UCG U
---    AAUU  A GU  GAA   UGU--    AAGA  G

```

```

>PC-3p-192357_5
TCGGCTTGAGTAATCAAATG

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

      UUA   GC   U       AAUA   --   ACG
GGAUGCUAU  UUCA  ACU CGAGUCGA   UUCGA  AUC  U
CUUAUGGUG  AAGU  UGA GUUCGGCU   AAGUU  UAG  U
      UA-   AA   -       A---   AC  ACU

```

```

>bmo-mir-3210-p5_2ss16GA18TC
GGCTGCTCTTGA ACTATCA

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

UA   AUU  UA-   U   UGAACUA--  G
AUUGA  CAG  AAUUGC GCUAU   UCAU A
UAAUU  GUC  UUAAUG CGGUA   AGUA C
--   ---  UGA   -   CAAAGUUUA  G

```

```

>PC-3p-134791_7
TTCGAATTTCTCCGAGCCAAACT

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

U       UCA  U   C       U   U   U
UUUUUUGGA  UUU  GUU  GGCUCGGAGAAAUUU  AAUU  GC  C
AAAAAACUU  AAA  CAA  CCGAGCCUCUUUAAG  UUAG  UG  A
-       UGC  U   A       C   U   G

```

```

>dme-miR-276a-5p_L-1R-1_1ss10AT
AGCGAGGTTTAGAGTTCCTAC
>PN-276b-5p-1588
AGCGAGGTTTAGAGTTCCTACG

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AA      C      A      UUA      UUCAAU
AGAACAU CCAG AGCG GGU GAGUUCUACG A
UUUUGUA GGUU UCGU CCA UUCAAGGAUGC U
A-      C      G      UAC      UUAUUU

```

>tca-miR-981\_R+1  
TTCGTTGTCGACGAAACCTGCAA

**Identified by Sequence similarity**  
**Loop-structure:**

```

GAG      AUAU      ----      UGAAUC      -      A      C      GUUAUAAA
CAU      UG      GACAAUGUA      GGGUUUCG CGAUAA CG AC      \
GUG      AC      CUGUUACAU      UCCAAAGC GCUGUU GC UG      U
AA-      AACU      AAAA      UGCAUU      A      -      U      ACUAAAAG

```

>dme-miR-iab-4-5p  
ACGTATACTGAATGTATCCTGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

UG      -      U      A      C      AA-      U      C      AG      CU
GAU UU GUG CA UUCGU ACGUAUACUGAA GUAU CUG UG \
CUA AG CAC GU GAGCA UGCAUAUGACUU CAUA GGC AU A
A-      C      C      A      U      CAA      C      U      CU      CU

```

>aae-miR-283-p3\_2ss19CA21AG  
CGGAATTCCAACCTGATATACGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

G      C      CA      A      U      CUUUUAUG
CAUUU GAAAAGU AUAUCA UUGG AAUUCUGGG \
GUAAA UUUUUUG UAUAGU AACC UUAAGGCUU A
A      -      CA      C      -      UUGAUUGU

```

>PC-3p-63524\_18

TGTAATCCCATTCGTCGACATCGAAT

**Identified by Deep-sequencing  
Loop-structure:**

```
AACCA      -      U  U      UAA
  AUUCGA GUUGG CG GAUG  \
  UAAGCU CAGCU GC UUAC  U
-----      A      -  -  CCU
```

>PC-5p-64389\_18  
TATTTTAACCGAGTCGAGCCGATATAAGC

**Identified by Deep-sequencing  
Loop-structure:**

```
C-      G  U      C      --  G      GCU
  GAAU UA UUUAA CGAGUCGA  GCC AUAUAA  C
  CUUA GU AAGUU GCUUAGUU  CGG UAUGUU  U
UU      -  C      A      AA      -      AAU
```

>dsi-mir-2577-p3\_1ss3CT  
ATTCGATCCCCAGGAA

**Identified by Deep-sequencing  
Loop-structure:**

```
UGUU-      GA      CG-- UA      GACC  UAUUUU  C      GA--  C  UUU
  UGGUUUCA  AAGC  A  CCGU  GCAG  CAA CAAUUUC  GA UGA  U
  AUUAAAGU  UUCG  U  GGUA  CGUU  GUU GUUAAGG  CU GCU  C
UAAUC      A-      UUA  GG  AUUU  UGU---  U      ACCC  A  UAC
```

>dme-miR-932-5p\_R+1\_1ss10TA  
TCAATTCCGAAGTGCATTGCAGT

**Identified by Deep-sequencing  
Loop-structure:**

```
UGC      U  A      AA  A      GUUAAAACA
  UUGGAGACGGC  UCA UUCGG  GUGC UUGCAGU  U
  AAUCUUUGUCG  AGU AGGGC  CACG AACGUCA  G
A--      U  G      GG  -      AAAAAGAUA
```

>dme-miR-252-3p\_L-1R+3\_1ss22TC  
CCTGCTGCCCAAGTGCTTATCATT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AAA          UC          AGU  C          AGAGAU
  CGAUUCUUU  UAAGUACU  GC  GCAGG      \
  GUUGAGAAA  AUUCGUGA  CG  CGUCC      A
---          CU          ACC  U          CCAAAU
```

>dme-miR-219-5p  
TGATTGTCCAAACGCAATTCT  
>PN-219-5p-6916  
TGATTGTCCAAACGCAATTCTTG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUAUACU    U  UC    U    AAC          UGAUUAUU
  UUUC AGC  UGAU GUCCA  GCAAUUCUUG  \
  AAAG UCG  GCUG CAGGU  UGUUAGGAAC  U
CAU-----  C  UU    -    CUA          UGAACAUU
```

>dvi-miR-10-p3  
CAAATTCGGTTCTAGAGAGGTTCT

**Identified by Sequence similarity**  
**Loop-structure:**

>cqu-miR-10-3p\_R-1  
CAAATTCGGTTCTAGAGAGGTT  
>PN-10-3p-3  
CAAATTCGGTTCTAGAGAGGTTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AACC          CU    -  G    U          -----  A
  AUGUUCUACAU  ACC  CU  UAGA  CCGAAUUUGUU  UGAC  U
  UACAGGGUGUG  UGG  GA  AUCU  GGCUUAAACAG  AUUG  A
AGUA          UU    A  G    U          CAUAAA  A
```

>aae-miR-305-3p\_R-1  
CGGCACATGTTGGAGTACACTT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AA  A  -      CUAU      U  G  CU  AAUA
    UUU GUC CCAUGU  UGUACUUCA CA GUGCU GGU  U
    AAA CAG GGUGUA  ACAUGAGGU GU CACGG CCA  U
AA  A  U      ACUC      U  G  C-  ACGU
```

>PC-3p-39750\_32  
AGCTGGAACAGTTGATAGTAC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AGC      A  GA  ACAUG  G
  UGGAAC GUU  UAGU  AUUUG A
  AUUUUG CAA  AUUA  UAAAU A
---      C  AA  AACUA  A
```

>PC-3p-22471  
GGATCAAGAGATTGTCGGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
A--      G  AAGA  GG-----  CGA  GG UC  U
  CUACG AUC  GAUUGUC  UUCGAGUC  UCG  A  GAA U
  GGUGC UAG  CUGAUAG  AAGUUCAG  AGC  U  CUU U
UAG      A  A---  AUGGUUAAAA  AUA  UU U-  U
```

>ame-miR-317\_R+3  
TGAACACAGCTGGTGGTATCTCAGTATT

**Identified by Sequence similarity**  
**Loop-structure:**

>dme-miR-317-3p\_1ss21-T  
TGAACACAGCTGGTGGTATCTCAGT

**Identified by Deep-sequencing**  
**Loop-structure:**



```

-- U----- UC UG - -- G UAUUUUUAA AA
GUACAA AUG UG CAAUU CUGGGGUACU CC CUGUG UCGCUU AUGU \
CAUGUU UAC AC GUUAA GACUCUAUGG GG GACAC AGUGAA UACA U
AC UAAAAU GA GU U UC A ----- AC

```

```

>aga-mir-308-p3_2ss15AT17GA
AATGGTCAAATCACTGAA

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

UUUUUAUUAUAA A-- AAUA
      UUCA AUUUGCUUAUUG \
      AAGU UAAACGGGUAAC U
UUUUUA----- CAC CACU

```

```

>PC-3p-140441_7
TATATCCATCTCATCAGAACTGGTTTCGA

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

UAAUUC UG UU C A
      ACCA UUUGGU GUG UGGAUUAU C
      UGGU AGACUA UAC ACCUAUUA U
UAGCUU CA C- U U

```

```

>aga-mir-2-1-p5_2ss13GA17CT
CTGTCTCTCAAATGGT

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

GC CUCUCA AUA UAU C U A CUC U---- A CAA
AAAUUCU UGU AAAUGG CGU UCC GAA ACGG UUUCU AUGA AC AGCCA \
UUUAAGA ACG UUUGCC GCA AGG CUU UGUC GAAGG UACU UG UUGGU G
A- UUAUA- GA- U-- C - A UUU UAGCU A CAG

```

```

>PC-5p-176370_5
CTCTCAAATGACTGTGAAATG

```

**Identified by Deep-sequencing  
Loop-structure:**

```
U--      UG G      UCA      A      A      UUG U
  ACUUU G UUAAGCUC AAAUG CUGUGA AUG AU C
  UGAAA C GGUUCGAG UUUAC GACACU UAC UA C
UCU      GU -      UAG      C      A      UUA U
```

>dme-miR-999-3p

TGTTAACTGTAAGACTGTGTCT

**Identified by Deep-sequencing  
Loop-structure:**

```
G G CAA - UG A      C AC - UA
GA GA UACA GU ACG AGACAUAGUCU ACAG AAUAUU GUG \
CU CU AUGU CA UGU UCUGUGUCAGA UGUC UUGUAA CGC U
- A AAC A GU C      A AA U GU
```

>dme-miR-929-5p\_R-1

AAATTGACTCTAGTAGGGAGT

**Identified by Deep-sequencing  
Loop-structure:**

```
CAUC      U AA      A      AG      CUUGUAA
  ACCUAU UG AUCAA UUGACUCU UAGGGAGUC \
  UGGAUA AC UAGUU AACUGAGG AUCCUCAG C
AAC-      U AG      A      CA      UUAAAAA
```

>ngi-mir-283-p3\_2ss16CA17TC

GTATCCGGTTACGAAAC

**Identified by Deep-sequencing  
Loop-structure:**

```
C      ---      UUAC-      C
AU GUAU CCGG GAAA A
UA UAUG GGCC CUUU U
A AAU CUGAU A
```

>PC-5p-105242\_10

TGCATGTCCAGGTATGAATTACGAACC

### Identified by Sequence similarity

#### Loop-structure:

```
UUUCUUUUC      - - A UA  UU  U      UG
                GUUGAAU G UGC GG  UGAA  AUG GUUGAUUG  \
                CGGCUUG C ACG CC  GUUU  UGC UAACUAAC  U
AACUAAA--      U G  A  CG  CU  -      CU
```

>PC-5p-187937\_5

TTTGTCTTAAGCTGTACGAGGC

>PC-5p-12784

TTTGTCTTAAGCTGTACGAGGCA

### Identified by Deep-sequencing

#### Loop-structure:

```
AAU      --      AGC      -      UG  AA
  UUAUUU  GUCUUA  UGUA  CGAGGCAA  AG  U
  AAUGAG  CAGAAU  ACAU  GCUUUGUU  UU  U
CAA      AU      CAA      U      GU  AC
```

>dps-mir-277\_R+3\_1ss23AT

TAAATGCACTATCTGGTACGACTTTT

### Identified by Sequence similarity

#### Loop-structure:

```
AUUA      A-      -      UAAAAAU
  GUUUUGGAGU  CGUAUCAGA  AGUGCGUUUGCA  \
  CGAGACCUCA  GCAUGGUCU  UCACGUAAAUGU  U
AA--      CA      A      UCAUAAC
```

>PC-3p-15921\_93

CTGTACGATCTGCTAACTTGTA

### Identified by Deep-sequencing

#### Loop-structure:

```
CA  AA  UU-      UG  G      CG----  CA
  GAA  AGGC  UUGCGAUG  AG  UAGUAGGUUGUAUAGUA  GAUA  U
  CUU  UUCG  AGCGUUAU  UC  AUCGUCUAGCAUGUCAU  UUAU  A
AA  AA  CUU      GU  A      CAUACA  AA
```

>dvi-miR-274\_L-1R+2\_1ss25-C  
TTTGTGACCGACACTAACGGGTACGTGG

Identified by Sequence similarity  
Loop-structure:

>dme-miR-274-5p\_R-1  
TTTGTGACCGACACTAACGGGT

Identified by Deep-sequencing  
Loop-structure:

```
A      G      UU--      C A CU      GUG- UA
UUCGU GCAGUUUUA      UUGUGA CG CA AACGGGUA      AUU U
AAGCA CGUUAAAGU      AACACU GC GU UUGCUCAU      UAG U
-      A      CACC      A - UU      AUCA UU
```

>dme-miR-184-3p\_R+6  
TGGACGGAGAACTGATAAGGGCTTATAT

Identified by Sequence similarity  
Loop-structure:

```
CC U UA      - A - CCG GAAU
GC CG CCCUUAUCA UUCU UCG CC UGU \
UG GC GGGAAUAGU AAGA GGC GG ACG U
C- U UC      C - A UCA AGUU
```

>PC-3p-117296\_8  
TCGGGATGTGACAATGCTTCGGGAT

Identified by Sequence similarity  
Loop-structure:

```
AGC --      CA U U CAUU- UU - U
ACC AUCUCGA UAUU UCAC UCUU      UUUC UUUA ACA C
UGG UAGGGCU GUAA AGUG AGGG      AAGG AGGU UGU C
--- AU      UC U U CUUAU UU C G
```

>dya-miR-31a\_R+7  
TGGCAAGATGTGGCATAGCTGATACTGAA

>aae-miR-31\_1ss1TA  
AGGCAAGATGTGGCATAGCTGA

**Identified by Sequence similarity**  
**Loop-structure:**

```
AAAUU      CG U-   AA   C           CAU----- A
      AUGCAU AA  UGGC GAUGU GGCAUAGCUGA       UC A
      UACGUA UU  ACUG CUACA CCGUAUCGGCU       AG A
-----    AA  UC   AC   -           AUCCAUU C
```

>PC-3p-190861\_5  
TGTACAGGATGTGATGAGATTGGAGC

**Identified by Sequence similarity**  
**Loop-structure:**

```
UG  GG  ---  UG  ---  A  A
AAU GAU  GUGA AGAU  UGGGU UGU A
UUG UUA  CGCU UCUG  GCUUA ACA A
--  UU  GUU  GU  UUA  G  U
```

>PC-3p-76957\_14  
TGAGATCCAAAATGCGAAATAATTGTT

**Identified by Sequence similarity**  
**Loop-structure:**

```
AU      -      --  UA      --      AAAUAAUA
UGAAAA ACGAUU UU  UAUUUU AUCUCA      \
ACUUUU UGUUAA AA  GUAAAA UAGAGU      A
--      A      UA  GC      CC      AAAUGAAU
```

>PC-5p-88605\_12  
TGGACGAGAATGAAGCGGAATATTTATTC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UG      --  AC      GAAG      A--      AUGAGGA
GGCA  UGG  GAGAAU      CGGAAU  UUUAUUCG      \
CCGU  ACC  CUCUUA      GCCUUA  AAGUAAGC      G
--      AG  AA      A---      AUG      GAAGCAA
```

>PC-5p-142719\_6  
TGGGACACGCAATTAATGAAGT

**Identified by Deep-sequencing  
Loop-structure:**

```
AA          C          G U    UAU
AUGGGGAACUUCAUAUGGGACA GCAAUUAUGAA UA ACUU  U
UACCCCUUGAAGUAUACCCUGU CGUUAGUUUUU AU  UGAA  A
--          A          A U    UUA
```

>dme-miR-8-3p\_R+1  
TAATACTGTCAGGTAAAGATGTCC  
>nlo-miR-8\_R+4  
TAATACTGTCAGGTAAAGATGTCCTGA  
>isc-miR-8\_L+3  
ATCTAATACTGTCAGGTAAAGATGTC

**Identified by Sequence similarity  
Loop-structure:**

>aae-miR-8-3p  
TAATACTGTCAGGTAAAGATGTC

**Identified by Deep-sequencing  
Loop-structure:**

```
AUUUAAA      G  UGUUC      -  G      C      ACUA  GAA
      AAGGGC UC      ACAUCUU ACC GGCAG AUUAG      AU  \
      UUCUCG AG      UGUAGAA UGG CUGUC UAAUC      UA  U
CAA-----      -  CCUGC      A  A      A      GCA-  AAU
```

>PC-3p-84989\_12  
TCAGGTAAC TGTGAATATGCAAATTGCC

**Identified by Deep-sequencing  
Loop-structure:**

```
GU      CAA  UU      ACUU      GU
UAUUUG  GUU  GGGCAA  UAUGUUCAGCAGUUGCU  U
AUAAAU  UAA  UCCGUU  GUAUAAGUUGUCAAUGG  U
--      AUA  CU      AAAC      AC
```

>PC-3p-50597

TGGATTAATGTGATCGTCAGAAAATA

**Identified by Deep-sequencing  
Loop-structure:**

```
UAAUUA      GA  ----  -   CAA  UUC
      UAUUUUC  AUG   UAUUA UCCAG  UGU  \
      AUAAAAG  UGC   GUAUU AGGUC  ACG  U
ACUCA-      AC  UAGU   U   C--  CCU
```

>tca-miR-137-3p\_L-1R+1

TATTGCTTGAGAATACACGTAG

**Identified by Deep-sequencing  
Loop-structure:**

```
AA  UA  UG  C  C      UG  UAU  C  AU
AACU GU  GC  ACG  GUAUUCU  GGU  UAACA  ACA  \
UUGG CA  UG  UGC  CAUAAGA  UCG  AUUGU  UGU  U
--  --  GU  A  A      GU  UU-  -  AA
```

>PC-5p-152747\_6

TGAATTTAGGCCGCGTGAATTAAGACC

**Identified by Deep-sequencing  
Loop-structure:**

```
AAAAACCG      UUAG  C   UAAGAC  C   AAUGA
      CAGUGAAU  GCCG  GUGAAU  CGC  UAUGG  \
      GUCACUUA  UGGU  CGCUUA  GUG  GUAUC  A
AA-----      ----  -   CA-----  C   GAGUG
```

>PC-3p-69791\_16

TGTAGGATTAATGACGTGGAACC

**Identified by Deep-sequencing  
Loop-structure:**

```
AAAACG      UU  ---  G  C-  -  CCUU-  UUUU
      UUAA  UCAU  UUUCAUG  CA  AAUCC  AU  CUG  U
      AAUU  AGUG  AAGGUGC  GU  UUAGG  UG  GAC  C
```

ACUA-- UU UCC A AA A UCACU UAAG

>aae-miR-9c-3p\_1ss11GA  
TAAAGCTTTAATACCAGAGGTC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C      C      CU      CU      G      UGUUUUUA
AUUUUUG UGAG CUUUGGUAUU AGCU UAGAU \
UAAAAGC AUUC GAGACCAUAA UCGA AUCUA A
-      -      UG      UU      A      UGUGUUAU
```

>dme-miR-9a-3p\_L+1\_1ss13TG  
ATAAAGCTAGCTGACCGAAGTTA

**Identified by Sequence similarity**  
**Loop-structure:**

>PC-3p-2392\_719  
ATAAAGCTAGTTGACCGAAGTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
      CC      U      U      G      G      AUA
GAUGCUA GUUG CUUUGGUUA CUAGCU UAUGA UGU \
CUGC GAU UAAU GAAGCCAGU GAUCGA AUACU GCA A
      UA      U      U      A      -      GGU
```

>PC-5p-56048  
TCGGAATTGCTCAGTAAGTTGGTGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UU--- UAUU AU C- -- U UUG
      UUUG AUCGGA UG UCAGUAA GU GGUG \
      AAAC UGGUCU AU AGUUUUU CA CCAC A
UAUAU UC-- CU CU AA C UAA
```

>PC-3p-26867\_51  
TCGAGAAGATATGAGACAATTGGTGT



**Identified by Deep-sequencing  
Loop-structure:**

```

-   A   -----   U   -   UGU   CA   UAUU   U
GGAU UCUACCA   ACAUCA UU UCUU   AUGUUU   UUG   AGUG \
CCUA AGAUGGU   UGUGGU AA AGAG   UAUAGA   AGC   UUAC A
A   A   UAUGAUAAU   U   C   ---   AG   UUUU   C

```

>PC-3p-91336\_11  
AAAATTGGAGAAGTCCGGAGTG

**Identified by Deep-sequencing  
Loop-structure:**

```

           C   GGC
GCGACAUUCCGGACUUCUCCAA UUUUC   U
CGCUGUGAGGCCUGAAGAGGUU AAAAG   U
           A   AAC

```

>PC-3p-36814  
TACGATTATCAGATGATGCTTGAAC

**Identified by Sequence similarity  
Loop-structure:**

```

UAAUUGA   C   GUUC-   UC   A
  UGUGUCA CAUUAUU   GUA   GAUG U
  ACACAGU GUAGUAG   UAU   CUAC G
-----   C   ACUAAU   UA   U

```

>dpu-miR-iab-4-5p\_L+3  
TGGACGTATACTGAATGTATCCTGA

**Identified by Sequence similarity  
Loop-structure:**

```

U   A   C   AA-   U   C   AG   CU
GUG CA UUCGU   ACGUAUACUGAA   GUAU CUG   UG \
CAC GU GAGCA   UGCAUAUGACUU CAUA GGC   AU   A
-   A   U   CAA   C   U   CU   CU

```

>dme-miR-iab-8-5p\_R-3  
TTACGTATACTGAAGGTATA

>miR-iab-5p-24979  
TTACGTATACTGAAGGTATACCG

**Identified by Deep-sequencing  
Loop-structure:**

```
U   GUCG   U   AC   UU           G   A   G   UAGA
GAU   GUG CA   UCGUG   ACGUAUACUGAA   GUAU CC   GA   U
CUA   CAC GU   AGCAU   UGCAUAUGACUU   CAUA GG   CU   A
-   AAA-   U   GA   U-           A   -   A   CACG
```

>PC-5p-30305  
TGTTATATGACGATACGTTCGGTAA

**Identified by Deep-sequencing  
Loop-structure:**

```
AAUUUUGUU   A   CGA           A   G
      AU UGA   UACGUUCGGU   ACA A
      UA ACU   AUGUAGGCUA   UGU A
----- G   UAC           G   A
```

>PC-5p-57282  
TATTGTACGACGGTTAAGCGTGTATG

**Identified by Deep-sequencing  
Loop-structure:**

```
C-   UA   -----   --   A---   UU   CUA
GC   UGU           UCAAGCCAU   ACAU   AGCCGUU   UACG   U
UG   ACG           GGUUCGGUG   UGUG   UUGGCAG   AUGU   A
UA   GC   CAAGCUUAU           UA   CGAA   C-   UAU
```

>bmo-mir-3333-p3\_1ss10GA  
TGTTGCCGTAGTAAGAA

**Identified by Deep-sequencing  
Loop-structure:**

```
GC   -   UAACA   UC   C   UUUCAACUU
AUCAAUUUUUU   AC   AUGGU   AACG   ACAG GG   G
UGGUUGGAAGA   UG   UGCCG   UUGU   UGUC   CU   A
```

A- A ----- CC - UUCUUUACA

>PC-5p-180209\_5

CTGGGATGGTATGTCGAAACT

**Identified by Deep-sequencing  
Loop-structure:**

```
AAACU GG ----- A U
      G AUGGUA UGUCGAA ACUU G
      C UACCAU ACAGCUU UGAG U
CUU-- UU GGUU A C
```

>PC-5p-173845\_5

TATAGTGTAGAAGCTTGCGAA

**Identified by Deep-sequencing  
Loop-structure:**

```
AUCCC--- A UA----- C A GA
      ACU UAGUG GAAGCUUG GA UG A
      UGA GUUAC CUUUGAGU UU AC U
UAAGCUAC C UCCCC U A AC
```

>PC-5p-39757

TAATGTAGAGCATTGGCGCAATTTA

**Identified by Deep-sequencing  
Loop-structure:**

```
C A ----- GCAAU UG A
  UUA UGUAGAGCAUU GGC UUUA GUUG A
  AAU GCGUCUUGUAA UCG AGGU UAAC C
- C AGUAUGC AGCU- UU A
```

>PC-3p-48401\_25

TACGAGAGTTGAATGCGATGCGTCCGTT

**Identified by Sequence similarity  
Loop-structure:**

```

AGAGAGAGA   GUU-   AU
             GAGA   GAAUGCG G
             CUUU   UUUACGU U
AUUAA----- AAGU   CG

```

>PC-5p-19199  
TAGAGGATTCGGAAGTTTCGGAAGTT

**Identified by Sequence similarity**  
**Loop-structure:**

```

C-----   AA   A- UC   GUAAAA
           AUU  AAACU CG  UCCU   \
           UAG  UUUGA GC  AGGA   U
AUUGAACU   GC   AG  UA   AAGUUU

```

>aae-miR-100-p3  
CAAGAACGGATGTATGGGATT

**Identified by Sequence similarity**  
**Loop-structure:**

```

AUUCUUUAUACCAUU   UGUAUGG   UC   UC- C A
                   UUGGA   GAU  UUGACGA  CG CA C
                   GACCU   CUA  AAUUGCU  GU GU C
CC-----          UUUCUUA  U-   UUA  A  A

```

>PC-5p-2635\_653  
TCAATTGTAAACGACT

**Identified by deep-sequencing**  
**Stem-loop structure:**

```

UA   UU   A-   GC   GCC
AUCA AGGUU UUGCGAU UGGU  \
UGGU UUCAG AAUGUUA ACUA  C
--   --   CA   --   AAG

```

>tca-miR-3894-p3\_1ss4TC  
AATCAATTGTAAACAA

**Identified by deep-sequencing**  
**Stem-loop structure:**

```

      G      U      --      GAUG      UG-      ---      UU      U-      GUG
UCG AAUUG GUUC CCGUU      UGCA      GA      AAAGAUAU UAUC UGUUUUGG G
AGU UUAAC CGAG GGUAA      AUGU      CU      UUUUUUAU AUAG AUGAAUC C
      G      U      UU      ACAA      UAA      AAU      --      CC      AUA

```

>dpu-mir-12-p3\_1ss2CA  
TAAACGGTCAACATTT

**Identified by sequence similarity**  
**Stem-loop structure:**

```

U      A--      U      GUA      CAA      UU      AUA
AUGUGUUGUC      AAUGA GUUAAA      AACGGU      CA      CA      G
UGUACAAUAG      UUACU UAAUUU      UUGCUA      GU      GU      U
-      CAC      -      AC-      AG-      UC      GCU

```

>dwi-mir-287-p3\_2ss3AC19TC  
TTCCAATTATTGTAAATGC

**Identified by sequence similarity**  
**Stem-loop structure:**

```

GA      AUG      CCCUG      AG      UUUU
GUA      UAAAA      GGAAU      UUA      \
CGU      AUUUU      CCUUA      AGUU      A
AC      AA-      AUUAA      G-      CUGA

```

>PN-304-5p-46155  
AAATCTCAAATTGTAATTGTG

**Identified by deep-sequencing**  
**Stem-loop structure:**

```

A      U      G      A      A      U      -      AA      UGU
UGCAUU UAU GAG AAUCUCAA UUGUAAU GUGGG CG UA \
ACGUGA AUG CUC UUGGGGUU GACGUUG CACCU GC GU A
A      U      G      A      A      -      A      GA      UAA

```

>dme-bantam-3p\_L-5R-1\_1ss22TA  
UCAUUUUGAAAGCUGAA

**Identified by Sequence similarity**  
**Loop-structure:**

```
UC      AAUCA-   AAC      C      UU      U      GUU
AUUUGUAUUC   UUUUAU   ACGAAA   CAGUUUUCGA   UGAUUUUUA   CUUU   U
UAAACAUAAG   AAAUA    UGUUUU   GUCGAAAGUU   ACUAGAGU   GAAA   U
--      CCACAA   ---      A      UU      -      AAA
```

>dme-bantam-3p\_L-5R-1\_1ss22TA  
TCATTTTGAAAGCTGAA

**Identified by deep-sequencing**  
**Stem-loop structure:**

```
-      GUU      C      AUCCG-   GUAA      U      C
GC CAUGGU   UUUA   GUU      CCAAUUUAUC   UUA AAGUUA C
CG GUGCCA   AAGUU   UAA      GGUUUAGUAG   AGU UUCGGU U
A      ---      U      GUUUAA   AA--   -      U
```

>ame-mir-3716b-p5\_1ss2GA  
TAAAATTGAAGAACT

**Identified by deep-sequencing**  
**Stem-loop structure:**

```
A      -   UG  --      GAA-   U
CAAU U   G   UAAAAUUGAA   CUG G
GUUA A   U   GUUUUAAUUU   GAC U
-      C   GU  UU      AAUG   A
```

>ngi-mir-927-p3\_2ss1TA17CA  
ATTTTAAATGGCAAAGA

**Identified by Sequence similarity**  
**Loop-structure:**

```
GC      U      A      UCAAU      CU      CUA
UUU GAAU UUGU   UAUUUG   GAUCAUG   A
AAA CUUG ACG   GUAAAU   UUAGUGU   A
UA      U      A      -----   U-      AUU
```

>dme-miR-2500-p5\_1ss11TC

CGTTTGAATTCCAAAT

**Identified by deep-sequencing  
Stem-loop structure:**

```
UA-  A  UU      C      UUU
     GA  GU  GAAUUC AAAUG  \
     CU  UA  UUUGAG UUUAC  G
CAA  A  CC      -      UGA
```

>bmo-mir-3386-p5\_1ss7TA  
ATGCCAATTGAATTT

**Identified by deep-sequencing  
Stem-loop structure:**

```
  G  -  ---  A--  UUG  GU  GUUA  AUGUCC  A  UUUC  A
UU  UCGG  C  GUUUA  GCGUU  UG  AAUUUGU  UUGUCG  GGGUGU  UUA  UUUGA  U
AA  AGCC  G  UAAGUU  CGUAGA  AC  UUAGACA  AACGGC  CUUACA  AGU  AAACU  A
  A  U  GUU  AAC  CA-  UG  A---  GA-----  G  UUU-  U
```

>ame-mir-3733-p5\_1ss3AC  
GTCGATAGAATAATG

**Identified by deep-sequencing  
Stem-loop structure:**

```
A----- G -      GA  AUA  AAUAU  CG  GA
      CU  G  UUGAGGUC  UAGA  AUG  UUUCUUU  AUUUU  \
      GA  U  AACUUUAG  AUCU  UAC  AAAGAAA  UGAAA  A
AGAAA  G  G      AC  C--  CU-----  AU  GU
```

>dsi-mir-2584-p3\_1ss11CA  
AAAAAGAGGTATATT

**Identified by Sequence similarity  
Loop-structure:**

```
AG  U      A  GAA  ----  A-  C  -  AUGAAAU  A  CAA
  GAA  GAAUAU  UU  AACUC  GUGCCUCUUUU  CA  UC  CAA  GU  CGC  U
  CUU  CUUAUU  AA  UUGAG  UAUGGAGAAAA  GU  AG  GUU  UA  GCG  C
--  U      A  AAG  AAUA  AA  A  U  GU-----  A  UAA
```

>ame-mir-3765-p3\_2ss9AG17CT  
TGAAATATGAATATATT

**Identified by deep-sequencing  
Stem-loop structure:**

```
      UAU  A      U      AUAUG-  G
AUGAAA  GA  UAUAUUU  GAAUU      ACA  C
UACUUU  CU  GUAUAGA  CUUAA      UGU  A
      UU-  -      -      AAACAA  A
```

>bmo-mir-2810-p5\_2ss11CG19GT  
GAGAGATTTTGGAGAACAT

**Identified by Sequence similarity  
Loop-structure:**

```
UUACCUAUUC  -  UU      C  -  ----  GAA----  UUUU      -  GA
      CGG  CGCA  UUUGG  AAA  GA      UUUUGGA  CAUU      UUUUUGGAC  CU  \
      GCC  GUGU  AAACC  UUU  CU      AAAGCUU      GUAG      GAAAACUUG  GG  U
ACUUUA-----  A  U-      A  A  UAAA      ACCAUA      UC--      U  GG
```

>tca-miR-3809-p5\_2ss2TA17GT  
AAGAATTCTGATAAATTT

**Identified by Sequence similarity  
Loop-structure:**

```
AA-----  AAACUUUUC      A  U  UAA  UC
      UACCUC      AAUU  GUC  GA  AUUC  \
      AUGGAG      UUAU  UAG  CU  UAAG  A
AACAGA      GCAUACC--  A  U  ---  AA
```

>bmo-mir-3406-p3\_2ss12TC17AC  
ACAATTAATTCAGAAC

**Identified by Sequence similarity  
Loop-structure:**

```
UG      C      U-  GA      CG
UCUA  AAUUAA  UCA  ACGAGU  U
GGAU  UUGGUU  GGU  UGCUCG  U
--  A      UC  A-      AG
```



>tca-miR-3853-5p\_L-3R-4\_1ss10TG  
TGTATTGTGTGAAAT

**Identified by deep-sequencing  
Stem-loop structure:**

```
UUAG      --      A      AAUAA-      GC-      GUUU
UCGAAAA  GUUUUA AUAGUA      ACGAAU  CGGAAU  \
AGCUUUU  UAAAGU UGUUAU      UGUUUU  GUUUUA  G
CAG-     AA      G      GUUAAG      ACA      AAAU
```

>bmo-mir-2852-p3\_2ss7TG17CT  
TGAATTGTTTGAGAACT

**Identified by Sequence similarity  
Loop-structure:**

```
CUUA      U      AGAA      UGU      U
CAUUU     UGUGAAU GUUUG      GAAAA      GUU U
GUAAA     AUACUUA UAAGU      CUUUU      CGG U
AAUA      C      GCGC      UUU      U
```

>dps-mir-276c-p3\_1ss7CA  
TGGATTACTGTTATGAAA

**Identified by Sequence similarity  
Loop-structure:**

```
CA-      ACA---  CUU      U      C-      U-      AAU      UU
UUCAA     UAUUGC      UCC      AUGA UA  UGU  AUGAUACAA  CUAG  U
AAGUU     AUGACG      AGG      UACU AU  AUA  UGCUAUGUU  GGUU  U
ACG       GCUUAA  C--      U      CU      CU      GU-      GU
```

>dps-mir-2504\_L-1R-6\_1ss13AC  
TAAGGATTAAGCTTA

**Identified by deep-sequencing  
Stem-loop structure:**

```
CC---      --      UC      U-      UGUCA
UCCAUA      AUCU  AGAUU  CAUU  GUGUA  A
AGGUAAU      UAGG  UCUGA  GUGG  UACAU  U
```

CGAAU AA UA UU UUUCU

>rmi-mir-5316a-p5\_1ss5GC  
TTCCCGTTGAATTGAAT

**Identified by deep-sequencing  
Stem-loop structure:**

```
      --  AU-    U    UA---  G    UUA
AAAAUGGUA  CAA  GAUGG GAAU    AA GAU  \
UUUUACCGU  GUU  UUGCC CUUG    UU CUG  A
           AA  AAG    -    UUAAC  G    UAA
```

>dps-mir-2524-p5\_1ss7AG  
ATGTTGGATTAAATA

**Identified by deep-sequencing  
Stem-loop structure:**

```
-   ACAU--  UG  A  UGG  AUAA
CGAU      AUU  AUA UCU  AUCC  \
GUUA      UAG  UGU AGG  UAGG  A
G   AUAUUU  GU  A  UUA  GCUA
```

>ame-miR-125\_R+2  
CCCCTGAGACCCTAACTTGTGACA  
>PC-5p-59350\_19  
TCCCTGAAACCCTAATTGT  
>aae-miR-125-5p\_R+2  
TCCCTGAGACCCTAACTTGTGAAA  
>PN-125-5p-55364  
TAATCCCTGAGACCCTAACTTGTGA

**Identified by sequence similarity  
Stem-loop structure:**

>dme-miR-125-5p\_R-2\_1ss16CT  
TCCCTGAGACCCTAATTGT

**Identified by deep-sequencing  
Stem-loop structure:**

G A UG UC U CCCU -- GUC

UUGU GC AU CC GAGA AAUUUGUGA CU G  
 AACACG UA GG CUCU UAAAACACU GA A  
 - G GU U- C AGCU UU AUU

>dme-miR-100-5p\_L+6R-1\_1ss15AG  
 CCGTGGAAACCGTAGATCCGAACTTGT  
 >ame-miR-100\_L+2\_1ss24GT  
 CCAACCGTAGATCCGAACTTGT  
 >api-miR-100\_L+2R-1\_1ss5CT  
 ACGATCCGTAGATCCGAACTTGT  
 >dan-miR-100\_R+5\_1ss9AG  
 AACCCGTAGATCCGAACTTGTGATGTT  
 >bmo-miR-100\_R+3  
 AACCCGTAGATCCGAACTTGTGAAC

**Identified by sequence similarity**  
**Stem-loop structure:**

>dme-miR-100-5p\_R-1\_1ss9AG  
 AACCCGTAGATCCGAACTTGT  
 >tca-miR-100-5p\_L-5R-3  
 GTAGATCCGAACTTGT

**Identified by deep-sequencing**  
**Stem-loop structure:**

UUUU-- C AA GA A CUGA G  
 UUUCA AC GA CCCGUA UCCG ACUUGUG AUU A  
 AAAGU UG CU GGGUAU AGGC UGAACAU UGA U  
 UUUAGU C AG AC A UG-- A

>dvi-miR-10\_L+2R+1  
 TCACCCTGTAGATCCGAATTTGTT  
 >tur-miR-10-5p\_L+2R+1  
 ATCACCCTGTAGATCCGAATTTGTT  
 >tca-miR-10-5p\_L-1R+5  
 ACCCTGTAGATCCGAATTTGTTAAAA  
 >dpu-miR-10\_R+3\_1ss12TA  
 TACCCTGTAGAACCGAATTTGTACT

**Identified by sequence similarity**  
**Stem-loop structure:**

>dan-miR-10\_R+1

ACCCTGTAGATCCGAATTTGTT

**Identified by deep-sequencing  
Stem-loop structure:**

```
CUAAUUU   CGAACC   CU   -   G   U   -----   A
GAAG      UCAU     AUGUUCUACAU ACC CU UAGA CCGAAUUUGUU   UGAC U
UUUC      AGUA     UACAGGGUGUG UGG GA AUCU GGCUAAAACAG   AUUG A
AACUAU-   -----   UU   A   G   U   CAUAAA   A
```

>cqu-let-7-5p\_R+2\_1ss6TN  
TGAGGNAGTTGGTTGTATAGTAT  
>tca-let-7-5p\_R+4\_1ss9TC  
TGAGGTAGCAGGTTGTATAGTAAA  
>ame-let-7\_L+3  
TGGTGAGGTAGTAGGTTGTATAGT  
>hme-let-7\_L+5R-1  
CGTGGTGAGGTAGTAGGTTGTATAGT  
>dwi-let-7\_R+5  
TGAGGTAGTAGGTTGTATAGTAAAAA  
>aga-let-7\_R+7\_1ss10TA  
TGAGGTAGTAGGTTGTATAGTTCCGTGG  
>PC-5p-19011  
ATATGAGGTAGTAGGTTGTATAGT

**Identified by sequence similarity  
Stem-loop structure:**

>dme-let-7-5p  
TGAGGTAGTAGGTTGTATAGT

**Identified by Sequence similarity  
Loop-structure:**

```
AAA      UU-      UG   G      CG----   CA
AGGC     UUGC GAUG AG UAGUAGGUUGUAUAGUA   GAUA   U
UUCG     AGCGUUAU UC AUCGUCUAGCAUGUCAU   UUAU   A
AA-      CUU      GU   A      CAUACA   AA
```

>dme-miR-966-p5\_2ss9TG17TG  
GTGGGCTGGGTGGCTGGGG

**Identified by Sequence similarity  
Loop-structure:**

```

GCGA  --   AGCU  AA-   G   C   U
      AGG  UCAG   UUG  AUUCAG CUACC ACG G
      UCC  AGUC   AGC  UGGGUC GGUGG UGC G
CCUA  AU   CU--  AGG   G   -   A

```

```

>ame-mir-3776-p5_1ss1AC
CGGGGCAGGAGGAGGGG

```

**Identified by Sequence similarity**

**Loop-structure:**

```

      GAA   AACGAG  GG   GA  AGG--  -----  GAA
UUUUGC  UAAAU   GG  GAG  GG   GGG   GGGG  U
AAAACG  AUUUA   CC  UUC  UC   CCC   CCCC  A
      AA-   GGAA--  UU   GG  GUAAA  AAGUAAAG  GAA

```

```

>bmo-mir-306a-p5_1ss5GT
GCGGTGCGCCGCTC

```

**Identified by Sequence similarity**

**Loop-structure:**

```

A-   C  A  UAUCA   A  U  A   UCGGC   AU
      AAC CU UC   CAGC CC AC CCGG   CGCCGG  \
      UUG GA AG   GUCG GG UG GGUU   GCGGCC  G
GC   U  -  CAA--  C  -  C   CUUA-   AA

```

```

>hme-mir-6302-2-p5_3ss5AC17GA18GC
GTGGCGGTTGACGGGGAC

```

**Identified by sequence similarity**

**Stem-loop structure:**

```

AAAA  UG   GAAAU   AAAA   A   U
      UCU  AUUAU   UCAA   GUUAC GUU  G
      AGG  UGGUA   AGUU   CGGUG  UAA  U
AA--  GU   GGGGU   GG--  A   C

```

```

>tca-miR-3897-p3_1ss16GA
GGTGGGGGTGGGGTA

```

**Identified by sequence similarity**  
**Stem-loop structure:**

```
-----      AUC      UU  U U      UUCA  AAAA
      AUUUCGUAC      UUCUUAU  CU C CAUUAUUG      UC  \
      UAAAGCGUG      GGGGGUG  GG G GUGGUAAC      AG  U
UACUUGG      GU-      GG  U -      UUAU  CUCA
```

>api-miR-3049\_L-7R-2\_1ss12GA  
GGCAACTGCGGCGGA

**Identified by sequence similarity**  
**Stem-loop structure:**

```
AAC      UAAAUUUAA      CUU      UU--      U
      CCAAUU      CCGC      UUGU      UUAUGAU G
      GGUUAA      GCGG      AACG      AAUGCUA U
---      CUUACCGC-      UC-      UAAU      A
```

>mja-mir-6494-p5\_2ss16TC19TC  
AGTAGGAGGGCGGCGGGC

**Identified by sequence similarity**  
**Stem-loop structure:**

```
AAA      U      -----      A-      GGG      CC-      ACCGU
      CACUGGC ACU      CGCCG      CCC      CUACC      UGCA      C
      GUGGCCG UGG      GCGGC      GGG      GGUGG      GCGU      A
G--      -      UCAAC      GC      A--      UUU      CCUUC
```

>dme-miR-4952-p5\_1ss1CG  
GGCGGCGACGACGAG

**Identified by sequence similarity**  
**Stem-loop structure:**

```
C      AACUUGC      GACG      G
      UCA      UGGCGGC      ACGUAC \
      AGU      AUCGUCG      UGUAUG U
A      CAAGUAA      A---      G
```

>tca-miR-3885-p5\_1ss15GC

CGAAGGCGGCGGCGCC

Identified by sequence similarity

Stem-loop structure:

```
C   AA-   UG   U--   UAU   GG--   -   CU--  UAU
AUUC  AUUAAU CUUUGU UGGUUUA UCGAA  CGGC  GGCUGG  AC  \
UAAG  UAAUUG  GGAACA  ACCAAGU  AGCUU  GUUG  UCGACC  UG  U
A   CUA   --   UUC   ---   AGAA   A   UCAC  UUU
```

>dmo-mir-282-p3\_2ss8AT17AG  
ATATAAGTTCAGACATG

Identified by sequence similarity

Stem-loop structure:

```
CUAAUAAAAUACCA-----  AAGU  -----  UCUUUC
                        UUUGUC  AC   CGC   \
                        AAACAG  UG   GCG   C
UUUACAUAUAUCAUUUACAA  ACU-  AAUAU  UCCUUU
```

>tca-miR-3885-p3\_2ss15CG17AC  
GCGGCGGCGGCGGCGGCT

Identified by deep-sequencing

Stem-loop structure:

```
CAA-----  CC-  G  G  A  G  GGU
                UGGUU  AGC  GC  GC  GC  GC  \
                ACCAG  UCG  CG  CG  CG  CG  A
CAAAAAAAAAACAUAAAUGCAA  AAA  G  G  G  G  GCG
```

>tca-miR-3885-p3\_1ss4AC  
CGACGGCGGCGGCGGC

Identified by deep-sequencing

Stem-loop structure:

```
UUG   GAC   G  G  --   UG  UUUG   G  GGC  U
  UUGGC  GGCGGCG  C  GC  AUUC  UCG  GGUAAU  GA  GG  G
  AACCG  UCGCCGU  G  UG  UAAG  GGU  UCGUUG  CU  CC  U
A--   AUC   -  G  GC  GU  UUAG   G  AC-  A
```

>tca-miR-308-p5\_2ss4CA18TA  
TTGATTGTGAATGGGTGA

**Identified by deep-sequencing  
Stem-loop structure:**

```
U---   U           AU   UG   -   GA   GA
      UGGU UUGAUUGUGA GGG AC GGUU UG \
      ACUA GAUUAACAUU UCC UG CCAG GC G
CCAC   C           AU   GU   A   AA   AC
```

>ame-mir-3787-p3\_2ss16CG18GA  
TTTTGTAAATATCGAGAA

**Identified by deep-sequencing  
Stem-loop structure:**

```
UCUAUU   GAGA-   ----   AAUAUGU   GGGU
      UUCUUGA   ACAAAGAA   CAAAC   AGAAC   \
      AAGAGCU   UGUUUUUU   GUUUG   UUUUG   U
-----   AUAAA   ACCA   GU-----   GUGU
```

>dme-miR-285-3p\_L-6\_1ss21GC  
CATTCGAAATCAGTCC

**Identified by deep-sequencing  
Stem-loop structure:**

```
      A   U   A   GG           AA   UUG-----   C   --   GCAAAU
AUCCG UU GAG ACUGA UCGAGUGGUG UAGA           UUGC AUUUG UUGAAU \
UAGGC AA UUC UGACU AGCUUACCAC AUCU           AACG UAAAC AACUUA   A
      -   U   C   AA           G-   UAAAGGUUUUAA   -   UU   AAGUAA
```

>tca-miR-279c-3p\_L-4R-4\_1ss14CT  
TAGATCGAATATTCG

**Identified by sequence similarity  
Stem-loop structure:**

```
CCAUA   -   A-   UC   U   AA           AUC--   -----   AAUU   GCACA
      GUG UG   CAA   GAA UAAA   AUAUCAG   GAAU   AUUCG   UGAA   U
      CAC AC   GUU   CUU AUUU   UAUAGUC   CUUA   UAAGU   ACUU   A
G-----   U   CC   U-   -   GG           CUUUC   ACUAAC   CCU-   AUUUU
```



>PC-3p-142531\_7  
TGTTAGATATCAGGAAAA

**Identified by deep-sequencing  
Stem-loop structure:**

```
AC  A   UAC   ---   CGAA  A   UG   G   C
   UG GAU  UUUCA  UUCUGA  UAU UAA  AGA  UGUCG \
   GC CUG  AAGGU  AGGACU  AUA AUU  UCU  ACAGC U
--  -   CGU    AAA    -----  G   GU   G   G
```

>tca-miR-3807-p3\_1ss8CG  
CGAAATTGTGAAATC

**Identified by deep-sequencing  
Stem-loop structure:**

```
   C   GAAUG  GAAAC  --  AUUG  AAUCAG  U
UCU GAUGU  AAGU   CAUC  CGAA  UGA   UG U
AGG UUGCA  UUUA   GUAG  GCUU  ACU   AC A
   U   AAG--  -----  UA   AUA-  AAAAAA  G
```

>dps-mir-31b-p5\_1ss3AT  
AGTAGATGATTTGAAAT

**Identified by sequence similarity  
Stem-loop structure:**

```
U   G   UAA   GA  CAU   UCUUC-  C   --   AGAU   UU
GUUCGCU AUGC  UGGUGUU  UA  UUGACU  GUUUU AUUUU  GUUAUU  UGGAAA \
UAAGCGA UGUG  ACCACGA  AU  AGCUGG  UAAAA UAAAG  UAGUAG  GCUUUU  C
-   -   CAA   G-  UUU   UCAUUU  A   UU   AU--   UU
```

>tca-miR-2765-5p  
TGGTAACTCCACCACCGTTGGC

**Identified by Deep-sequencing  
Loop-structure:**

```
A  C  A  -  CA  AUGAAU
UUUGG AC UGGUA CUCCA C CCGUUGGC A
AAGCC UG GCCAU GAGGU G GGUAACCG U
```

G C C U AA AAAAUA

>dme-miR-965-3p\_R-1\_1ss9TG  
TAAGCGTAGAGCTTTTCCCCT

### Identified by Deep-sequencing Loop-structure:

```
U          CAC   A   U   UUGCCAG
UAUCGAAGGGG  GGCU UACG CUUAUG   U
AUAGUUUCCCC  UCGA AUGC GAAUAC   U
-           UUU   G   -   UUAUAAG
```

>bmo-mir-6497-p5\_1ss16CT  
ATTGGCTCTGAGGACTGGG

### Identified by Sequence similarity Loop-structure:

**S-1**

```
G   -   UCUGA   AAAAA   C   A   UAU
UUUG GC   GGACA   UUC AU AAAUUU  \
AGAC CG   UCUGU   AAG UA UUUAAG  A
A   A   UUA--   -----   C   A   UAC
```

>bmo-mir-6497-p5  
ATTGGCTCTGAGGAC

### Identified by Sequence similarity Loop-structure:

**S-1**

```
G   -   UCUGA   AAAAA   C   A   UAU
UUUG GC   GGACA   UUC AU AAAUUU  \
AGAC CG   UCUGU   AAG UA UUUAAG  A
A   A   UUA--   -----   C   A   UAC
```

>tca-miR-1175-5p\_R-2\_1ss19TA  
AAGTGGAGCAGTGGTCTCATC

### Identified by Deep-sequencing Loop-structure:

GUGA - C UC A G AGU

```
AGUAAGU GGAG AGUGG UC UC CUUU U
UUAUUCA UCUU UCACC AG AG GAAA U
GAGG A U UU - A AAG
```

```
>hme-mir-279a-p3_1ss14AC
TCGTCGAGGCCACCA
```

### Identified by Deep-sequencing Loop-structure:

```
CAAA C U C-- CAA
ACUAU G CGAGG CAC U
UGGUA C GUUCU GUG U
---- - - AAU AUG
```

```
>dvi-miR-210_L+1R-1
CTTGTGCGTGTGACAGCGGCT
```

### Identified by Deep-sequencing Loop-structure:

```
UA UGC GC - U UUAGA
CCUAU AGCUGCUG CAC UGCACA GA A
GGGUG UCGGCGAC GUG GCGUGU CU U
UC UUA A- U U CAACU
```

```
>dps-mir-2534-p5_1ss4AC
TCCCCTGGCCCCGTGG
```

### Identified by Sequence similarity Loop-structure:

```
C-- G U
GUGGCCCGU GA A
UACCGGGCA CU A
AAU G G
```

```
>dme-mir-289-p3_2ss13AG17CA
GTGGAGCCTGCGGCTTA
```

### Identified by Deep-sequencing Loop-structure:

```
AAAG----- CGGAA A CA
GAAUUGA GGC CCAC \
```

```
UUUAAUU UCCG GGUG G
ACAACUCAG CGGCG A AG
```

```
>dme-miR-989-3p_2ss20AT21CT
TGTGATGTGACGTAGTGGATT
```

### Identified by Deep-sequencing Loop-structure:

```
U- U A- CG C U U - AAUU
AAUCA AAG GAA CCAUUGC UCAC AUCAC UG GU U
UUAGU UUC CUU GGUGAUG AGUG UAGUG AC CA A
UU U AC A- C - U A AUUU
```

```
>dme-miR-981-3p_R-1_2ss20GT21CT
TTCGTTGTCGACGAAACCTTT
```

### Identified by Deep-sequencing Loop-structure:

```
UAUUG UGAAUC - A C GUUAUAAA
GACAAUGUA GGGUUUCG CGAUAA CG AC \
CUGUUACAU UCCAAAGC GCUGUU GC UG U
CAAAA UGCAUU A - U ACUAAAAG
```

```
>dme-miR-31a-5p_R-2
TGGCAAGATGTCGGCATAGCT
```

### Identified by Deep-sequencing Loop-structure:

```
CG U- AA C CAU---- A
AA UGGC GAUGU GGCAUAGCUGA UC A
UU ACUG CUACA CCGUAUCGGCU AG A
AA UC AC - AUCCAUU C
```

```
>dme-miR-307a-3p_R+1
TCACAACCTCCTTGAGTGAGC
```

### Identified by Deep-sequencing Loop-structure:

```
A U A CCU G C A
UUUUA UC CUCACUCAA GG UGUGAUG UUU \
AGAAU AG GAGUGAGUU CC ACACUAC AAG U
```

U C C CCU A C U

>dme-miR-306-5p\_R-1\_1ss10TG  
TCAGGTACTGAGTGACTCTCA

### Identified by Deep-sequencing Loop-structure:

U C GU G U- G -- U  
GCU G CAG UAC GAGU ACUCUCAG UAAAU \  
CGA C GUC AUG CUCG UGAGAGUC AUUUA C  
- A UG G UU - UU A

>dme-miR-305-3p\_R-1\_2ss7AG13AG  
CGGCACGTGTTGGAGTACACTC

### Identified by Deep-sequencing Loop-structure:

- CUAU U G CU AAUA  
GUC CCAUGU UGUACUUCA CA GUGCU GGU U  
CAG GGUGUA ACAUGAGGU GU CACGG CCA U  
U ACUC U G C- ACGU

>dme-miR-124-5p\_1ss19AG  
GGTATCCACTGTAGGCCTGTATG

### Identified by Deep-sequencing Loop-structure:

GCAAAAA UU C C AG G UUCGA  
CGUUU CUC UGGUAU CACUGU GCCU UAUG U  
GCAAG GAG ACCGUA GUGGCG CGGA AUAC A  
AAUA--- C- A A CA - UAAAA

>dme-miR-12-5p  
TGAGTATTACATCAGGTACTGGT

### Identified by Deep-sequencing Loop-structure:

AACGU UUU U C CCUUUUA

```

CUAUCG   UUGAUGUGAGUAU ACAU AGGUACUGGU   \
GAUAGC   AAUUACGCUCGUA UGUA UUCGUGACCG   U
UUU--    UC-          U    -          AUCUUUAA

```

```

>bmo-mir-6496-p5_1ss13AC
CGGCGAGCGAACCGG

```

**Identified by Sequence similarity  
Loop-structure:**

```

GCCA   A   AAC   UC-   UC   U
GGCG GCG   CAUU   UCGA   AGC \
CCGC CGC   GUAG   GGCU   UCG C
A---   -   ---   UCC   --   G

```

```

>bmo-mir-2733i-p3_1ss3TC
TTCTCAACAGACCGT

```

**Identified by Deep-sequencing  
Loop-structure:**

```

ACGCAA   UC   AC----   UAC-   AU
AUU   UCA   AGACCG   CG \
UGA   AGU   UCUGGC   GC   A
GAUCUC   GA   GGAACC   CGAC   CU

```

```

>ame-mir-927b-p3_1ss6GC
ACAGACCGTACCGAT

```

**Identified by Deep-sequencing  
Loop-structure:**

```

GCAA-----   UC   AC----   UAC-   AU
ACU   UCA   AGACCG   CG \
UGA   AGU   UCUGGC   GC   A
GCUGAUCUC   GA   GGAACC   CGAC   CU

```

```

>aga-miR-124_R-3
TAAGGCACGCGGTGAATGCC

```

**Identified by Deep-sequencing  
Loop-structure:**

```

AAAAA   UU   C   C   AG   G   UUCGA
CGUUU   CUC   UGGUUAU   CACUGU   GCCU   UAUG   U

```

```
GCAAG GAG ACCGUA GUGGCG CGGA AUAC A
AAUA- C- A A CA - UAAAA
```

```
>PC-5p-55665_21
TATCACAGTTGCTATTTCTGTC
```

### Identified by Deep-sequencing Loop-structure:

```
A- AAAAA CA AUU- CA
UUU CCAUAUCA GUUGCU UCGUG G
AAA GGUAUAGU CAACGA AGGCG A
AG GAA-- UA GCUU UA
```

```
>PC-5p-29795_45
CGGTCAATCACCCGGCAACT
```

### Identified by Deep-sequencing Loop-structure:

```
AAAAU A CG AA CC A AGUG U
GUUUAUACA UA GUC UCAC GGCA CUAU GUUU \
UAAUAUGU AU CAG AGUG CCGU GAUUG UAAA A
----- C AG AA CU C AA-- U
```

```
>PC-5p-15105_99
TTTTGATTGTTGCTCGAAATT
```

### Identified by Deep-sequencing Loop-structure:

```
UG CUAUCA C UU UAU
UGUGACAC UUUUGAUUGUUG UCGAAA CCGUG \
ACACUGUG GAAAUAAUAAU AGCUUU GGUAU U
UA UAAACA A C- UGU
```

```
>PC-5p-10903_144
AGATGCTTCAAGTCTGAACGATT
```

### Identified by Deep-sequencing Loop-structure:

```
UA- A- C- A C AA- U
CCCU AGAUG UUC AGU CUG CGAU \
GGGA UCUAC AAG UCA GAC GCUA C
```

UAA CA UA A U CAC U

>PC-3p-5714\_290  
TAGCTGCCTCGTGAAAAGACGAT

### Identified by Deep-sequencing Loop-structure:

```
      A  CG  AA  CC  A  AGUG  U
AUGUUUAUACA UA  GUC  UCAC  GGCA  CUAUU  GUUU \
UGUAAAUAUGU AU  CAG  AGUG  CCGU  GAUUG  UAAA A
      C  AG  AA  CU  C  AA--  U
```

>PC-3p-3346\_517  
TATCACAGCCATTTGATGAGC

### Identified by Deep-sequencing Loop-structure:

```
U--  UG G  UCA  A  A  UUG  U
ACUUU G UUAAGCUC  AAAUG  CUGUGA  AUG  AU C
UGAAA C GGUUCGAG  UUUAC  GACACU  UAC  UA C
UCU  GU -  UAG  C  A  UUA  U
```

>PC-3p-31889\_42  
TGTAACCGGGTCGTCGCAAGTATCGATC

### Identified by Deep-sequencing Loop-structure:

```
UU  AG  GAUU-  CG  AAUG  CA
CU  GC  UUGGUAUUU  GGCGACUC  GGUU  G
GG  CG  AGCUAUGAA  CUGCUGGG  CCAA  U
UU  GG  AUGCU  CG  ----  UG
```

>PC-3p-23858\_59  
TGTGATGTGACGTAGTGGATTC

### Identified by Deep-sequencing Loop-structure:

```
U  A-  CG  C  U  U  -  AAUU
AAG  GAA  CCAUUGC  UCAC  AUCAC  UG  GU  U
UUC  CUU  GGUGAUG  AGUG  UAGUG  AC  CA  A
U  AC  A-  C  -  U  A  AUUU
```



```
>tca-mir-6015-p3_1ss15GC
GCAGCGCCGGTTGTCGT
```

### Identified by Sequence similarity Loop-structure:

```
AGC    --    UC    GAC
  GCCGG  UUG  GU   \
  UGGCC  AAC  CA   U
CCU    UU   UA   ACG
```

```
>tca-mir-3899-p3_1ss3TA
ACATCGGCGACACTCGA
```

### Identified by Deep-sequencing Loop-structure:

```
GC      UCC-    AAC  AG    AAAAA----  G
AGAUGA  AUUGAG  UG  GUCGA          UG A
UUUGCU   UAGCUC  AC  CGGCU          AC A
AC       UAAA    ---  AG    ACAAGAAAG  A
```

```
>tca-mir-3867-p3_2ss4AC17TG
ATTCCACCGTTCCCGTGA
```

### Identified by Sequence similarity Loop-structure:

```
AU-----  U    UCCACC  CC    AUG
          GUGC  UUUU    GUUC  GUU   \
          CACG  AAAA    CAAG  CGA   U
UACACAUAC  C    UAA---  U-   CAU
```

```
>tca-mir-3846-p3_2ss14GT18AC
CATCAACTGACATTGCACC
```

### Identified by Deep-sequencing Loop-structure:

```
CAC    CU    -    ACCU    -    U    -    G
  AUCCA  GAC  AUUGC  GGAUU  UG  GUC  GGA  U
UAGCU  UUG  UAACG  UUUAA  GC  CGG  CCU  U
AAU    --    A    CUU-    C    U    U    C
```

```
>tca-miR-92a-3p_L+1R+4_1ss10AT
```

TATTGCACTTGTCCCGGCTATTAA

**Identified by Sequence similarity  
Loop-structure:**

```
--  U   C   G       GU   ----  GCAU
   CAAU UGCA AGG UGGGACAAG  CAAUGU   UGU   \
   GUUG GUGU UCC GCCCUGUUC  GUUAUA   ACA   U
AA   U   A   G       AC       AGAA  AAUU
```

>tca-miR-34-5p\_R+6

TGGCAGTGTGGTTAGCTGGTTGTTGT

**Identified by Deep-sequencing  
Loop-structure:**

```
UAAA  U   U   U   C   ---  A
      CGCG UGGCAG GUGG UAG UGGUUGU  GUG A
      GCGU ACCGUC CGCC AUC ACCGACA  UAC U
UACG  U   C   U   -   AUA  A
```

>tca-miR-2765-5p\_L+2

GGTGGTAACTCCACCACCGTTGGC

**Identified by Sequence similarity  
Loop-structure:**

```
A  C   A   -  CA   AUGAAU
AC  UGGUA CUCCA C  CCGUUGGC  A
UG  GCCAU GAGGU G  GGUAACCG  U
G  C   C   U  AA   AAAAUA
```

>nlo-miR-993\_R+3

GAAGCTCGTCTCTACAGGTATCTTTT

**Identified by Sequence similarity  
Loop-structure:**

```
-  GC   UC  C       UUC       UUGUUUUUUA  UA
   CCU  GUGA  UA CCUGUAG  CGGGCUUUUG  AGAA  A
   GGG  CACU  AU GGACAUC  GCUCGAAGAC  UCUU  U
U  A-   CU  -       UCU       UA-----  UU
```

>ngi-miR-34\_L+5R+1

GTGGTGGCAGTGTGGTTAGCTGGTTGT

**Identified by Sequence similarity**

## Loop-structure:

```
AA   UAAA   U   U   U   C   ---   A
   AAGGU   CGCG UGGCAG GUGG UAG UGGUUGU   GUG A
   UUUCG   GCGU ACCGUC CGCC AUC ACCGACA   UAC U
AC   UACG   U   C   U   -   AUA   A
```

```
>ngi-miR-13a_R+1_1ss16GA
TATCACAGCCATTTTAATGAGC
```

## Identified by Sequence similarity Loop-structure:

```
ACU   CU   CAU   GA----- AU
   GGACA GACAGA UUUAUU   GC U
   UUUGU UUUGUUU AAGUUA   CG A
UUU   --   UU-   AAUAAC CA
```

```
>mse-mir-9a-p5_1ss11CA
AATCCCGCCGAGGCC
```

## Identified by Sequence similarity Loop-structure:

```
CC   A   AGUCCGAAUA   C
   UUG GCUCGGCG   GCU G
   AGC CGAGCCGC   CGA C
A-   -   CCUAAAACAC   G
```

```
>mse-mir-6099-p5_1ss10TC
AATACGTCGCCTAGA
```

## Identified by Deep-sequencing Loop-structure:

```
AA U   AG-   -   AAA
   G CAAU   UUUGGC AC   A
   C GUUG   AGAUCCG UG   A
CC -   CUA   C   CAU
```

```
>mse-miR-965_R+3_1ss9TG
TAAGCGTAGAGCTTTTCCCCTAAT
```

## Identified by Sequence similarity Loop-structure:

```
U   CAC   A   U   U-   CCAG
```

```

UAUCGAAGGGG  GGCU UACG CUUAUG  UG  \
AUAGUUUCCCC  UCGA AUGC GAAUAC  AU  U
C              UUU   G   -   UU  AAGU

```

```

>mja-mir-6494-p3_1ss12CT
TGGAGCCGCCATTGG

```

### Identified by Deep-sequencing Loop-structure:

```

A-      U  GCAGAA  UU  G
GU  CAAUGGUG GC      GUGC  GGC  U
CA  GUUACCGC CG      UACG  CCG  G
CG      -  AGG---  U-  A

```

```

>isc-mir-79-p5_1ss5AC
GAGGCTGAAGGCGCT

```

### Identified by Sequence similarity Loop-structure:

```

AG-  GAA  CC  A  AC  UA
GCU  GCGG  UCA  UC  AUG  A
CGA  CCGU  AGU  AG  UAC  U
UUG  GC-  UA  -  A-  UC

```

```

>isc-mir-153-p3_1ss11GT
GTCGCGGCGGTGCTG

```

### Identified by Sequence similarity Loop-structure:

```

AA-  AC  C      AGGG  G  CA  C
GG  UC  GGCCUCA  UCGCG  CGGUG  GG  U
CC  AG  CCGGGGU  AGUGC  GCCAC  CC  U
AAC  GU  U      GA--  G  --  C

```

```

>isc-miR-276_L+3_1ss19AG
AGCTAGGAACTTCATACCGTGCTC

```

### Identified by Sequence similarity Loop-structure:

```

AA  C  A  UUA      UUCAAU
CCAG  AGCG  GGU  GAGUUCUACG  A
GGUU  UCGU  CCA  UUCAAGGAUGC  U
A-  C  G  UAC      UUAUU

```

```
>hme-mir-6311-p3_1ss9AC
CGCGGGTTCGAGTCC
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
A AAA - UUC G --- A- A
GG ACGCG GG GA UGCAA UC UUGCGUCAACC U
CC UGCGU CC CU ACGUU AG AACGCAGUUGG G
- AC- A UA- - CCC GG C
```

```
>hme-mir-276-p3_1ss2GC
TCTAGGAACTTCATACCGTGCTCT
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
AA C A UUA UUCAAU
CCAG AGCG GGU GAGUCCUACG A
GGUU UCGU CCA UUCAAGGAUGC U
A- C G UAC UUAUU
```

```
>hme-miR-928_L+1R-7
AGTGGCTGTGGAAGC
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
A UUUC U U CCUUUUCAAUUUGUUUC UU
GGGCUUC AUGGUU UUC G CUCAA GGU C
UCUCGAAG UGUCGG AAG C GAGUU CCG U
G UC-- - U ----- UU
```

```
>hme-miR-2a_R+2_2ss19TA23CA
TATCACAGCCAGCTTGAAGAGAAC
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
AUUGUAAA---- C - - CU UUAUUC
UCAAUUGCGUC CUU CAAAG UGGCUGUGA UG A
AGUUGGCGUAG GAGA GUUUC ACCGACACU AC A
CAGCUAAGUUUA C A G AU UUAUUA
```

```
>dya-miR-308_R-3_1ss11TG
AATCACAGGAGTATACTGT
```

### Identified by Deep-sequencing Loop-structure:

```
UAAAUUAA          G    UU    C UG UU
      GUUUGGUUCGAUGUCUCGCAGUAUUAU CUUGUG AUUGA G U \
      UAGAUUAGGUUAUAGAGUGUCAUAUG GGACAC UAACU C G G
AAACCUUA          A    --    - GU AA
```

```
>dvii-mir-309-p5_1ss3TA
AGATTTGCCAGGCTCT
```

### Identified by Sequence similarity Loop-structure:

```
A-  AU    -    CCA C  AA  A
    GUA  GCCAAA GAUUUG  GG UUU  GACUC A
    CAU  CGGUUU UAAAC  CU AAG  CUGAG A
AA  --    G    UA-  -  CC  U
```

```
>dvii-miR-306-3p_L-4R-2_1ss10TG
GTCGCGCTGTGCCTGT
```

### Identified by Sequence similarity Loop-structure:

```
AAUAUUG  UAU  C U  CCUGA  U  -  U
      UUG  GCG GC GUG  AUUGU GUA UGGCA A
      GAC  UGC CG UAC  UAGCA UAU ACCGU U
UA----- UC-  U U  CAAG-  -  C  A
```

```
>dsi-mir-970-p3_2ss9AC19AC
TATTTGGTCGCTGAATTGC
```

### Identified by Deep-sequencing Loop-structure:

```
AUUAGA  A  UGUC  AU  UAAU  CGU  CAA
      UUUGUG AAU  UCAGUG  CG  GUAA  GUGA  U
      AAACAC UUA  AGUCGC  GU  UAAU  CACU  U
AGAAAC  G  ----  CG  UUAU  CUU  UUU
```

```
>dpu-mir-96-p5_1ss13CT
ATTTGGCACTGGTACA
```

**Identified by Sequence similarity  
Loop-structure:**

```
A   ---   U   UUUGU   UC   UAU
AAUG   CCG UGCC   UUCG GGU   A
UUAC   GGU ACGG   AAGU UCA   U
C   AAU   C   UUU--   --   CUU
```

```
>dpu-mir-263b-p3_1ss2CA
AAAGGTCGTGGGTTC
```

**Identified by Sequence similarity  
Loop-structure:**

```
GAAA   --   G   UUAGU   AUU
AUGGCUU CGAU UUUG   UGA   U
UACUGGG GCUG AAAC   AUU   A
----   GU   G   UUGCU   GAU
```

```
>dpu-mir-252a-p5_1ss1TG
GCCTAAGTACTCGTG
```

**Identified by Sequence similarity  
Loop-structure:**

```
A   UA-   ACUC   CCC
GGC   AGU   GUAU   G
CCG   UCA   CAUA   U
-   UCC   CU--   UUA
```

```
>dpu-mir-133-p5_2ss13TA18AT
ATCCGGGCCAAAATGTTT
```

**Identified by Deep-sequencing  
Loop-structure:**

```
ACAAAA   U-----   A   C   A
GUGUCCGAAU   GCCUG AUU GUU \
CAUAGGUUUG   CGGGC UAA CAA A
GUG---   UAAAAC   C   -   A
```

```
>dpu-miR-133_R+3
TTGGTCCCCTTCAACCAGCTGTTTT
```

**Identified by Sequence similarity**

### Loop-structure:

```
U GUC          UUCC GU      C AAAU
GU AUAGCUGGUUGG GG CAGAU UA \
CA UGUCGACCAACU CC GUUUA GU U
U AA-          UCC- UG      U AAGU
```

```
>dps-mir-87-p3_2ss1TG18AC
GTTTCATCCCGGTTGAGCC
```

### Identified by Sequence similarity

#### Loop-structure:

```
UCUUCAAA      CCG      CCCCCAGUU
AGAUC         ACAUC      GUUGAG      A
UCUAG         UGUAG      UAACUU      G
UAAAACCA     CA-        CUAUUUAAA
```

```
>dps-mir-2567b-p5_2ss10AC17TC
AAACGTTGACTTTAGCC
```

### Identified by Sequence similarity

#### Loop-structure:

```
C - U      AGUUUA UG      AACACAUGCAU
GA GUA UUGG      U AUGUCUG      \
CU CGU AACC      A UGCAGAC      U
C G U      GAUUUC- GU      ACAUUUUUAAU
```

```
>dps-mir-2543b-2-p5_2ss7TG17CT
ATCCTAGGTGCTGTGGTT
```

### Identified by Sequence similarity

#### Loop-structure:

```
GU      --      G -      AUAA G      A
GCUGUCAC AAACU ACA UGCC      GU AUUA G
CGGCAGUG UUGG UGU GUGG      UA UAAU A
GU      AG      -      C      AA-- G      A
```

```
>dps-mir-2532-p5_1ss4CT
TTTTCCAGCTCCGAGA
```

### Identified by Sequence similarity

#### Loop-structure:



```

AUUUUUUC      C      UUA
      CAGCUC GUUC  U
      GUUGAG UAAG  U
UAUCUCU-      -      UCU

```

```

>dps-miR-927-5p_L+4R-1_1ss25CT
GTGGTTTAGAATTCTTACGCTTTAT

```

**Identified by Sequence similarity  
Loop-structure:**

```

U      G      CU      AU  AUUAAACG      AUA
GUUUG  UUUGC  UUUAGAAUUC  ACGCUUU  CA      AUGAAA  \
UAAGC  AAACGAAGUCUUAGG  UGCGAAA  GU      UAUUUU  A
-      A      UU      CG  CGCUAA--      GCA

```

```

>dme-mir-92a-p5_1ss8AG
TTCCCGTGCGACGGG

```

**Identified by Sequence similarity  
Loop-structure:**

```

AG      G  CGA      -      ---      ---      CG
GCGC  UG  CGGCUG  CCCA  GCU  UGC  G
UGCG  AC  GCU  GGC  GGGU  CGA  ACG  C
AG      G  AA-      A  GCC  CCU  AC

```

```

>dme-mir-4981-p5_2ss9AG18AC
GCCGGCGCGAAGTTTCACT

```

**Identified by Sequence similarity  
Loop-structure:**

```

AC-      AUC      GAA      G
CGCAAU  GCGCG  GUUU  A
GUGUUUA  CUGCG  UAAA  A
UAU      A--      A--      A

```

```

>dme-mir-4968-p5_1ss16CT
TCCTCAGAGCCGCGATT

```

**Identified by Sequence similarity  
Loop-structure:**

```

CGGUUGAAAAC      AGA      CGU      U  C  C

```

```

          CGGG  CGUU  UCGCGGUU CU AUC \
          GCCC  GCAG  AGCGCCGA GA UAG G
UACUCCU----- CG-  UU-      - C  C

```

```

>dme-mir-312-p3_1ss10GC
CTTGAGACGCCCTGATT

```

**Identified by Sequence similarity  
Loop-structure:**

```

AAAAAUU      U  UGAAAA      U  AU
      UUAUUU GGGC      UCAA AGA \
      AAUAAG CCCG      AGUU UCU U
AGCACAU      U  CAG---      -  AC

```

```

>dme-mir-2535b-p5_1ss9AG
ATGCCGGGGTTGTGG

```

**Identified by Sequence similarity  
Loop-structure:**

```

A  U      GACA-  --  UU
CGG ACUUAUAA      GUA  GC \
GCU UGAGUGUU      CGU  CG U
A  -      GGGGC  AA  CA

```

```

>dme-mir-2499-p3_1ss13GA
TTGGCGGCATGCAGA

```

**Identified by Sequence similarity  
Loop-structure:**

```

CACUC      -  AUU      -  CA
      GCAUCA UGCA      CUGCGU UUGCUA U
      CGUGGU ACGU      GACGUA GCGCGU G
CU---      G  CGU      C      AU

```

```

>dme-miR-iab-8-5p_R-3
TTACGTATACTGAAGGTATA

```

**Identified by Deep-sequencing  
Loop-structure:**

```

U  AC      UU      G  A  G  UAGA
CA  UCGUG  ACGUAUACUGAA  GUAU  CC  GA  U
GU  AGCAU  UGCAUAUGACUU  CAUA  GG  CU  A
U  GA      U-      A      -  A  CACG

```

```
>dme-miR-263a-3p_R-1_2ss12AG21TA
CGTGATCTCTTGGTGGCATCA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
- - CA G UG A AU UUG U
UCAC AUGG AUG CAC G AGA UCACGGG AU U
AGUG UACU UAC GUG U UCU AGUGCCC UA U
G A AC G GU C -- UUA A
```

```
>dgr-mir-92a-p3_2ss16GA18GA
CTTGTCCCGGCCTATAAA
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
U C G GU ---- GCAU
UGCA AGG UGGGACAAG CAAUGU UGU \
GUGU UCC GCCUGUUC GUUAUA ACA U
U A G AC AGAA AAU
```

```
>der-mir-317-p3_2ss3AC17GT
CCCGTGGCCGTTTGCT
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
CUC UC CUU UU AGCUAA
UAUAGCCG AC CCAC AAU \
AUGUCGGU UG GGUG UUA U
--- U- CC- UC AAGUAA
```

```
>dan-mir-275-p5_2ss2TC17TC
CCCCTACCTTGCGCGCC
```

**Identified by Sequence similarity**  
**Loop-structure:**

```
GU C AC -- A GC
CC GU CUU GCGCGCC GAUACCC \
GG CA GAG CGUGCGG CUAUGGG G
-- A AA UU - AC
```

```
>dan-miR-11_R+5
```

CATCACAGTCTGAGTTCTTGCTGCCA

**Identified by Sequence similarity  
Loop-structure:**

```
          C       C       UUUUUUUUUUUUGAA       A
CUGAGCGGGAACUC GAUUGUGA UGCG                ACAAUUGC U
GACUCGUUCUUGAG CUGACACU ACGC                UGUUAACG A
          U       -       UAC-----              U
```

>cqu-miR-276-3p\_L+2  
GTTAGGAACTTCATAACCGTGCTCT

**Identified by Sequence similarity  
Loop-structure:**

```
AA  C  A  UUA      UUCAAU
CCAG AGCG GGU  GAGUCCUACG  A
GGUU UCGU CCA  UUCAAGGAUGC  U
A-   C  G  UAC      UUAUU
```

>bmo-mir-3407-p3\_1ss9TC  
TCACCTGCCCGCGAA

**Identified by Sequence similarity  
Loop-structure:**

```
CU  C  ----  ---  CUC
   GCU ACCU  GCCC  GCGCCGC  \
   UGG UGGA  CGGG  UGCGGCG  G
UC  U  CGAC  AGU  CUA
```

>bmo-mir-3389-p5\_1ss2AC  
GCCCCAGTCGTAGCC

**Identified by Sequence similarity  
Loop-structure:**

```
AU-----  A  A  UAAAA
          UUAUGA UUG GG  U
          GAUGCU GAC CC  C
AUAAAAUC  -  C  UUAUG
```

>bmo-mir-3314-p5\_2ss12CG17GC  
TGCCCCGGAACGAGCCC

**Identified by Sequence similarity  
Loop-structure:**

```
UUU  U  CGGA  CCCAUU  AAU
UCA AUC  ACGAG  UGGGU  U
AGU UAG  UGCUU  ACCCA  G
AAC  -  CGGA  UAAU--  AUA
```

```
>bmo-mir-316-p3_1ss1CA
AGTCAACGGCAAAGT
```

**Identified by Sequence similarity  
Loop-structure:**

```
AUG--  C--  A  UG  A
GCU  GACUG  CU  A  \
CGG  CUGAU  GA  U  U
AAAAA  CAA  -  GU  U
```

```
>bmo-mir-2855-p3_1ss1GC
CCAATGCCTCGACCA
```

**Identified by Sequence similarity  
Loop-structure:**

```
AGCGUAA  UC  CC  AA
UGCC  GA  AC  \
ACGG  CU  UG  U
CUAUAAC  --  UA  UA
```

```
>bmo-mir-2820-2-p5_1ss3AC
GCCTCGTGCATGGCC
```

**Identified by Deep-sequencing  
Loop-structure:**

```
GU  ACA  UUGAUCAGG  G  U  G  C
GGC  CAUGC GCGAG  AUCUG  GCGA  GGAGUCGC  CG  A
CGG  GUACGUGCUC  UGGAC  CGCU  UCUCAGCG  GC  G
GU  ---  CGGA-----  G  -  -  C
```

```
>bmo-mir-2772a-2-p3_1ss5GA
GATGATCGTCTGGTC
```

**Identified by Sequence similarity**

### Loop-structure:

```
UUC  G      CGUC      AAGCA  GU
    GGU UAUGAU    UGGUGG    UU  U
    CCA AUACUA    ACUACC    AA  U
UGA  -      ----      GG---  AA
```

```
>bmo-mir-2733j-p3_1ss2TC
ACGATCGTGGTAGAG
```

### Identified by Sequence similarity

#### Loop-structure:

```
CAA  A      -      UU  U
    UCUA CCGUG  UUAA  GU  A
    AGAU GGUGC  AGUU  UA  U
UCG  -      U      UU  U
```

```
>bmo-miR-989a_L-1R+4_1ss21AT
TGTGATGTGACGTAGTGGATCTAT
```

### Identified by Sequence similarity

#### Loop-structure:

```
U  A-  CG      C  U      U  -  AAUU
AAG  GAA  CCAUUGC  UCAC  AUCAC  UG  GU      U
UUC  CUU  GGUGAUG  AGUG  UAGUG  AC  CA      A
U  AC  A-      C  -      U  A  AUUU
```

```
>ame-mir-6050-p5_1ss7TC
GGCGGGCTGTGGAGGG
```

### Identified by Sequence similarity

#### Loop-structure:

```
GG-      -----  -      G-  C      -  C
GCCAGGGC      GC  CGGCC  CAC  GCC  GUU  C
UGGUCCCG      CG  GCCGG  GUG  CGG  CAA  A
AGG      UAGCU  A      AG  U  G  C
```

```
>ame-miR-2944_R-3
TATCACAGCAGTAGTTACCT
```

### Identified by Sequence similarity

#### Loop-structure:

```
UCAAAC      CUAG  AU      UAUCAU
    GAGUAGC      GU  UGUG      U
```

```

CUCAUUG CG ACAC C
----- AUGA -- UUUCA

```

```

>ame-miR-2944_2ss10AT22GC
TATCACAGCTGTAGTTACCTGCT

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

C A AA - CC - UU C
AG UA AGG AACU CGG UGUGAU AUG CAA A
UU AU UCC UUGA GUC ACACUAU AC GUU U
A A CG A A- G C- U

```

```

>aga-miR-34_L+6R+3
ACGATCTGGCAGTGTGGTTAGCTGGTTGT

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

AA UAAA U U C GUGAAU
AAGGU CGCG UGGCAG GUGG UAG UGGUUGU \
UUUCG GCGU ACCGUC CGCC AUC ACCGACA A
AC UACG U C U - AUAUAC

```

```

>aae-mir-980-p3_1ss11AC
TTAGCTGCCTCGTGA

```

**Identified by Deep-sequencing**  
**Loop-structure:**

```

CG AA CC A AGUG U
GUC UCAC GGCA CUAU GUUU \
CAG AGUG CCGU GAUUG UAAA A
AG AA CU C AA-- U

```

```

>aae-miR-989_R+1
TGTGATGTGACGTAGTGGTACC

```

**Identified by Sequence similarity**  
**Loop-structure:**

```

U A- CG C U U - AAUU
AAG GAA CCAUUGC UCAC AUCAC UG GU U
UUC CUU GGUGAUG AGUG UAGUG AC CA A
U AC A- C - U A AUUU

```

>aae-miR-932-5p\_R+1\_1ss16AT  
TCAATTCCGTAGTGCTTTGCAGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UGC----      U  A  AA  A      GUUAAAACA
      UUGGAGACGGC  UCA  UUCCG  GUGC  UUGCAGU      U
      AAUCUUUGUCG  AGU  AGGGC  CACG  AACGUCA      G
AAAAAGA      U  G  GG  -      AAAAAGAU
```

>aae-miR-34-3p  
CAACCACTATCCGCCCTGCCGCC

**Identified by Sequence similarity**  
**Loop-structure:**

```
UAAA  U  U  U  C  ---  A
CGCG  UGGCAG  GUGG  UAG  UGGUUGU  GUG  A
GCGU  ACCGUC  CGCC  AUC  ACCGACA  UAC  U
UACG  U  C  U  -  AUA  A
```

>aae-miR-306-5p\_R+2\_1ss22GA  
TCAGGTACTGAGTGACTCTCAAGT

**Identified by Sequence similarity**  
**Loop-structure:**

```
U  C  GU  G  U-  G  --  U
GCU  G  CAG  UAC  GAGU  ACUCUCAG  UAAAU  \
CGA  C  GUC  AUG  CUCG  UGAGAGUC  AUUUA  C
-  A  UG  G  UU  -  UU  A
```

>aae-miR-278-3p\_L+4  
TGGGTCGGTGGGACTTTCGTCCGTTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
G  CC  C  AA  GU  A
UACA  CGGAUGA  AGUCUCA  CGGUC  UAU  A
AUGU  GCCUGCU  UCAGGGU  GCUAG  AUA  U
A  UU  U  G-  AC  U
```

>aae-miR-276-3p\_L+4R+1  
GTGGTAGGAACCTTCATACCGTGCTCT



**Identified by Deep-sequencing  
Loop-structure:**

```
AA      C      A      UUA      UUCAAU
  CCAG AGCG GGU   GAGUCCUACG   A
  GGUU UCGU CCA   UUCAAGGAUC   U
A-      C      G      UAC      UUAAUU
```

```
>aae-miR-252-3p_1ss21GA
CTGCTGCCCAAGTGCTTATCA
```

**Identified by Deep-sequencing  
Loop-structure:**

```
A      UC      AGU C      AGAGAU
CGAUUCUUU UAAGUACU GC GCAGG \
GUUGAGAAA AUUCGUGA CG CGUCC A
G      CU      ACC U      CCAAAU
```

```
>aae-miR-210_R+2
CTTGTGCGTGTGACAACGGCT
```

**Identified by Deep-sequencing  
Loop-structure:**

```
UGC      GC      -      U      UUAGA
AGCUGCUG CAC UGCACA GA      A
  UCGGCGAC GUG GCGUGU CU      U
UUA      A-      U      U      CAACU
```

```
>aae-let-7-p3_1ss9AT
TATCTGCTTTGCAATCT
```

**Identified by Sequence similarity  
Loop-structure:**

```
AAUUA-      CU      CAA      AGU
  UCUG UUG   UGGG \
  AGAC GAC   ACCU U
AGUAAG      UU      AUG      UUG
```

```
>PC-5p-188166_5
TAAGTCAACTACGCTATTTGAGAGA
```

**Identified by Deep-sequencing  
Loop-structure:**

```
C-      A      C-      ---      -      U      GA      AUG      UA
```

```
GUU AGU AACU ACGC UAU UGA GAU GUA \  
CGA UCG UUGA UGUG AUA ACU CUA CGU U  
UU C UA GUG C U AG AA- UA
```

>PC-5p-181101\_5  
TGGATTGTAAACGCCGCGTATGAAATAG

### Identified by Deep-sequencing Loop-structure:

```
AAAUG A CCG - G  
GAUUGUAA CG CGUAUG AAAUA \  
CUGACAUU GC GCGUGC UUUAU A  
UACCU C AA- C A
```

>PC-5p-164093\_5  
AAACACCATTGTATTCGTTTCAT

### Identified by Deep-sequencing Loop-structure:

```
UU C AU UUUGUC  
GUAAACAC AUUGU UCGUUUCA U  
CAUUUGUG UGACA AGCGAAGU A  
AC U -- UUAAAA
```

>PC-5p-151736\_6  
TGGACGCCCTACAGAGCC

### Identified by Deep-sequencing Loop-structure:

```
AC--- --- C --- A UGGAA G UG U UU  
AUGG ACG CCU AC GAGCC UUC U GA UG \  
UACC UGC GGA UG CUCGG AAG A UU GC A  
AACCA AGA U AGU G UCA-- A GU U UA
```

>PC-5p-145750\_6  
TAGGACGCATCTGGTGGGAGC

### Identified by Deep-sequencing Loop-structure:

```
CAACGAU C C ----- C A  
GCC AAGAGGGCAUAGGA GCAUCUGGUGGGAGC GUUGUGGG UA A  
UGG UUCUCCCGUGUCCU CGUAGGCUACCCUCG UAAUACUC AU A  
UUAUAG- U U UUAUUA U U
```

>PC-5p-134134\_7  
TGGGAATATGGACCATGACAGGTGAACC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CU   UUU   U   A--   C   CCGA----   AU
UCUC  GGGAA AUGGACC   UGA AGGUGAA   ACA U
AGGG  UCUUU UACCUUG   GCU UCCAUUU   UGU U
A-   CU-   U   CCA   U   AACAGAG   AU
```

>PC-5p-119733\_8  
ATTGGTTCCAGTGCTCTGGCTGC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AA   U   CAA   UU   U   -   C   -   G
AUGGU GUC   UA   GG   UCCAGU   GCU   UGG   CUGCAAAG C
UGCCA CAG   AU   CC   AGGUCA   CGG   GCU   GAUGUUUUU U
GC   -   CUC   UC   C   A   U   A   U
```

>PC-5p-116706\_8  
GGGGCACGGCTATACGTCTTATG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U   CAC   A   U   UUGCCAG
UAUCGAAAGGGG   GGCU   UACG   CUUAUG   U
AUAGUUUCCCC   UCGA   AUGC   GAAUAC   U
C   UUU   G   -   UUAUAAG
```

>PC-5p-113515\_9  
TCAATCAACCACGTGCAGCTGTAGCACA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
A---   CAA   G   CA   -   AA   AAUU
UGAAUU   UCAACCAC   UG   GCUG   UAGCAC   CGUCGU   C
AUUUAA   AGUUGGUG   AC   CGGC   GUUGUG   GUAGUA   G
UGUA   C--   A   --   C   --   AGUG
```

>PC-5p-105910\_9  
CGCCATTGCCTCACTATCACT

**Identified by Deep-sequencing**

### Loop-structure:

```
U  A-  CG      C  U  U  -  AAUU
AAG  GAA  CCAUUGC UCAC AUCAC  UG  GU  U
UUC  CUU  GGUGAUG AGUG UAGUG AC  CA  A
U  AC  A-      C  -  U  A  AUUU
```

```
>PC-3p-64602_18
TTGCATGTCCCATATGAAGTT
```

### Identified by Deep-sequencing

#### Loop-structure:

```
A          C          G  U  UAU
AUGGGGACUUCUAUAUGGGACA  GCAAUUAUGAA  UA  ACUU  U
UACCCCUGAAGUAUACCCUGU  CGUUAGUUAUUU  AU  UGAA  A
A          A          A  U  UUA
```

```
>PC-3p-171940_5
TAATACCAACGCATCGATTTCG
```

### Identified by Deep-sequencing

#### Loop-structure:

```
UUUC          AAUU          UUA-  UU--  CC
UCGAAAUC      UGCGUUGGUA      GU      UCUG  C
AGCUUUAG      ACGCAACCAU      UA      AGAC  A
AAAA          CU--          UAUG  UUUU  UG
```

```
>PC-3p-137999_7
TAAGCNTAGAGCTTTTCCCCT
```

### Identified by Deep-sequencing

#### Loop-structure:

```
U          CAC  A  U  UUGCCAG
UAUCGAAGGGG  GGCU  UACG  CUUAUG  U
AUAGUUUCCCC  UCGA  AUGC  GAAUAC  U
C          UUU  G  -  UUAUAAG
```

```
>PC-3p-133245_7
CAATCACCCAATGTCGTCTAAC
```

### Identified by Deep-sequencing

#### Loop-structure:

```
CUG---      -  CA  C  AC
AGACGA  AUUGG  GA  UGGAGU  A
UCUGCU  UAACC  CU  ACUUCA  A
```

ACCCAA G CA A AU

>dme-miR-9c-5p  
TCTTTGGTATTCTAGCTGTAGA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C   CU           CU   G   UGUUUUUA
UGAG CUUUGGUAUU AGCU UAGAU \
AUUC GAGACCAUAA UCGA AUCUA  A
-   UG           UU   A   UGUGUUAU
```

>dme-miR-34-5p\_R-1  
TGGCAGTGTGGTTAGCTGGTTGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AA   UAAA   U   U   U   C   ---   A
AAGGU CGCG UGGCAG GUGG UAG UGGUUGU GUG A
UUUCG GCGU ACCGUC CGCC AUC ACCGACA UAC U
AC   UACG   U   C   U   -   AUA   A
```

>dme-miR-276a-3p  
TAGGAACTTCATAACCGTGCTCT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AA   C   A   UUA   UUCAAU
CCAG AGCG GGU GAGUCCUACG A
GGUU UCGU CCA UUCAAGGAUGC U
A-   C   G   UAC   UUAAUU
```

>dme-miR-998-3p  
TAGCACCATGAGATTGAGCTC

**Identified by Deep-sequencing**  
**Loop-structure:**

```
CUA   C   A   AU   UUGAUAA
UCAG GCUGAA UCUCGUGG CUGCA \
AGUC CGACUU AGAGUACC GAUGU U
UAC   U   -   AC   CAAAAAG
```

```
>dme-miR-993-5p_R-1
TACCCTGTAGTTCCGGGCTTTT
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UC      C      UUC      -----      U
      UACC UGUAG  CGGGCUUUUG      UUGUUUU U
      AUGG ACAUC  GCUCGAAGAC      AAUAAGA A
CU      -      UCU      UAUCUUUUU      A
```

```
>dme-miR-993-3p
GAAGCTCGTCTCTACAGGTATCT
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
GC      UC C      UUC      -----      U
      GUGA  UA CCUGUAG  CGGGCUUUUG      UUGUUUU U
      CACU  AU GGACAUC  GCUCGAAGAC      AAUAAGA A
A-      CU  -      UCU      UAUCUUUUU      A
```

```
>dme-miR-92b-3p_1ss1AC
CATTGCACTAGTCCC GGCTGC
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UU      AUA      A UGU      U C C      AU
      UUU      UUGUAGG CG  CUGGUGC AU UG UAU  A
      AAA      AACGUCC GC  GAUCACG UA AC GUA  U
UU      A--      G CCU      U C U      AA
```

```
>dme-miR-375-3p_1ss17AG
TTTGTTGTTGGCTTGAGTTA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

```
-      AAUU      U      UUU      UGCG      A
      GAUG      ACUUAA CCAAUGAA  CAAACUG  UUUA \
      CUAC      UGAGUU GGUUGCUU  GUUUGGU  AAGUU C
U      GUAU      C      ---      UA--      A
```

```
>dme-miR-279-3p_R-1
```

TGACTAGATCCACACTCATTA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C           A  AA  -----  G      UGA
AUUGUUUUUGAUGAGUG GGG  UAGUU      UC CAUUA  A
UAAUAAAAAUUACUCAC CCU  AUCAG      AG GUAAU  U
A           A  AG  UGUUCA  -      CCA
```

>dme-miR-278-3p

TCGGTGGGACTTTCGTCCGTTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
G  CC      C      AA      GU  A
UACA  CGGAUGA  AGUCUCA  CGGUC  UAU A
AUGU  GCCUGCU  UCAGGGU  GCUAG  AUA U
A  UU      U      G-      AC  U
```

>dme-miR-133-3p

TTGGTCCCCTTCAACCAGCTGT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U  GUC      UUCC  GU      C  AAAU
GU  AUAGCUGGUUGG  GG  CAGAU  UA  \
CA  UGUCGACCAACU  CC  GUUUA  GU  U
U  AA-      UCC-  UG      U  AAGU
```

>PC-5p-9426\_168

GGGAGCGAGATCGGGGCTTACT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AAG-      U      C  UC      U  GUCAAU  U
CUAUUGUAU  CGAUGGGAG  GAGA  GGGGCU  ACU      UGAAAU  \
GGUAACGUA  GUUAUCCUC  CUCU  UUCUGA  UGA      ACUUUA  U
UAAA      -      U  UU      C  -----  U
```

>PC-3p-5114\_326

TATCACATCCGAAAGGTTTCCC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

C   C           A A       A   UUAUUU
GAAG GAAUUUUU CG AUGUGA AUG   A
CUUC CUUUGGAA GC UACACU UAC   U
U   C           A C       A   UAGAACU

```

```

>lmi-miR-210-5p_R+1_2ss10AC20AT
AGCTGCTGGCCACTGCACATGAT

```

**Identified by Deep-sequencing  
Loop-structure:**

```

A   UGC           GC   -   U   UUAGA
CCUAU   AGCUGCUG   CAC UGCACA GA   A
GGGUG   UCGGCGAC   GUG GCGUGU CU   U
C   UUA           A-   U   U   CAACU

```

```

>miR-iab-3p-7195
CGGTATACCTTCAGTATACGTA

```

**Identified by Deep-sequencing  
Loop-structure:**

```

C   AA-           U   C   AG   CU
UUCGU   ACGUAUACUGAA   GUAU CUG   UG \
GAGCA   UGCAUAUGACUU   CAUA GGC   AU A
U   CAA           C   U   CU   CU

```

```

>PN-1175-5p-1444
AAGTGGAGCAGTGGTCTCATCG

```

**Identified by Deep-sequencing  
Loop-structure:**

```

GUGA   -   C   UC   A   G   AGU
AGUAAGU GGAG AGUGG   UC UC CUUU   U
UUAUUCA UCUU UCACC   AG AG GAAA   U
GAGG   A   U   UU   -   A   AAG

```

```

>PN-307-3p-48434
CACAACTCCTTGAGTGAGCGA

```

**Identified by Deep-sequencing  
Loop-structure:**

```

A   U   A           CCU G   C   A
UUUUU UC CUCACUCAA   GG UGUGAUG UUU \
AGAAU AG GAGUGAGUU   CC ACACUAC AAG U
U   C   C           CCU A   C   U

```



>PN-306-5p-5786  
TCAGGTACTGAGTGACTCTCAG

**Identified by Deep-sequencing  
Loop-structure:**

```
U   C  GU   G   U-   G       --   U
GCU G   CAG UAC   GAGU ACUCUCAG   UAAAAU \
CGA C   GUC AUG   CUCG UGAGAGUC   AUUUA C
A   A  UG   G   UU   -       UU   A
```

>PN-998-3p-32093  
TAGCACCATGAGATTTCAGCTCA

**Identified by Sequence similarity  
Loop-structure:**

```
CUA   C       A       AU       UUGAUAA
UCAG GCUGAA UCUCGUGG   CUGCA   \
AGUC CGACUU AGAGUACC   GAUGU   U
UAC   U       -       AC       CAAAAAG
```

>PN-305-3p-8834  
CGGCACGTGTTGGAGTACACT

**Identified by Deep-sequencing  
Loop-structure:**

```
C       CUAU       U G       CU   AAUA
CCAUGU       UGUACUUCA CA GUGCU GGU   U
GGUGUA       ACAUGAGGU GU CACGG   CCA   U
U       ACUC       U G       C-   ACGU
```

>PN-276b-3p-60313  
TAGGAACTTAATACCGTGCTCT

**Identified by Deep-sequencing  
Loop-structure:**

```
AA   C       A   UUA       UUCAAU
CCAG AGCG GGU   GAGUUCUACG   A
GGUU UCGU CCA   UUCAAGGAUGC   U
A-   C       G   UAC       UUAAUU
```

>PN-981-3p-48900  
TTCGTTGTCGACGAAACCTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UGAAUC      -      A C GUUAUAAA
      GGGUUUCG CGAUAA CG AC \
      UCCAAAGC GCUGUU GC UG U
UGCAUU      A      - U ACUAAAAG
```

>PN-279a-3p-51815  
TGACTAGATCCACACTCA

**Identified by Deep-sequencing**  
**Loop-structure:**

```
C      A AA ----- G UGA
AUUGUUUUUGAUGAGUG GGG UAGUU UC CAUUA A
UAAUAAAAUUACUCAC CCU AUCAG AG GUAAU U
A      A AG UGUUCA - CCA
```

>PN-993-5p-19064  
TACCCTGTAGCTCCGGGCTTTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UC      C UUC ----- U
GUGA UACC UGUAG CGGGCUUUUG UUGUUUU U
CACU AUGG ACAUC GCUCGAAGAC AAUAAGA A
CU - UCU UAUCUUUUU A
```

>PN-308-3p-496  
AATCACAGGAGTATACTGTGAG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
A      G UU C UG UU
GUUUGGUUCGAUGUCUCGCAGUAUUAU CUUGUG AUUGA G U \
UAGAUUAGGUUAUAGGAGUGUCAUAUG GGACAC UAACU C G G
U      A -- - GU AA
```

>PN-2765-5p-44846

TGGTAACTCCACCACCGTTGG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UUU A C A - CA AUGAAU
GG AC UGGUA CUCCA C CCGUUGGC A
CC UG GCCAU GAGGU G GGUAACCG U
AAG G C C U AA AAAAUA
```

>PN-210-3p-4435  
CTTGTGCGTGTGACAGCGGCTAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UA UGC GC - U UUAGA
CCUAU AGCUGCUG CAC UGCACA GA A
GGGUG UCGGCGAC GUG GCGUGU CU U
UC UUA A- U U CAACU
```

>PN-307-5p-51620  
ACTCACTCAACCTGGGTGTGATG

**Identified by Deep-sequencing**  
**Loop-structure:**

```
AUA--- A U A CCU G C A
UUCA UUUUA UC CUCACUCAA GG UGUGAUG UUU \
AAGU AGAAU AG GAGUGAGUU CC ACACUAC AAG U
ACACUA - C C CCU A C U
```

>PN-989-3p-1550  
TGTGATGTGACGTAGTGGAT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
U A- CG C U U - AAUU
AAG GAA CCAUUGC UCAC AUCAC UG GU U
UUC CUU GGUGAUG AGUG UAGUG AC CA A
U AC A- C - U A AUUU
```

>PC-3p-49057  
TAAGCGTAGAGCTTTTCCCCTTTT

**Identified by Sequence similarity**  
**Loop-structure:**

```

A  U          CAC  A  U          UUGCCAG
CA UAUCGAAGGGG  GGCU UACG CUUAUG      U
GU AUAGUUUCCCC  UCGA AUGC GAAUAC      U
C  C          UUU  G  -          UUAUAAG

```

>PC-3p-43520  
TAAATATAAATCGGCGTCGTTACCAAA

**Identified by Deep-sequencing**  
**Loop-structure:**

```

UAAC--  C  AUUAUCUU  CC-  AU  CAAC  CCU
      GUC AAGUA      UUUG  AUGA  CUGA  UUUUAUGU  C
      CAG UUCAU      AAAC  UGCU  GGCU  AAAUAUA  U
CUUCA  -  -----  CAU  GC  ----  AUU

```

>PC-3p-41277  
AGTTCTCAGTCCGACGATC

**Identified by Deep-sequencing**  
**Loop-structure:**

```

GA  C  AU  -  AA---  UG
UC GAUCC  AAAU AUUGUCG  ACAAUU  G
AG CUAGG  UUUUA UAGCAGC  UGUUGA  U
AA  U  CC  C  CUGAC  CC

```

>aga-mir-34-p3\_2ss20GA22CT  
AGCCACTATCCGCCCTGCCATT

**Identified by Deep-sequencing**  
**Loop-structure:**

```

AA  UAAA  U  U  U  C  ---  A
AAGGU  CGCG UGGCAG GUGG UAG UGGUUGU  GUG A
UUUCG  GCGU ACCGUC CGCC AUC ACCGACA  UAC U
AC  UACG  U  C  U  -  AUA  A

```

>PN-281-3p-8487  
CTGTCATGGAATTGCTCTCTTT

**Identified by Deep-sequencing**  
**Loop-structure:**

```
UGAAA      UA-      C      A      AU
AUGAAGAGAGC  UCCGU GACAGU GGG  U
UAUUUCUCUCG  AGGUA CUGUCA CUU  U
CAUC-      UUA      -      -      AG
```

>PC-3p-6605

ATATGAATGAAAAAGAACAA

### Identified by Sequence similarity Loop-structure:

```
U  AC  C  AAA      GA  A      C      G  AA-  GU
UGA  UG  UU      UUUUUAU  UA  AUUUU  GAUU  AG  AGAU  \
ACU  AC  AA  AAAGUA  GU  UAAAA  UUAG  UC  UUUA  C
C  AC  -  GAA      A-  A      -  G  AGG  AA
```

>PC-5p-12029\_129

TGGGGTACTCCCTGTGGTCGCT

### Identified by Deep-sequencing Loop-structure:

```
C      UG      -  -  G      UAUUUUUAA  AA
CAAUU  CUGGGGUACU  CC  CUGUG  UCGCUU      AUGU  \
GUUAA  GACUCUAUGG  GG  GACAC  AGUGAA      UACA  U
A      GU      U  UC      A      -  -  -  -  -  -  -  -  AC
```

>PC-3p-29347\_46

GAGAGTGCTCTTGTAGCTGGTC

### Identified by Deep-sequencing Loop-structure:

```
U  C  GU  G  U-  G      --  U
GCU  G  CAG  UAC  GAGU  ACUCUCAG  UAAAA  \
CGA  C  GUC  AUG  CUCG  UGAGAGUC  AUUUA  C
-  A  UG  G  UU  -      UU  A
```

>bmo-mir-2832-p3\_1ss6AC

AAGGTCCCCAGTTCG

### Identified by Sequence similarity Loop-structure:

```
UACGUC  A  UC  AA
```

```

UGC      CCC GU  GAA  U
ACG      GGG CA  CUU  U
CUUUU-  C  --  AU

```

## Group 2 --- miRNAs with two putative coding genes

>bmo-mir-3401\_L-6R-2\_1ss10TC

GTGCAAATCGTTCGT

Identified by Deep-sequencing

Loop-structure:

S-1

```

AA-      UC      A      CAUCAACUG      AA      -----      U--      G
CUUGU    CGUUU    UAAA  GAGA      AAUGGAAAGG  AUUGUGU    GCAAA  CGUUC  \
GAGCG    GUAAA    AUUU  CUUU      UUACUUUUUCU  UGAUACA    CGUUU  GCAAG  U
CAA      UU      G      UUUUUUUA-  A-      AGGUAA    UUU    G

```

S-2

```

UUG      CU      UU      ACA  G  G      C      AC  UCAC  UU      U-      U      G  CA
UUUG    UGAUG  AUGA  UG  AU  GUGCU  CAGA  UC      GU  GUGUU  GAAU  GAGCU  CG  G
GAAC    ACUGC  UGCU  AC  UA  UACGA  GUUU  AG      CG  CACAA  CUUA  UUUGA  GC  A
UAA     UU      U-     AA-  G  -      A      --  CUAC  UU      UU      C      -  UA

```

>bmo-mir-3382-3p\_L-9R-1\_1ss19TG

ACTGGATTCGTGAAC

Identified by Deep-sequencing

Loop-structure:

S-1

```

G--      AAA  C      UU  UGAACA  G
GAAGAC   GU  AACUGGA  CG      UUU  G
CUUUUG   CA  UUGACCU  GC      AAA  A
UCG      AAC  A      U-  CC-----  A

```

S-2

```

UCAU    A  -  UUC--  UG      AAAAU  A
CC  CUG  GA      G  AACAU  CAA  \
GG  GGC  CU      C  UUGUA  GUU  U
----  C  A  UUUAC  GU      CCUGC  A

```

>aae-miR-309b-p5\_1ss12CG

GTTGGTGGAGTGATT

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```

U      UG  ---  UUUUCU--  UGUU
  GUUGG  GA  GUGA      UAAUGUU  \
CAACC  UU  UACU      GUUGUAG  C
A      GU  UGG  UGUUUAAU      UUAG
  
```

**S-2**

```

-      U  GA      UUC  UG  UUG--  G  G
GAUUGA  CAGAU  GA  GCUCU  U  AUU  UGGU  GUG  \
UUAAUU  GUCUG  UU  UGAGG  G  UGA  GCCG  UAC  U
      C      U  AG      U--  GU  UUCUU  G  G
  
```

>tca-miR-3893-5p\_L-2R-8\_1ss15GC  
GATGTTACGACGCCT

**Identified by Sequence similarity  
Loop-structure:**

**S-1**

```

CGGU      ----  AUUUG  CU  GAA
  GCGUCGU      UUGGA  GA  C  A
    CGCAGCA      AGCUU  UU  G  U
----      UUGU      GCUA-  AG  AAA
  
```

**S-2**

```

UUUUUAUC  C  C      A
      CGU  AU  UCAAUG  U
      GCA  UG  AGUUAC  U
CAUCGCA  U  U      U
  
```

>dvi-miR-31a-p5\_1ss11AC  
TCAATTGGCACGATG

**Identified by Sequence similarity  
Loop-structure:**

**S-1**

```

A  UA      U      -  CUUUU--  UU
  U  AUAUCGU  UCAAU  GA      UUCG  \
A  UA  UAGCA  GGUUA  CU      AAGC  A
-  GC      C      A  AUAUCUU  CU
  
```

**S-2**

```

AAAUUC      A  G  --  AUUCACUAU  A
  
```

```

GGUUUC AUU GC ACG          UUUCA C
CCAAGG UAA CG  UGC          AAAGU A
AAA---      G  G  AA  CAACUAAU-  U

```

>mse-mir-87-p5\_1ss10CT  
CTGATGGGCTTGAATC

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```

UUAU      CA  UUU--  A  A--  U  G  G  UAG
      UUCA  CC      UUUG GAAG  UG GCAAC GU GC  U
      AAGUU  GG      AAGC CUUC  AC CGUUG UA  UG  U
GUU-      CG  UAGUU  -  ACC  U  G  A  CAC

```

S-2

```

      A  A  AAUGA      UG U  U  G--  GA
CAA UUC CG      UUUAUU  G AUUC GGCU  CU  A
GUU AAG GC      AGAUGA  U UAAG UCGG  GA  U
      A  -  AA---      GU C  U  GUA  GU

```

>dme-miR-996-p3\_1ss8TG  
TCATGATGAAGTTCG

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

```

AUU A  A      C  A-  C  G
      C  UG  UGAAGUU  GUGGA  UAG CUAAAU  U
      G  GC  ACUUCGA  CACCU  GUC  GGUUUG  A
--G G  -  -  AA  C  C

```

**Identified by sequence similarity**  
**Loop-structure:**

S-2

```

AU  -  AUA      U  G-  A
      UUGA  UUUCA  UCAUGAG  GAUG  UGU  A
      AACU  GAAGU  AGUACUU  CUAU  ACG  C
UU  U  ---      -  AA  A

```

>bmo-mir-3228-p5\_1ss9TC  
TCCTTGGACCTTGAA



**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```
AU----- AAU  UU      ACA  UUA
      GGUU  GGA  GGAAGA  UGACAU  U
      CCAG  CCU  UCUUUU  ACUGUG  U
AAAGUU  GUU  --      AUA  UUG
```

**s-2**

```
AACAUA-  UAAA      A
      CCA  AGUUUUGC  A
      GGU  UCGAAGCG  A
AAGUCCA  UCCA      C
```

>dpe-mir-3-p5\_2ss15CA17GA  
GGATGCATTTTGTGAAA

**Identified by Sequence similarity  
Loop-structure:**

**S-1**

```
AA      C-  AA      CG  AU
  UCAUAGA  GCA  UCGAUU  AU  U
  AGUGUUU  CGU  AGUUAA  UA  U
A-      UA  --      AA  AG
```

**S-2**

```
-  UUU  U  UAU  GU  A  --  U  AAAUUCAAA  AAU  C
AAUAUUCG  AUCG  GUC  CGC  GCAUUUU  GA  AAUAU  UUGUU  AA  GUGAA  GU  G
UUUAAGU  UGGU  CGG  GCG  UGUAGAA  UU  UUAUA  AGCAA  UU  UACUU  CG  C
      A  GU-  -  UAG  GU  A  AA  C  GCAUUUGUG  GC-  C
```

>dme-miR-4948-p5\_2ss9TA17GA  
CGTGATCCAGGTTGTGA

**Identified by Sequence similarity  
Loop-structure:**

**S-1**

```
AC----- AUU  -  GA--  GGU  U  AU
      CGG  UUC  GCGAU  UCCA  UG  UG  U
      GCC  AAG  CGCUA  AGGU  AC  AC  U
UACACUU  ---  U  AAUG  ---  U  CU
```

**s-2**

```
UU  CA-  U  ACUU--  C  C  U
  GAUC  GGUUG  CAUU  GGC  AA  CGG  U
```

```
CUAG CCAGU GUAA CCG UU GUC U
-- AUA C CCCACU - C A
```

>dgr-mir-3-2-p5\_1ss9TG

ATGCATTCGGTACAG

Identified by Sequence similarity

Loop-structure:

S-1

```
UC A UC -- ACA AU- UCCAA
GUGU U GUGC AUUCGGU GACA CAGGGU C
CACA A CACG UAAGUUA UUGU GUUUCA A
GA - GA AG AG- ACC CUACA
```

s-2

```
UGA GUACA -- AUAAGAA AAAU
UUGCAUUCG GC GUGU UUUCGG U
AACGUAAGC CG UACA GAAGCC U
AAC AAG-- AA GGGC---- AAAG
```

>hme-mir-2767-p3\_1ss11GA

TTTATTCCAAACTGTA

Identified by Sequence similarity

Loop-structure:

S-1

```
UUCGA-- CAA- U - AUG
UGGGA UGC UGGAAU GAUUUGA UUUGA \
ACUCU AUG ACCUUA UUGAACU AAGCU A
UUAACAA UCAA - U ACA
```

s-2

```
UC A ----- A CGG- CU-- UG --- AGA
UCAC UGGU GG UUAGC UG GUGG GU GAAUAAA A
AGUG AUUA CC AAUCG AC UACU CA CUUAUUU G
CU - AUAUAGCU - UAAA UUUU GU AAC AGA
```

>bmo-mir-3360-p5\_1ss8AT

GATAATTTTATGAAA

Identified by Deep-sequencing

Loop-structure:

### S-1

```

UCUUA   UCUGA   U   AAU-   A   UUCU
UGCGG   UAUC   UAAU UUAUGA   GGG AGAAU   \
ACGCC   AUAG   AUUA AAUAUU   UCC UUUUA   C
UCA--   UC---   C   GUCU   A   UAAA

```

### s-2

```

A G A   AAAUA   AUU-----   UC
A AU AUUUUAUG   GUUG   AGU U
U UA UAAAAUAC   CAAC   UCA U
- G A   GUAAA   GCUUACUC   UU

```

### >tca-miR-29-p3\_2ss15TA17CT

```
AGATTTTATTTTGAATT
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```

CUUACG   UU   CAAA   U   UU-----   UUCAAU   AAA
   CAUA   UGGACAAU   GAU UUAUU   GAAU   UUGCA   \
   GUAU   ACCUGUUA   CUA AGUAA   CUUG   AACGU   U
UAA---   --   ----   U   CUUACCUCUUAU   CUUAU-   GAC

```

### Identified by Sequence similarity Loop-structure:

#### S-2

```

UG   UCAC   AUU-   CGCA-   -   C   ---   AUU
AAAUGAAAUCAAA   GAUUG   ACAAAU   CAUU CAUU GAUUUG   AGUUU   \
UUUAUUUUAAGUUU   UUAGC   UGUUUU   GUAA GUAA CUAAC   UUAAA   U
--   UAUU   ACGU   UAAAG   C   A   CUU   AUG

```

### >api-bantam-p3\_1ss1TA

```
ATATCATTTGTTTCATT
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```

CCAG   A GC   A   AAAAC   -   -   AUGCAUCC
   GAAUAG G   CAA GAG   GAU UAAAU UGA   A
   CUUGUC C   GUU CUU   CUA AUUUU ACU   A
CGA-   A UU   A   GUUA-   U   U   CAACAAAC

```

#### s-2

```

----   UC   U   UCA--   U   GUC   A
   UC   CGAAUG AGCA   GUUG CUGU   GUUC A

```

```
AG GUUUAC UUGU UAAC GACA UAAG U
UUGA UC - UACUA U AC- U
```

>dme-miR-4979-p3\_1ss4AG

ATCGCATCTTTGAAT

### Identified by Deep-sequencing Loop-structure:

S-1

```
GAA CA- UAA GUUUU CUGU UAUUUU UAA G
UCG UCUUUGAAUUUU AGU UAU GUUUU UAAGUGUUGU UCA A
AGU AGAAGCUUAAAG UCG AUG UAAAG AUUCACGACA GGU G
A-- AAG UC- ACUU- UUU- CGUA-- CG- C
```

s-2

```
U- C -- CA AUUG- AU AU AUU ACAUA
UGUCG GUGCA UCA CG CAA AGA UGAC GGGU U
AUAGC UACGU AGU GC GUU UCU GCUG CUCA U
CU C CC AA AAUAA -- AC --- GCUAU
```

>nlo-mir-927-p5\_1ss14AC

TGATATTTGTTTTCGA

### Identified by Deep-sequencing Loop-structure:

S-1

```
GUUC AC-- A U ---- U- C
GGUUG UGG UUU GAUAAUUUGUUU UCGA UG A
CCAAC ACC AAA UUGUAAACAAA AGUU AC U
---- GAUA - C GUAA UU G
```

S-2

```
CA U UA AUCA-- U UAAA-- U C AA- A
AUCGA GAGUAAU UAUUCGG AAGUCU GAAA GU CCG UU GAC \
UAGCU UUUGUUUA GUAGGCC UUCGGG CUUU CA GGC AG CUG A
-- - UA GACAUC U CUAUA U U CAC U
```

>tca-miR-219-p5\_1ss3TA

TCATGTTTGCAATTT

### Identified by Deep-sequencing

## Loop-structure:

S-1

```
UU   A C - UC
  UAAAU GU GAUG GAUUUU \
  AUUUA CG UUGU CUAAG A
--   A U A UU
```

s-2

```
AAAUUA -- UU AA CAC
  GUAU CAUG UGC UUG \
  CGUA GUAU AG AGAC U
CCC--- CC UU -- UAC
```

>ame-mir-3756-p3\_1ss6TA

AATTTATGAAATTCT

## Identified by Deep-sequencing Loop-structure:

s-1

```
AAAUU - C GU U- C ----- A AUUAUU AU
  UAUGAA AUUCU UC GCGUAG GUGG GCA UUC UU AUUU \
  GUAUUU UAAGA AG CGCAUAC UACC CGU AAG AA UGAA U
----- C A AU UU - UACUAAC A GACUAU AA
```

S-2

```
GGA A CCA-- G
  AUUUUUCGG UCAUU UUUUUGGAU \
  UGGGAGGUU AGUGA AAGUAUUUA A
--- G UCUUA A
```

>mse-mir-2768-p5\_1ss9AT

ACTGGTGATATATTTT

## Identified by sequence similarity Loop-structure:

S-1

```
UG UU UUUUUUUUUU UUUC-- CU - UG U AA- C
  UA UUGU UUGU UGUCGU UU A AUCA UUA UGGA A
  AU AGCA AACA AUAGUGG AG U UAGU GGU ACUU G
GU UU UUUGUU---- UUUUAU UU U GU U GUA G
```

s-2

```

AAA      GAUA      C   UU A
  GCUGGU      UAUUU GAG  G C
  CGAUUA      GUGAA CUU  C A
---      A---      -   GG U

```

>tca-miR-9c-p5\_1ss4GA  
TGTAATTATTTTTGAA

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```

UAAUAC      C   UGCACC      -   A
      CAAA AU      ACA GGAG \
      GUUU UA      UGU CCUC A
AGAUAA      U   UAAAA-   A   A

```

**S-2**

```

GC      C-   A   UG CA--   UG UC   U AU
GUUGGC AUGC UU  A   AAUUUAU G  CGA C \
CAACUG  UACG AA  U   UAAAAUG C  GCU G U
--      UU   A   GU UUA   GA GA   U UU

```

>mse-mir-6093-p5\_1ss8TA  
CTGTTGAACTTTTTTC

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```

CA      GUAUAGA      GUCAUUC      AC----   UCCUC      CA
  GCUUUUCA      UGGCGU      GGUU      AGUUU      CACU \
  CGGGGAGU      ACCGCA      UCAA      UCAAG      GUGA  A
C-      -----      AAUAU-   CUUUUU   UUGUC      UU

```

**s-2**

```

      C   U--   CAU      UAUU   UUUUUUG
GAUUG GAA   GGUUC  UACAGU  GGU      \
CUAAC CUU   UCAAG  GUGUCG  CCG      U
      A   UUU   UU-   ----   UCGUAAU

```

>tca-miR-3825-p5\_1ss12AT  
ATGTTTTGGTGTAGA

**Identified by Deep-sequencing**

## Loop-structure:

S-1

```
AC----- AA-- U-- A ACU
      AAUAACA UGUUU GGUGU GAA U
      UUAUUGU ACGAG CCAUA CUU U
AAAAUACUC GUAC UCU A ACC
```

S-2

```
- G G AGA AA
GGUUG GUUUGAU UUUU GUGU AU \
UCAAC UAAGCUA AAAA CACG UG A
      G A G GAA CA
```

>dse-mir-9b-p5\_1ss9GC

TATTATTCGTCTTT

## Identified by Deep-sequencing Loop-structure:

S-1

```
U C - UA AU
UUAUAG AUAAAA GC AGGUG GC \
AGUGUC UAUUUU UG UUUUAU UG G
      - C C UA AU
```

s-2

```
UUCAA AU- U UCUUUUUUUUAAC UA- UU
      UUUCU UA UUCG UGA UG \
      AAAGG AU AAGC ACU AC C
UAUGC AAU U UUCAUUCUAAAA UCC AA
```

>dps-mir-2539-p5\_2ss1AT17AT

TTGGTCATGTTTCTGTT

## Identified by Sequence similarity Loop-structure:

s-1

```
AA UGGU UCU---- U-- UA
UUC CAUGUU GUUUA AAGU \
AAG GUAUAA UAAAU UUCA U
AA UUUU UUUUAU UCC UU
```

S-2

```
G CCCAACA AA UU- CU AG A AAU
AUCCAU UAAUA AAAC ACCA AACAU GAA UUUC \
UAGGUG AUUUAU UUG UGGU UUGUA CUU AAAG C
G CAGAAG- C- UAC -- GA - AGC
```

>dme-miR-2280-p5\_1ss5CG  
TTTTGTTAGCTGGC

**Identified by Sequence similarity**  
**Loop-structure:**

s-1

```
CCAUAAAUA C UACAAAAA CGUAU
AG GUCC AAAACUUU \
UC CGGG UUUUGAAGA U
ACCA----- - UUCGAUUG- UUCUC
```

s-2

```
UUUUUU UU- U UUCU GUA AGC -- UU
UGA UU UG GUUUU UUUUGUU UUGUUU GCA U
ACU AA AC CAAAA AAAAUAA AAUAAA UGU G
UUU--- UAU U UUU- AAA --- UU UU
```

>hme-mir-2c-p3\_1ss1TA  
CATTGTTGCCACTT

**Identified by Sequence similarity**  
**Loop-structure:**

s-1

```
G--- C U C UUAUUA U CU U CAU--- --- U AUU
GUAG AUUGU GCCA UUCU UCGAU UG UGG CAC UGAUU GC GCC U
UAUC UAACA CGGU AAGA AGCUA GC ACC GUG GCUAG CG UGG A
UUAA U - - UCAC-- U U- C CUACUU UUU U CUU
```

S-2

```
AAU A U U CAC CA
GCAUA UUCA UGU GC UUGC C
UGUGU AGGU GCA CG AACG A
--- A U - --- UA
```

>dya-mir-308-p5\_1ss13TG  
GTTTTGTTTCCTGTT

**Identified by Deep-sequencing**  
**Loop-structure:**



### s-1

```

AUUU--      UAC          UUUUAUGA      UAUCA      U
          AACA      GGACAAAUG      UUAUUC      GUAUAUG U
          UUGU      UUUUUUUUGC      AAUAAG      UAUUGUAC U
AUAAAU      CC-          UAA-----      UA---      A

```

### s-2

```

UUUUUU      UG UC      ACCUGUU      ACUUC      A UAU      AU      UUUUAUUUUUC
          UU UU CUGUU      ACC      GUC UA      UUUGUGG      GAUUU      A
          AA AA GAUAA      UGG      CGG AU      AAACACU      UUAAA      A
C-----      GU GA      GUCU---      CUU--      - CAU      CU      CACUCUAACAC

```

### >tca-miR-3821-p3\_1ss1AG

GTTTTTGGCACAAAT

### Identified by Deep-sequencing Loop-structure:

### s-1

```

U      -      GAGU          UGAGUU      AA      UUG
UGUAUGCA GAAU      UUUUGUAUGCAAAA      UUUGUG      CAAA      A
ACGUAUGU CUUG      AAAACGUAUGUUUU      AAACAC      GUUU      G
-      U      AAU-          UGAGUU      G-      UUU

```

### s-2

```

ACU      UC      -      UU      GA      CG      UAUUAUAUUUU
      GUGA      AAUUUG      GCUAGG      AUUU      UU      GUAAA      G
      UACU      UUAAC      CGUUU      UAAA      AG      UAUUU      A
---      --      A      U-      --      AU      UUUUUUUUUUU

```

### >dmo-mir-279-p5\_1ss9CG

GTGTTTCAGATTGTT

### Identified by Deep-sequencing Loop-structure:

### S-1

```

UGUU      CUU      --      C--      CUUU      UG CAAUUCU      GC
      UAAC      UCUGA      CACC      GAGG      GAC      A      UG \
      AUUG      AGACU      GUGG      UUCC      UUG      U      AC      A
-----      UU-      UU      ACU      AUC-      GU -----      AA

```

### S-2

```

AACAUUUAAUUUUUCAUUCUCUUUUUUUU      GA      -      CUAUA      CUA
          GUGUUUCA      UUGU      UGG      GGUUG      A
          CAUAAAGU      AACA      ACC      CCAAC      U
AGUUAUAUCAAUCUAAUUAU-----      --      C      UCAA-      UUC

```

>dpu-mir-278-p5\_1ss3AT

AATGTTTTCTCTGTT

### Identified by Deep-sequencing

#### Loop-structure:

S-1

```
U      AA  UAA  U  UCUCUG  AU-  U  AAUC
GAUAAU  UUG  CGAA  GUUU  UUUUUU  UUUCA  GC  \
UUGUUA  GGC  GCUU  CAAA  AAGAAA  AAAGU  CG  G
U      --  UAG  U  UAAUAA  GGU  -  GUUU
```

S-2

```
CAU--  -----  ---  A  A  G  AG
      GAAUGUU  UUCUCU  GUUUUG  UUUC  UUUU  C  \
      CUUAUAG  AAGAGA  CAAAGC  AGAG  AGAA  G  U
UUAAU  UGACCG  ACG  A  A  A  UU
```

>dme-miR-316-5p\_2ss11CT20GC

TGTCTTTTTCTGCTTACTGCCG

### Identified by Deep-sequencing

#### Loop-structure:

S-1

```
U  CU  UGCUUA  C  UU  UA
UCUAU  GAU  GUCUUUUUC  CUG  CG  UGUU  C
AGAUG  CUA  CGGAAAAGG  GAC  GC  AUAA  U
-  CU  UCAAAC  A  U-  UU
```

S-2

```
UAUUUAUGA  U  CU  UGCUUAC  C  --  UA
      UCUA  UGAU  GUCUUUUUC  UGC  GUC  UAUU  C
      AGAU  GCUA  CGGAGAAAG  ACG  CAG  AUAA  U
CUUA----  -  CU  UCAA---  A  CU  UU
```

>PC-3p-187220\_5

TGTATCTTCATCTTTATCTTCATC

### Identified by Deep-sequencing

#### Loop-structure:

s-1

```
AUUUUUAUAAAAUAUCUC  -  -  UU-  UUC--  AAAA
      GAU  AAGAU  GAGAUGA  UGC  AAGAUGAAGAUGAGAU  G
      CUA  UUCUA  UUCUACU  AUG  UUCUACUUCUAUUCUA  A
-----  C  U  UCU  UUCUA  CUAU
```

**Identified by Sequence similarity**  
**Loop-structure:**

s-2

```

AUUAUCUC - - U- UUC-- AA
      GAU AAGAUGA GAUGAA UGC AAGAUGAAGAUGAGAUGA G
      CUA UUCUAUU CUACUU AUG UUCUACUUCUAUUCUACU A
CAUUU--- A U CU UUCUA AU
  
```

>PC-5p-62433\_18

AAATCGATCTTTTTTGGCGCT

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

```

A U CU - UUUC AAA
UAAA CGAU UUUUUGG CGC GCA \
GUUU GCUA AAGAACU GCG UGU C
- - AU A ---- CAU
  
```

s-2

```

C U CU --- UUUCAAA
ACUAAA CGAU UUUUUG GCG \
UGGUUU GCUA AAAAAC CGUG A
- - AU AAG UCAUAAA
  
```

>dsi-mir-31b-p5\_1ss2AT

GTTTCGAGCCTCTTATC

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```

U CCUC - CG UCCA U CAAU CAA --- AUA
GUUCGAG UUGU GU C GUUC AG UUC AAAUGUG ACC C
UAAGUUC AACA CG G CAAG UC AAG UUUACGU UGG A
- CGU- A AU UCUC U AAAC UAG GAA AAA
  
```

S-2

```

AUUA UCU CG UCUUACCC U U UA
AAUG AUCCAUU AGCC AUUCAUAC GCG C \
UUAU UGGGUAG UCGG UAAGUAUG UGC G C
---- UGC AG UUAUU--- - U GC
  
```

>PC-3p-1003\_1619

CATACTCTCCTTTTCGATCTCA

**Identified by Deep-sequencing  
Loop-structure:**

S-1

```
AAA      A      C      C      UGUAUUA
GUUUAUC GUGGGGUU AAAGGAGAG AUGUA  \
UAAAUAG UACUCUAG UUUCCUCUC UACAU  U
C--      C      C      A      UAGGAGU
```

**Identified by Sequence similarity  
Loop-structure:**

S-2

```
U-  A      U      A      GUCU  CA
GAAUC GUC CUGGGAUCGAA GGAGA UAUACA  UUUG  \
CUUAG UAG GACUCUAGCUU CCUCU AUAUGU  AAAC  U
CU  C      U      C      ----  UU
```

>aae-bantam-5p\_R+1  
CCGGTTTTTCATTTTCGATCTGACT

**Identified by Sequence similarity  
Loop-structure:**

S-1

```
AAAGU      U      GCAA  U      -      UAUUU
UAUUGAAGGU GAAGAUU  GU GGACGG AGAA  U
AUAGCUUUUA CUUUUGG  CG CCUGUC UUUU  C
-----      -      GC--  -      A      UGCUA
```

S-2

```
GGAACAC      -      CC      -      U      U-  A-  GCAACUGAA
UUCC AUUUG  GAU GAA AUGG  AC  CCA      C
AAGG UAAAC  CUA CUU UACU  UG  GGU      A
GUAAA--      U      AA  G  U  UU  CA  AAAAAUAA
```

>tca-miR-3866-p5\_2ss3GA19CG  
TCACACAGTTTGATCAATG

**Identified by Sequence similarity  
Loop-structure:**

S-1

```
UUU      AAAA  U      A      UG-  A      --  CAAGAGU  A  GU
UUUCGCU  GCUC  CG UCG CAGUU  AUC AUGUA  GUA      UUA AAU  \
AAAGUGG  UGAG  GU AGC GUCAA  UAG UAUAU  CAU      AAU UUA  A
```

```
--- GGCA U A UUA G GA AAAAUAU A AG
```

S-2

```
AAA AAUAACG UG
UUCGGUCAAAUUG UGAA GCUUU \
AAGCUAGUUUGAC ACUU CGGGG G
AC- AAA----- GG
```

>dme-miR-4941-p5\_1ss4CT  
ATTCTCGAGCTGCTCAC

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
CUUCU C UUCA CA C CAU G UUG
CGAG UGCUCG GCG UCUU AGC GC CAGU \
GCUU AUGAGC UGC AGAA UCG CG GUCA A
CU--- C ---- C- C UGC - CCA
```

s-2

```
UUUA CG- U U A
AUUCU AGC GC CCAAC \
UAAGA UUG CG GGUUG A
---- CUA C U A
```

>tca-miR-3888-5p\_R-4\_1ss6TC  
GTGCTCTGAATGTCA

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

```
UG CAG - AA UCAAAG G
AUUUCUGCC UGCUC UG UG UGAA A
UGAGGGCGG AUGGG GC AC ACUU A
AA CAA C GA CA----- A
```

S-2

```
CA C--- G AAA
GUGCU UGA AU UC G
CGCGA ACUUA AG U
G- AUGA A AAG
```

>PC-3p-34325

ATGTTCTTGGTTTTGATTGTG

### Identified by Deep-sequencing Loop-structure:

S-1

```
      AU      U      U-----      AU      UG      -      GA      GA
AUAAU  GUUC  UGGU      UUGAUUGUGA  GGG  AC  GGUU  UG  \
UGUAU  CAGG  GCCA      GAUUAACAUU  UCC  UG  CCAG  GC  G
      --      U      CACUAC      AU      GU  A      AA  AC
```

S-2

```
      UG      U      UUUU  U      UC
GU  UAAU  CAAG      GG  ACGUGU  G
CG  GUUA  GUUU      UC  UGUACG  A
      GU      -      UGGU  U      UA
```

>ame-miR-282\_L-9R-2\_1ss16AG

TCTCCTGGGCTTTGTCT

### Identified by Deep-sequencing Loop-structure:

S-1

```
      UG-      AG-      UAUCA-      CAA
CAAUU  AGCGGAUAAAG  AGGA      CGGU  G
GUUUU  UUGUCUGUUUC  UCCU      GCUA  G
      UUA      GGG      CUCCGA  ACU
```

s-2

```
A      --  G      C-  UACG  GA
CUCC  UG  GCUUUGUCG  GC  CGU  \
GAGG  AC  CGAAGCGGU  CG  GCA  U
-      UC  G      AU  ----  AC
```

>dps-mir-986-p3\_2ss2CG17CG

CGAGTTGGGTTGTTTGGG

### Identified by Sequence similarity Loop-structure:

S-1

```
CAUAAA      G      GUU      AGA
      ACUGACA  AGUUGG  GUUUU  \
      UGACUGU  UCAACC  CGAGA  C
AAG---      -      AC-      CGU
```

S-2

```

U-      C GC-      UAU--      UUCU-      UCAAU      ---      AU      G C      AA
  GUAA UA      CAUUUG      UGC      GCCC      UG      AACCA UGUA AG UAU A
  CAUU AU      GUAAAC      ACG      UGGG      AC      UUGGU ACAU UU AUA U
UC      A ACA      UUUCC      UUUGU      UUGAU      AUA      AU      G A      GA

```

>PC-3p-106345\_9

TGTCCACTGGTTCGTTGTTCTG

**Identified by Deep-sequencing  
Loop-structure:**

S-1

```

AG--      A--      -      GUAA-      U      A G      AAAAAAAAAA
  UGA      GCA AC      CAGAGCAACGA CCAGUG GA AG      \
  GCU      CGU UG      GUCUUGUUGCU GGUCAC CU UC      A
AAAA      AAA      A ACUAC      U      - G      GCCGGUAGA

```

S-2

```

AA      UC      A G      CAAA
  CAGAACAACGA CAGUG GA AGU      A
  GUCUUGUUGCU GUCAC CU UCG      U
AC      UU      - G      CCGG

```

>PC-3p-94661\_11

CGGATTGTATTTTTGGGCA

**Identified by Deep-sequencing  
Loop-structure:**

S-1

```

C-      -      G      AAU      CAA
  UUGUUCAAAAAA AAAAGU UCG      UCUG      G
  AACGGGUUUUUU UUUUUA GGC      GGGC      U
AA      A      -      ---      CCC

```

s-2

```

C-----      C      GUGUCAAAU      AAGU
  UUGUUCAAAAAA AAAAA      UCUGC      C
  AACGGGUUUUUU UUUUU      AGGCG      C
UUUUCAAUAAAAAA      A      -----      GGCC

```

>PC-5p-59938\_19

TGATGTTTGTATTATGGGTTGAA

### Identified by Deep-sequencing Loop-structure:

S-1

```
AGAGGAAA      G      A      AUA
      GUUUGAAUUG UGAUGUUUGUUU UGGGUUGAA C
      CAAACUUAAU ACUACAAACAAA ACCCAACUU A
GUAUUAGG      A      C      AUU
```

s-2

```
U-  AUU  A  ---  -  GUUG  A  -  CUCAU  CCAAU  -  G
  UGA  UUCG UGUUU  GUUU AUGG  AAU CG UGAGUA  UUCA  GCA UGUA A
  ACU  AAGU ACAA  CAAA UACC  UUUU GC ACUCAU  AAGU  CGU AUAU A
UU  CUU  C  UCC  C  ACA-  -  G  UUUUU  -----  U  A
```

>aae-miR-87

GTGAGCAAATTTTCAGGTGTGT

### Identified by Deep-sequencing Loop-structure:

S-1

```
-  G  A  A  GU  UUG-----  U  AUA
  UUAAC UUGAUG GCCUGAAAGUU UGCU UACCU  CGC ACCA C
  AAUUG AACUGU UGGACUUUUAA ACGA GUGGA  GUG UGGU C
U  A  G  -  --  UUUAUUUUAA  C  AAA
```

S-2

```
U  U  UUU  G----  UAU
  CACAUCU AGAAUUUGCUU  ACCU  GC  C
  GUGUGGA UUUUAAACGAG  UGGA  CG  G
-  C  ---  AGCAA  UUA
```

>PC-3p-11367\_137

TGTTTCCTGATTGTATAAGATC

### Identified by Deep-sequencing Loop-structure:

S-1

```
  AU  A  UUC  UUCAU
UUAG  CUC AUGAUA  CUUGUACAAUCAGGAAACAG  U
AAUC  GAG UACUAU  GAAUAUGUUAGUCCUUUGUU  U
  --  C  CUA  UAUUU
```



## S-2

```
-- AAU UUC U GUUCUU
GAU CUC GAUA CU GUACAAUCAGGAAACA U
CUA GAG CUAU GA UAUGUUAGUCCUUUGU U
UC CUC CUA U AUAUUU
```

## >PC-3p-189898\_5

TAGAATTCCAATTTGAAACGTGTCGATCTT

### Identified by Sequence similarity

#### Loop-structure:

## S-1

```
AG ---- A A A--- UU AAC
AAUUUU GUAGAAA AUC AUAC CAAGUUG AUUC \
UUAAAAG UAUUUUU UAG UGUG GUUUUAC UAAG G
-- UUCU C C CAAA CU GUU
```

## s-2

```
UU A AAGAAUUUUC A A A--- UU AAC
UUU UAGGA GUAGAAA AUC AUAC CAAGUUG AUUC \
AAA AUUCU UAUUUUU UAG UGUG GUUUUAC UAAG G
UU A ----- C C CAAA CU GUU
```

## >PC-3p-103654\_10

TACTCGAGGTTCGGAATGTGATTTAACC

### Identified by Deep-sequencing

#### Loop-structure:

## S-1

```
AACUC- AA--- A A G A -- GGA AAA
AUCAU UA GUUAAA C ACAUU UGAAUCUU GUGCUG UC A
UAGUA GU CAAUUU G UGUAA GCUUGGAG CAUGAC AG A
CAUUUA CUCUG C A - G CU G-- AAG
```

## s-2

```
AC CAUAA A A G A -- GAA AAA
UCAU UA GUUAAA C ACAUU UGAAUCUU GUGCUG UC A
AGUA GU CAAUUU G UGUAA GCUUGGAG CAUGAC AG A
AU CUCUG C C - G CU G-- AAG
```

## >PC-5p-46215

TATTGAATATTGAATACAC

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```
AAUG--- - --- GCCGA A
      GAUG GUGUA AAUG AAUGU U
      CUAU CACAU UUAU UUACA G
AUUUUAA U AAG AAG-- A
```

**s-2**

```
UU U U GAUGU - U - UAUUU- AUU CACAUCACACA U
  UGU UGUUUUU AUAU GAUAUUU AUGUG GUGUGUGU GUGU UGUAC GUA UUGCA U
  ACA ACAUAAG UAUU UUAUAAG UACAC UACAUACG CAUA ACGUG CAU GAUGU C
-- U U AG--- U U U UGUCAU CAU CUACAAUUAC A
```

>PC-3p-61883\_19  
TAATGACCAATTATCGTTGAATCGCACT

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```
C - U UGC AACC A
GAA GU UGAUUUAA CGAUAAUU CA AGA C
CUU CA GCUAAGUU GCUAUUAA GU UCU U
- C - CCA AA-- A
```

**S-2**

```
----- U U AACC A
GAACGU UGAUUUAA CGAUGAUU GUCA AGA C
CUUGCA GCUAAGUU GCUAUUAA CAGU UCU A
CUUCAC - C AA-- A
```

>PC-3p-42445  
ATGAGTTGATTGAACTGCTT

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```
C AUA UG UUA- A ACAAAGG -- U- GAA
UG GCUUUGAGCA GUU AUU AUUU CUAAG AUUU CGGA AAAAUG C
AU UGAAAUUCGU CAA UAG UAAA GGUUC UAAG GUUU UUUUAC G
U --- GU UUGAG - AAUAAG AC UU AAC
```

**S-2**

```
CUAG UCA - CA- GU - UUU
  GAA GAA CA UAAUUA UCA CA U
```

```

CUU   CUU GU   GUUAGU AGU GU   A
----  UG-   C   CCA       UG   A   UAA

```

```

>tur-mir-5736b-p3_1ss5AG
AAACGATCAACCATC

```

**Identified by Deep-sequencing  
Loop-structure:**

S-1

```

ACU      AUUA      C   C   CAUCACC      GAAA
  UUCGC      CAACAAA GAU AAC      AGCCGU   \
  AAGUG      GUUGUUU CUG UUG      UCGGCA   U
U--      GGCC      U   C   -----      AACC

```

S-2

```

GCACA-  A-      CCA  A-  C   AAA  ---      -   U-   GU
GGCUCAU  GG  GAUCGU  AU  UG  AUCG  GG  GCAUUACC AAA  UGCUU  \
UUGAGUA      CC  CUAGCA  UA  AC  UAGC  CC  CGUAGUGG UUU  AUGAA  G
      AACCUA  AA      AAG  GC  -   CA-  UUA      C   UU   AG

```

```

>bmo-mir-3325-p3_1ss3AC
GCCAAAAGAAAAGTGT

```

**Identified by Sequence similarity  
Loop-structure:**

S-1

```

CCAAC      AA   GU
  CAAAAG  AACU  A
  GUUUUC  UUGG  A
GUACC      A-   UA

```

S-2

```

AAUACACAAC      CU      CU  UUCC-  AA
      AAAAGAAAA  GUUAU  GC      GGCU  \
      UUUUCUUUU  UAUGU  UG      CCGG  A
CUUCUCUUU-      U-      AC  UUACU  AG

```

```

>rmi-miR-5318_L-5R-7_1ss8AC
TACCTGCAGAAGACT

```

**Identified by Sequence similarity**

## Loop-structure:

### S-1

```
GUCACUUACUC  C  A  AG  A  UG  C
              AC  UGC  GA  ACG  UU  G  U
              UG  ACG  CU  UGU  GG  C  A
AGCA-----  A  C  CA  C  GU  G
```

### s-2

```
AA----  C  CC  UGA
         CUUC  GUA  UGAUA  U
         GAAG  CGU  AUUAU  G
AAAAA  A  CC  UCA
```

>dme-miR-92a-5p\_L-4R-3\_1ss15TA  
CGGGAAGGTGACAAC

## Identified by Sequence similarity Loop-structure:

### S-1

```
        UAC  CU  UUU  AAC  UAGAA  UCUA
UUUUCAG  CGA  GU  UG  UGUCAU  CUUCG  \
AAAAGUC  GUU  CG  AU  ACAGUG  GAAGU  U
        UAA  AU  CGU  GCA  -----  UUCA
```

### S-2

```
U  UAU  UAAU  A  U  UG  CAACA--  UCAUGCA  AAUA
AUG  AUGUA  AUGA  UGAAGAU  GAAGG  A  UUGUA  UGGAA  G
UAC  UACAU  UGCU  ACUUCUG  CUUCU  U  AACAU  AUCUU  A
C  UCU  ----  A  C  GU  UACUAAA  UAAUAUA  GCUU
```

>bmo-mir-3265-p5\_1ss14GT  
AGACTGAGAGCTCTT

## Identified by Sequence similarity Loop-structure:

### S-1

```
U          CU--  U
GACUGAGAGCU  GAAG  G
UUGACUUUUGA  UUUC  C
-          UAGU  U
```

ACUGAGAGCUCUU

### S-2

```
CUAG  C  CUCU  AAAAA
```

```

ACA UGAGAG   UUUGU   C
UGU ACUCUU   AAACA   A
----  A      UU--   AACAA

```

>bmo-mir-2755-p3\_1ss1TA  
 ATGCACCCTGTCAGA

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```

UU   ---  AUCUU   -   CC-----  U   ---  CU   U   UUUUUUUCCU
  UUCAA   GUGA   UUGAU GCAC   UG CA   UUA   ACA UUGUUU   \
  AGGUU   CACU   AACUA CGUG   AC GU   AAU   UGU AACAAAG   U
UU   UUA   CU---   G   UUGUUU   U   UUC   UU   U   UACAAAUCUC

```

S-2

```

--   CAA-   A-   GAUUU-   U   ACA   C
CAUUC   GACA   GCA   CUG   GUUUCG GUUUUAA   AUUUU C
GUGAG   CUGU   CGU   GGC   CAAGGC UAAGGUU   UAAGA C
  AA   CCCA   AA   AAGUGC   U   ---   G

```

>nvi-mir-33-p5\_1ss6CA  
 TGCAAAGAAAATATT

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

```

AAAA   AAAUAA--   U   AAGA   CA   U
  GUA   UAA GCA   AAAUAUU   AAUGU A
  CAU   AUU CGU   UUUGUAA   UUAUA A
AAC-   GUGAACAG   U   CCA-   AC   A

```

S-2

```

C   UG   AAAA   UCAAAU   UA
UCG   CAAAG   UAU   UGG   \
AGC   GUUUU   AUA   GCC   A
-   CA   AAGA   UAUUGU   GC

```

>tca-miR-3870-p5\_1ss11AC  
 AAAAGAGCGCCAAAT

**Identified by Deep-sequencing**

## Loop-structure:

S-1

```
GAAAA      C A   GAU      A-   AAG
GGU      GAGCGC AA UAC   GAUGA  AAGU  \
CCA      UUCGCG UU GUG   UUACU  UUUU  A
      AUG--      - C   AGU      AG   AGA
```

S-2

```
AC  A  GAGCG  A  UC  A
GA  AAA      CCA AU  GAGA U
CU  UUU      GGU UA  CUCU C
--  A  ACA--  A  C-  U
```

>PC-5p-128615\_7  
TGCCTGAACAATTGAGAATGAT

## Identified by Deep-sequencing Loop-structure:

s-1

```
      C  A-      AA--      GCA  A
UUUGC UGA  CAAUUGAG  UGAUG  GCG  \
AAAUG AUU  GUUAAUUU  AUUGC  CGC  C
      C  CA      AAAA      AG-  A
```

s-2

```
      C  A-      AA--      GCA  A
UUUGC UGA  CAAUUGAG  UGAUG  GCG  \
AAAUG AUU  GUUAAUUU  AUUGC  CGC  C
      C  CA      AAAA      AG-  A
```

>aae-miR-2946\_R+1  
TAGTACGGAAAAGATATGGGGAT

## Identified by Sequence similarity Loop-structure:

S-1

```
      C-----  A      C  AU
UGAUU      UUAU CUUUUCC GUAC  \
ACUAA      AAUA GAAAAGG CAUG  U
      UAAAAA      -      -  UU
```

S-2

```
AAAA--      -      ACA-      AUA  AAUAAU
      CAA GAAUCGGA  UUUUC  GUAU  A
      GUUU CUUAGCUU  AAAAG  CAUA  A
GAUACC      G      AUAG      G--  CGAAGU
```

>bmo-mir-3252-p5\_2ss14CA17TG  
CGAATATCTGAAAAAAGA

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
----- GAG UUC G
UGUA UUUUCGU UUUUC UAUUCAA \
ACAU AAAAGUG AAAAG AUAAGGUU C
CUUU AA- UCU A
```

s-2

```
AAGAUAA U CA A AAA----- AU UG U
UAA UCUUU UU UAGUA UAACUAA U UUU \
AUU AGAAA AA GUCUAU AUUGGUU A AAA U
C----- C -- A AAAUUA -- GU G
```

>dse-mir-285-p5  
UAGAUUUCAGGAAAA

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
UAA----- AUA AG CA
UGUUG UC GAAAAUU \
GCAAC AG CUUUUAA U
ACAAAGUAAAA G-- AA AG
```

S-2

```
UG-- C AUAUU-- A U - AG UU
UCC GAUUA UUUGC UUC UC GA C \
AGG CUAUA AAGCG AGG AG CU G A
AUAA A GAACGUU - U U CU UU
```

>bmo-mir-3393-p3\_2ss11CA18TA  
AACGAGAAGAAAAATACA

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

```

C-      -      CG-      AAAA      UU  AAUAA
GAA  GAAAGA  GCGCAA  AGAAGA  UAUCAAGU  GCG  A
CUU  CUUUUU  UGUGUU  UUUUCU  GUGGUUCG  UGU  G
CU   A      UUA      GA--      UU  GCUA

```

s-2

```

U  UG  U  -  AGAAAA  AAAUUU-  G  G
U  AC  GAAC  GAGA  AUAUUACCG  UUC  AAU  U
A  UG  UUUG  CUCU  UAUGGUGGC  AGG  UUA  A
U  GU  -  A  -----  AAAAGUAU  G  C

```

>PC-3p-135633\_7  
TGACGAGAAAGAAAAATGAGCGCTAAAGT

### Identified by Deep-sequencing Loop-structure:

S-1

```

AAAC  UGU  AUUU-  C  GA-  --  A
      GA  UACC  AAUUU  AGUGCUU  UUUCUUUUUC  CAUUC  \
      CU  GUGG  UUGAA  UCGCGAG  AAAGAAAGAG  GUAAG  A
AAA-  UU-  CAUAU  A  UAA  CA  A

```

s-2

```

U  CAUU-  CC  GG--  --  ACA
AUAAC  AAUUU  GUGCUU  UUCUUUUUC  CAU  \
UGUUG  UUGAA  CGCGAG  AAGAAAGAG  GUA  A
U  CAUAU  AU  UAAA  CA  AGA

```

>bmo-mir-3255-p5\_1ss5AG  
CTTGAGGTAGTAGC

### Identified by Sequence similarity Loop-structure:

S-1

```

GGG  G  U  --  UU  G  C  AUG
UAUUA  UGGA  CUA  G  UU  GAAU  GGCC  G
GUGAU  ACUU  GAU  U  AG  UUUA  UCGG  U
---  G  U  GA  GG  G  C  CGG

```

s-2

```

CCAUU  GA--  AAUG  G-  U  AA
AACUC  ACC  CCAA  CA  AUCC  A
UUGAG  UGG  GGUU  GU  UAGG  A
-----  AUGA  A---  AA  U  AU

```



>cqu-mir-2952-p5\_1ss1TC  
CCACGGCTGGTACTGC

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
A---- G AC AUGA GAC- - U U AACG GA
      GC GCUUGU UGC CG AAG AGU GAC AAAGAUU UUC A
      CG CGACCA AC G GC UUC UUA CUG UUUUUAA AAG U
ACAAA A -- ---- AAAA G C U GAA- AC
```

s-2

```
U UGGAGGC ----- C
GUUAUUGU GGCUGGUAC UGC G
UAGUGACA UUGACCGUG ACG U
C ----- UUUUUA U
```

>der-mir-289-p3\_1ss15AG  
GACGGACTGGGGTAG

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
AUU G C UAAAUCAAU UUUGUUG U AU CU AA
ACGGU CU GUUCGUC CUUAG UUG GUUA AUUA GUUC \
UGCCG GG CAGGCAG GAGUU AAU CGAU UAGU CAAG G
--- G U CGAGUAAC UUUUA-- C GU UU UU
```

S-2

```
CUCUCUCG UAACA UU UC AAAUGC GAA
CGUUUAUCGA AU C UUC CGC \
GCAAGUGGCU UG G AGG GCG A
AAAAUAUA ----- GG UC CACAA- AAU
```

>cqu-mir-92-p5\_2ss14CG17CT  
GTACGGACAGGGGGAAT

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
UGAACA A- GG AA AGA
      UCG CAG GG UGA \
      AGC GUC CC ACU A
CA---- AA AA AA GAA
```

UACGGACAGGGG

S-2

```
A----- U   UU--- U-   U   G
      UCU UCCGU   UU  GGUU AACG \
      GGA AGGCA   AG  CCAG UUGC U
UAAAGG  C   UAAUU UC   U   U
```

>PC-3p-96406\_11

TCAACTGGACGGTGCAAAA

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

```
-   -   -   C   -   G   AGAAU   U
UUUC  UUUGCAU   UCAG UGA UGA  UUAA   UGU C
AAGG  AAAACGUG   GGUC  ACU  AUU  AGUU   ACA G
      U   GCA   A   C   G   -   -   -   A
```

S-2

```
C---   A  AA  -   U
UUUCCA   GUAC CG  CA  UUGAG \
AAAGGU   CGUG GC  GU  AACUC U
      AAAA   -  AG  C   A
```

>aae-miR-87-p5

CAGCCTGAAATTTGCTAAACCT

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```
AA-----   G   AAUUU   CUCUUUCC   GU
      UGGUUCA  UGA   GCUAAA   GUUU  A
      ACUAAGU  ACU   UGGUUU   UAAA  U
AAUUUCA   A   GGCU-   AUUAC---   AA
```

s-2

```
AUUAAUU   UU   AAC   CC   AC   UUUUUCGAAU   C
      GAAA  UGCUA   GAU  GGAG  GAUGGGCA   CGAU  A
      CUUU  AUGAU   CUG  UCUC  CUAUCCGU   GUUA  U
UGCAAAU   UU   CA-   U-   AA   UCCUCACAAU   U
```

>bmo-mir-6497-p3\_2ss16AG18TA

GATCCGTAACTTCGGGA~~AA~~AAGGATTGGCTC

### Identified by Sequence similarity Loop-structure:

S-1

```
CAACA  CG AC  AUC  C      -----  A  GAAGA  CUA--  AGAAUAAUGU
      GAC  U  CGAU  CG AGCCGGUCU  CC AGGU  GUCU  GUCGAU  \
      CUG  A  GCUA  GU UCGGUUAGG  GG UUCA  UAGA  CGGCUG  A
AGG--  AU GA  GAA  C      AAUAG  C  AUGCC  UAAAA  AAGGGAAUGG
```

S-2

```
ACU      ----  -  UA  GAUA  C  C--  -  CC  GG  AA  G-  AG  G  GA
UCUCA  CAGA CCG  CC  UCCG AG  CGG UCU  AA  UG  GA  UCUCU  UC  AUA  A
AGAGUU  GUCU GGU  GG  GGGC UC  GCC AGA  UU  AC  CU  AGGGA  GG  UGU  U
---  AGAA  C  UA  AAUA  U  AAU  U  --  AA  GG  GA  AU  A  AA
```

>PC-5p-179082\_5

TCGGAGATTCGTAACAAATGATAGT

### Identified by Deep-sequencing Loop-structure:

s-1

```
UUU  -  UU  -  A  UAA  U
GAA  UCG GAGA  CGUAAA  CAAUG  UAG  GAAUGU  C
CUU  AGU UUCU  GUAUUU  GUUAC  GUU  UUUACA  G
CGU  A  CG  A  -  UAG  U
```

s-2

```
UUU  -  UU  -  A  UAA  U
GAA  UCG GAGA  CGUAAA  CAAUG  UAG  GAAUGU  C
CUU  AGU UUCU  GUAUUU  GUUAC  GUU  UUUACA  G
CGU  A  CG  A  -  UAG  U
```

>PC-3p-166644\_5

TGAACGGTGAATAACGAACTAAATTGT

### Identified by Deep-sequencing Loop-structure:

S-1

```
-  U  A  A  G  UA-  -  CG  U
UCAUU  UUGAU  AUUUA  UUUGUUA  UCG  CU  CACUA  CA  G  G
AGUAG  AACUG  UAAAU  AAGCAAU  AGU  GG  GUGGU  GU  C  A
      G  U  C  A  -  CAA  C  AU  A
```

s-2

```

UUAU--      A      A      G      UA-      -      CG      U
      UUUU UUUGUUA UCG CU      CACUA CA      G      G
      AAAU AAGCAAU AGU GG      GUGGU GU      C      A
ACUGUU      C      A      -      CAA      C      AU      A

```

>dme-miR-2283-p3\_1ss6CA  
 GTGCAAATCATTAG

**Identified by deep-sequencing**  
**Stem-loop structure:**

S-1

```

A      CUU-      C      U      -----      G      -      ---      CC
GAGU      UGA UUGU CC      CUG AUAGUA GAU      UUCAUAG      \
UUCG      ACU AACG GG      GAC UGUCGU CUA      AGGUAUU      A
-      AUUU      A      U      UUAUC      A      U      ACA      AA

```

**Identified by sequence similarity**  
**Stem-loop structure:**

s-2

```

UU-      UU-      U      A      U      UUAUCCA-      UCU
UAAUUU      UG AUUU CAC UUC      UGA      \
AUUAAA      AC UAAA GUG AAG      ACU      A
AGC      UUU      -      C      U      UAAAAUCUU      UAG

```

>tca-miR-3802-p5\_1ss8GT  
 AACAAAATTATGGCT

**Identified by deep-sequencing**  
**Stem-loop structure:**

S-1

```

UUGA      A      A      A      GA      UG-      UCA
      CA GAUU UGU UG      AGAAAAU      GUU      \
      GU UUAU ACA      AC      UCUUUUA      CAA      A
UCG-      A      A      A      A-      CAA      CAU

```

S-2

```

UAAAAUAACC      AAAUU      C      AG      -----      C      U      -      UA-      G
      AACAA      AUGG UUUGUUU      UGUUC      AGUGUU AGUUG GUU AU      AGUU      \
      UUGU      UGCC AAACAAA      ACGAG      UUACAA UCAAC CAA UG      UCAA      A
C-----      CACU-      U      --      AAAUCUAACC      -      U      C      CGG      A

```

>mja-mir-6490-p5\_1ss17CG

ATTTAAGCATATTAATG

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```
AA  A      AAAGCGA      GCUC-      G-      ACU
   UUC UUUCU      CCUCA      AUGU      AGAUU      C
   AAG AAAGG      GGAGU      UACG      UUUAA      C
--  A      AAG-----      AAUUA      AA      GUC
```

s-2

```
UA      -      U-      AGG
  CUUAAGCAUA UUAU      GCUUGU      \
  GAAUUCGUAU AGUU      UGAAUA      U
C-      C      UC      CAG
```

>bmo-mir-3256-p3\_1ss14TG  
CAAGACAATTTTGT

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```
UUA--      UAAU      UCC-      U      ---      G      CAAC
   UACGCA      AUG      AAA GCA      AUUGU UUGA      \
   AUGUGU      UAC      UUU UGU      UAACA AACU      A
UGUAC      UCUU      UUUC      U      UUU      G      UAAA
```

s-2

```
      A      C---      GACAAU      U      C      AUAUGCA      AC
UGUAU GC      GAGCAA      UU GUUUA ACACAA      GU      \
ACAUA CG      CUCGUU      AG UAAAU UGUGUU      CA      C
-      ACUU      AAAAU--      U      -      CUUCAAC      AC
```

>bmo-mir-3276-p3\_1ss7TA  
TATTATATGATTGACC

**Identified by sequence similarity  
Stem-loop structure:**

S-1

```
G      UG      A      GA
AUUUAUC AUAA AAU      \
UAAGUUAG UAUU UUA      U
-      UA      A      AU
```

S-2

```
---      UU      U      AAAACCGUU      --      AA
GU      UAA CUUU      UAUAU      AUGAUUG      U
```

```

CG AUU GAAA          GUAAUA UGCUGAC U
CCA CU  -   ACUAUCUUC    UU      GU

```

```

>bmo-mir-3430-p3_1ss11CA
TATTTCAAACAAAAC

```

**Identified by sequence similarity**  
**Stem-loop structure:**

S-1

```

      AUUA--      GUAAAC      CCCA      AUAA      UUAAA      UUG
GACCAGA      UUUGU      AUUUUUGA      AAU      UUCGA      UC  \
CUGGUUU      AAACA      UAAAAACU      UUA      AAGCU      AG  A
      GACUCA      AACUU-      ----      ----      UCUGA      UAU

```

S-2

```

ACU--      CAUAA-      G      CUA      AAU
GAA      UUUG      UUGAA      UC      G
CUU      AAC      AACUU      AG      A
CACGU      UACUCA      A      UA-      CUA

```

```

>dps-mir-1002-p3_1ss10CG
AAGAACTTTGGCATT

```

**Identified by deep-sequencing**  
**Stem-loop structure:**

s-1

```

C      AA-      -----      C-      UU      GAAAA
CUAAA      GGUUG      UCAA      CCA      GUUC      C
GAUUU      CCGAC      GGUU      GGU      CAAG      G
-      GUA      UAAAUUAAU      AC      UU      AAACCU

```

s-2

```

      U-      GCAA      ACUU      U      AU
GAUGGAAA      GAAUAAC      GA      GGCA      AUC  \
UUUUUUUU      UUUUGUUG      CU      UUGU      UAG  U
      UU      AUG--      AUUU-      C      GU

```

```

>bmo-mir-2742-p5_2ss15TC18AC
ATTGAAAACTTTGCAAC

```

**Identified by Sequence similarity**  
**Loop-structure:**

### s-1

```

U C      GUAAA  UCUCAU  GGGUAG      CCGAA  C-      AAGUCAAAA  U
AU GAAGCAU  AGUU      CAAAG      UCGGUUG      GG  GUCAA      AUACU U
UA CUUCGUG  UUAG      GUUUC      AGUUAAC      CC  UAGUU      UAUGG A
U A      AG---  UAUAAC      AAAA--      AAG--  UU      GUAAUA--  C

```

### s-2

```

      G      U      UA---  ----  UA--  C      UGCAUU
UUGUU AUUUU UUUU      UCCAGC  UGA      AAAGU UUUUA  U
AACAA UAAGA AAAA  AGGUUG  GCU      UUUCA AAAGU  A
      A      U      CAUAG  UUUU  UACG      A      UAACUU

```

>tca-miR-3833-p3\_1ss4AC  
AGACAATTGAACTGT

### Identified by deep-sequencing Stem-loop structure:

#### S-1

```

AA-----  G  UCGAU  AC--  GGAACAA
      CUAU GA  CACAG  AUUGU  U
      GAUA CU  GUGUC  UAACA  A
UAUUUAA  G  UUAUU  AAGU  GAAAGAU

```

#### s-2

```

A G      UUGA      C--  GA  AAA  AC  G
AA U GUGACAA  ACUGUUUU  UU  GCUCU  CAUA  CUU \
UU A UAUUGUU  UGAUAAAA  AG  UGAGA  GUAU  GAA A
      G G      UA--  CAC  GG  GA-  AC  U

```

>aae-miR-31-p3\_1ss7TA  
TGAGTTAAGCTATTCA

### Identified by deep-sequencing Stem-loop structure:

#### s-1

```

      A      ----  UUCAUUC AAAA  GUUAA  U  GG      -  U
AUAUC UGAGUUA  AGCUA      CAAUUUUC  UAUGUAU GUU  UUAUUGGU UGGUAC \
UAUAG AUUCAGU  UCGAU      GUUUAAAG  AUACGUA CAA  GAUAGCUA ACUAUG U
      -      AUAU  UUG-----  -----  -  UU      U  U

```

#### s-2

```

UU -      UU  A  AA  UC  CU
      UU AUUCU  UUC  GUU  GCUAU  AGU  C
      AA UGAGA  GAG  CAA  CGAUA  UCG  A
CU C      U-  -  A-  C-  UA

```

>aae-miR-9a-2-p3\_1ss7TG  
TGAATTGAGAACATC

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```
AAA      UUA      UG      UUGC-      -- AA      GAACA--      AAA
  AUUCAA      AUUU      CAGUGAAU      AUUGAAU      UG      UUGA      UC      U
  UAAGUUU      UAAG      GUUAUUUA      UAAUUUA      AC      AGCU      AG      A
---      UA-      GU      UAUUU      UU      GA      AUACCAC      CAA
```

s-2

```
GCAA      AAUUGA      CA      UAUUAUCGCC
  GUAAUAUGCUUGGUG      GAA      UCAU      \
  CAUUGUAUGAAUUUAU      UUU      AGUA      A
CUUA      GAAUG-      CA      UUAUUAAAAA
```

>dme-miR-4983-p5\_2ss15GA17AT  
CATTCTGAAAAATATT

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```
CAAGUAACAAAAACA      AAAUAUUC      A
      UUUCUGA      CAA \
      AAAGACU      GUU A
CAUAAAUUUCAACCUA      AUAAAAUU      U
```

s-2

```
ACA      U      ACC      G      AAAUA-      U
  CGAA      CG      AUUUCU      AA      UCGA      C
  GUUU      GC      UAAAGA      UU      AGCU      A
---      U      C--      G      AACGAA      A
```

>bmo-mir-3279-p5\_1ss9TG  
AGAATTATGTGAAC

**Identified by Sequence similarity  
Loop-structure:**

S-1

```
AACAAU      UG      U      GA      AU      AAAUUU      UG      UC
UGAAA      AUG      ACAAAA      GU      UCGCA      AUUUGU      U      AUG \
AUUUU      UAU      UGUUUU      CA      AGUGU      UAAGCG      A      UAC      A
  AAAAUU      GU      -      --      AU      ACUUUU      GU      AC
```



s-2

```
      UAAC      AAGAA--      UGAAC      AC
GUGCAG      GAAGAUAG      UUAUG      GAUUUCA \
UACGUU      UUUUUGUU      AGUAC      CUAAGU A
      UU--      AUAAAGA      UAAAA      AA
```

>hme-mir-6305-p3\_1ss14TA  
ATGTGAGAAATTCAA

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```
AACCCG  A  GA-      UUCA-  A  U      UAUUU
      AAU UCU  UGUGAGAAA  AUAC AU CAAAUUCA  U
      UUA AGA  AUACUCUUU  UAUG UA GUUUAGGU  U
-----  C  AUG      UCACG  A  U      UAUUA
```

s-2

```
UCA  UCAACUG---  --  CAA  UAUU  UU
      GCCA      UUCACA  UCAGC  AAC  UA  C
      CGGU      GAGUGU  AGUUG  UUG  AU  A
---  UUAAUUAAA  AA  CCC  UUU-  UU
```

>bmo-mir-3421-p5\_2ss3CT17GA  
AATGAATTAAATCAGAA

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```
GC  G  -      AUGA  AA  A
UUGA  GU GC AGAGA  AUUA  UCAGA \
AGCU  UA UG UUUCU  UAGU  AGUUU A
      --  G  A      AAGG  AA  A
```

**Identified by Sequence similarity  
Loop-structure:**

S-2

```
U  GA      AA  C  C
  UG  UUGAAUG  UUUAAU  AGAACGU \
  AC  AACUUAAU  GAUUUA  UUUUGUA U
-  UG      CC  C  U
```

>ame-mir-3747a-p5\_2ss15TA17GT  
GATGAATAAAAATAATT

**Identified by deep-sequencing  
Stem-loop structure:**

**S-1**

```
CUCACA  A  U  AAAAAUAAUUA  --  U  UGU
      AUUG AUGGA GAAU          GU  GUG AUUU  A
      UAAU UACCU CUUA          CG  CAC UAUAG  A
GUA---  G  U  -----  CC  C  UAU
```

**S-2**

```
UUUCU  UUA AAAAAG  UG C  GUUG---  -----  AU
      UUCGA          UGUU  A  UAU          CAUUCGA  UUCG  \
      AAGCU          AUAG  U  AUA          GUAGGUU  AGGC  A
-----  CCAUUA---  GU  A  AAAAAUAA          UAUUA  AA
```

**>aae-miR-10-p3\_2ss1CT17TA  
TGAATTTGTTTGAATAAT**

**Identified by deep-sequencing  
Stem-loop structure:**

**S-1**

```
-  A  C  UU  AU-  -  UAAAAU
GCUAA AAA AUUUUA UAU UCAAA AUUCG CGA C
UGGUU UUU UAAAAU AUA AGUUU UAAGU GCU C
      G  A  A  --  GUU  U  UAACGU
```

**S-2**

```
A  UU  C  CAAAA  C  CA  A
UAA UAAA GUA UUUUUU  UAUUCG AAUAAAAUUC AAC U
AUU GUUU UAU AAAAAA  AUAAGU UUGUUUAAG UUG U
      G  UU  A  AAUA-  -  --  C
```

**>ame-mir-3774-p5\_1ss17AC  
TTGGATTA AAAATTTTAC**

**Identified by Sequence similarity  
Loop-structure:**

**S-1**

```
G  A--  CGAA  G  UU  GUAG  GAU
GUUUCUCUC UUU  GAAAAU  AAUU AGAAUAUU UU  UUUCUGUUUU  \
CAAAGAGAG AAG  UUUUAA  UUAG  UUUUAUGA  AG  AAAGACAAAA  G
      G  CAA  AA--  G  UU  AUA-  ACG
```

s-2

```

UUCAA      --      ---      AUGAA      UAC
      GUGUUCA  ACCU      AAUUU      CAA      \
      CGGUAAGU  UGGG      UAAAA      GUU      G
UAUUA      AC      AUU      AUUAG      UUA

```

>bmo-mir-6497-p3\_1ss13CG  
GGGAAGCGGATGGGG

**Identified by Sequence similarity**  
**Loop-structure:**

s-1

```

UUCUUC-    AU    -    CG  U    A-    CGA    AAAC
CUA        GAGG  GUG  GAAG  GA  GGGAU  GUGAA    AUGA    \
GAU        CUCC  UAC  CUUU  CU  CCUUA  CACUU    UACU    G
      CGCCUUA    CU    U    AA    -    CC    AUC    ACAG

```

s-2

```

C    A    CU A    AUAA  C  CCAUUCAU--  UC
GUGU  GUUCCA  C  UUUC    GU  GU    CGU  A
CGUA  CAAGGU  G  GAAG    CA  CA    GCG  A
-    G    AG C    GGAG  A  AUUUUUUUU  AU

```

>hme-mir-998-p5\_1ss14AG  
CCCGUGGGGCUCGGG

**Identified by Sequence similarity**  
**Loop-structure:**

s-1

```

C  -    AAGGAA  U    UU    AUA  A
CGCC  G  GCCC    GA  CGC  CGCUG  UCG  A
GUGG  C  CGGG    CU  GCG  GCGAC  AGC  U
      C  U    GUGG--  -    --    ---  U

```

S-2

```

C    CUA    GGGC    U  GA
CUG  GAAGU  UCGUCCGUG  UCC  AC  C
GAC  CUUCG  GGCGGGUAC  AGG  UG  U
-    CC-    ----    -  GC

```

>bmo-mir-3396-p3\_1ss3TG  
CGGAGCGGCCGTCGG

**Identified by sequence similarity**

## Stem-loop structure:

S-1

```
A   U   A   UCAAAAA   UGAGACAUA   AA   AU
UUG UGUC GCAA   GAAUUAC   GACG CGC \
AGC ACAG CGUU   UUUAGUG   CUGC GCG G
-   U   -   UAUCCUG   -----   CG   AG
```

s-2

```
CAAAUU   AAAA   UU   AA   A   C   UUCUUUA
GAUAA   GCU   GC   CCA CAACAG UUAU   U
UUAUU   CGG   CG   GGU GUUGUU AAGU   U
UUAACU   CUGC   --   A-   -   C   UUACUAG
```

>bmo-mir-9c-p5\_1ss6AG  
CGCCGGGGTCCGG

## Identified by sequence similarity Stem-loop structure:

S-1

```
UUGG   --   C   -   G   ---   AG   A-   GA
CGCCGU GGUCGG GUG CC CCGGU   CACC CU UGUG \
GCGGCA CCGGCC CGC GG GGCCG   GUGG GG ACGC A
UG--   GU   A   U   G   CCG   G-   CG   GA
```

S-2

```
AGAA   U   AAA   GC   GAG   CGU
GCU GCGAC   AUCGGCG AAC   UGGGU \
UGG CGCUG   UGGCCGC UUG   ACCCG C
AA--   -   G--   AC   G--   AAA
```

>mse-mir-275-p5\_5ss15CG19CG21CA22TC23AC  
GCAGGCGGCGGCGGCGGGACC

## Identified by sequence similarity Stem-loop structure:

S-1

```
A   G   G   --   UGG   -   C   UC   UAA   C
GCCAUU GC GCG   GCC   GUUCG GCCGGUGGUU GAUUG GG   CCGC U
UGGU GG CG CGC   CGG   CGGGC CGGCUACCAG UUGGC CC   GGUG A
-   G   G   GG   UUA   G   C   CU   UC-   G
```

s-2

```
C   -   CAACAU   AACA   G AGAA   GA   -   C--   UU   AA   UC
GG CAUGGG   CCGGCCG   CGU C   AGGC   GAUC GU   GUCGG CC   GCUGA G
CC GUACCU   GCGCGGC   GCG G   UCCG   CUAG CG   CGGCC GG   CGGCU U
A   G   CCUUC-   G---   G   ----   G-   U   UAC   C-   --   CC
```

```
>tca-miR-3885-p5_1ss2AG
GGAGGCGGCGGCGGCGGC
```

### Identified by deep-sequencing Stem-loop structure:

S-1

```
UGAAAAAUAU      A      UC-----      G  GGC
      UAAAUUCGA AGCA      CCGGAGGCGGC GC  \
      AUUUAAAGUU UUGU      GGCUUUUGUCG CG  G
CUAU-----      G      CUGAAAU      G  GCG
```

S-2

```
CUUC--      GCG AA-      -      G  G
      GAUGUU      UC      UGUU CCGU GU  G
      CUACAA      AG      ACGG GGCG CG  C
CACAAA      AA- GCG      C      G  G
```

```
>dme-miR-92a-3p_R-2_1ss1CT
TATTGCACTTGTCCCGCCT
```

### Identified by Deep-sequencing Loop-structure:

S-1

```
--      U      C      G      GU      ----      GCAU
CAAU UGCA AGG UGGACAAG CAAUGU      UGU      \
GUUG GUGU UCC GCCCUGUUC GUUAUA      ACA      U
AA      U      A      G      AC      AGAA      AAUU
```

### Identified by Sequence similarity Loop-structure:

S-2

```
UU      AUA      A      UGU      U      C      C      AU
UUU      UUGUAGG CG      CUGGUGC AU UG UAU A
AAA      AACGUCC GC      GAUCACG UA AC GUA U
UU      A--      G      CCU      U      C      U      AA
```

```
>dme-miR-2a-3p_1ss19TA
TATCACAGCCAGCTTTGAAGAGC
```

### Identified by Deep-sequencing

## Loop-structure:

S-1

```
      C   -   -           CU  UUAUUC
UCAAUUGCGUC CUUU CAAAG UGGCUGUGA  UG      A
AGUUGGCGUAG GAGA GUUUC ACCGACACU  AC      A
              C   A   G           AU  UUAUUA
```

S-2

```
UU   UA   -   -   A   A   UUGAUA
UCUAA  CUCA CAAAG UGG UGUGA AUG  G
AGAUU  GAGU GUUUC ACC ACACU UGC  U
UC     C-   A   G   G   A   UUAAGA
```

>PC-5p-7459\_217

CAATATCAATTGGTAATTCTGGG

## Identified by Deep-sequencing

### Loop-structure:

S-1

```
AG---  C   CA   A   U           CUUUUAUG
      CAUUU GAAAAGU AUAUCA UUGG AAUUCUGGG  \
      GUAAA UUUUUCG  UAUAGU AACC UUAAGGCUU  A
GCCUA  -   CA   C   -           UUGAUUGU
```

## Identified by Sequence similarity

### Loop-structure:

S-2

```
--   UCU  CU  U  UAUA  C  UU  AC
      CCGCU  UCA  GUU  UCA  UGAUAC  GUUGU  CG  \
      GGUGG  AGU  UAA  GGU  ACUAUG  UAACA  GC  A
AU   U--  CU  U  UA---  U  UU  CU
```

>PC-5p-64173\_18

TTCCGGACTTCTCCAACCTTTC

## Identified by Deep-sequencing

### Loop-structure:

S-1

```
      C   GGC
GCGACAUCCGGACUUCUCCAA UUUUC  U
CGCUGUGAGGCCUGAAGAGGUU AAAAG  U
              A   AAC
```

## Identified by Sequence similarity

### Loop-structure:

## S-2

```
UUU    AU-  AU--  --    UUUUUCGC
GCCGA  GU   GAAGUU GAGUGUC  C
CGGCU  CA   CUUCAG CUUACAG  A
CUU    GUU  ACCU   GC     CGCACUUU
```

```
>turn-miR-92-3p_2ss21GC22TC
TATTGCACTCGTCCCGCCTCC
```

### Identified by Sequence similarity Loop-structure:

## S-1

```
AAU  --  U  C  G      GU  ----  GCAU
GCAG  CAAU UGCA AGG UGGGACAAG  CAAUGU  UGU  \
CGUC  GUUG GUGU UCC GCCCGUUC  GUUAUA  ACA  U
AUC   AA   U   A   G      AC   AGAA  AAUU
```

## S-2

```
UU  AUA      A  UGU      U  C  C  AU
UUU  UUGUAGG CG   CUGGUGC AU  UG  UAU  A
AAA  AACGUCC GC   GAUCACG UA  AC  GUA  U
UU   A--      G  CCU      U  C  U  AA
```

```
>tca-miR-iab-8-5p_L-11_1ss25AT
GAAGGTATACCGGTC
```

### Identified by Deep-sequencing Loop-structure:

## S-1

```
CUU  AA  -  A
ACC  UAUAU UUC C
UGG  AUAUG AAG C
C--  CC   G  A
```

### Identified by Sequence similarity Loop-structure:

## S-2

```
UU          G  A  G  UAGA
ACGUUAUCUGAA  GUAU  CC  GA  U
UGCAUAUGACUU CAUA  GG  CU  A
U-          A  -  A  CACG
```

```
>rmi-mir-5332-p5_1ss14CG
AGGCCTTCGGACTGGT
```

## Identified by Sequence similarity

### Loop-structure:

#### S-1

```
A      CA  CCUUCG- C AU-  AA  U
AAAAUUU AGG      GA UA  UUA  UGAA \
UUUUUGAG UCC      CU AU  AAU  ACUU A
G      AG  AUAUACA A  AAC  AA  A
```

#### S-2

```
UC  CA  C  C  -----  AUA      C  C  G  C  GUAAUG
GAG  CG  AG  GC      AGUUC  GAUGUCGA  GG  GUC  GC  AGG  \
CUC  GC  UC  CG      UUAAG  CUACGGUU  CC  CGG  CG  UCC  A
AC  AG  U  -  GACCACC  CGG      C  -  G  -  ACCGCU
```

```
>mse-mir-79-p5_1ss2TA
AAGCGACGCTTTGGC
```

## Identified by Sequence similarity

### Loop-structure:

#### S-1

```
UA  U  AAUU      CAA
CCA  AGU  CUAAAU  A
GGU  UCG  GAUUUA  U
AC  U  CAGC      ACU
```

#### S-2

```
UGUUCA  -  ACGCUU  -  CU--  UUU
AGUUUG  CG  UGGC  AUCGAA  AAA  A
UCAGGC  GU  ACCG  UAGCUU  UUU  U
UC-----  A  AACUUU  G  UUCU  UUG
```

```
>mse-mir-7-p3_1ss4GA
AGCATCGGCATGCGCTT
```

## Identified by Sequence similarity

### Loop-structure:

#### S-1

```
CAAUC  ACAA  G  GCAUG  A  AAAUAC  GAA  UUUCAA
UCAGGC  GU  CAUCG  CGCUU  GC  UUAA  CCA  \
AGUCUG  CG  GUAGC  GUGAA  CG  AGUU  GGU  A
UU----  ----  A  AA---  -  GA-----  AAA  UAUCUG
```

#### S-2

```
AA      UA  UUUUU  UG  A
CUGAUGG  GC  UCGAU  GA  U
```



```
GGCUACU CG GGCUA CU U
-- CG UAC-- -- U
```

```
>mse-miR-2b_L+3R+2
ATCTCACAGCCAGCTTTGATGAGCAA
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
A      A  G-      U      AU  U-  G
AUGUGU UUG CAUCAA UUGGCUGU UAG GUU C
UAUACA AAC GUAGUUU GACCGACA AUC UAA C
C      A  GA      C      CU  UU  A
```

### S-2

```
UU      UA  -  -  A  A  UUGAUA
UCUAA  CUCA CAAAG UGG UGUGA AUG G
AGAUU  GAGU GUUUC ACC ACACU UGC U
UC      C-  A  G  G  A  UUAAGA
```

```
>dwi-mir-306-2-p5_1ss2TG
TGAGTGACTCTCAA
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
U  C  GU  G  U-  G  --  U
GCU G  CAG UAC GAGU ACUCUCAG UAAAU \
CGA C  GUC AUG  CUCG UGAGAGUC AUUUA C
-  A  UG  G  UU  -  UU  A
```

### S-2

```
UGUG      ACG  U      GUGA      CGUC
AAUUU  UG GAGUU  AUUUGAAGC  \
UUAAA  AC CUCAG  UGACUUUG  A
UG--  AA-  U  ----  AAAA
```

```
>dvi-mir-79-p3_1ss4CG
AAGGATTGGCTCTGTGG
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
AAA--      U  UAA  CG
UUAGA CCG  CUU  G
```

```

AGUCU GGU GAA G
CUAGA C UAG UA

```

## S-2

```

AAA-- U UAA CG
UUAGA CCG CUU G
AGUCU GGU GAA G
UUAGA C UAG UA

```

```

>dsi-mir-958-p5_2ss2GC17AC
CCGCGTGTCTTTGGCAC

```

## Identified by Sequence similarity Loop-structure:

### S-1

```

AAAA C CU UG AUUUUCG AAUCGA
AAGAG GUGU U GCAA CAACG C
UUCUU UACA A UGUU GUUGC A
GACA - AG GU AAUACUA AAACUU

```

### S-2

```

U U - - - - - U- G
UGGA GG GU GAC CGC UG G
ACCU CC CG CUG GCG AC A
U - A GUUG U CC A

```

```

>dse-miR-2b_R+5_1ss19GA
TATCACAGCCAGCTTTGAAGAGCGTTAT

```

## Identified by Sequence similarity Loop-structure:

### S-1

```

AUUGUAAA---- C - - CU UUAUUC
UCAAUUGCGUC CUUU CAAAG UGGCUGUGA UG A
AGUUGGCGUAG GAGA GUUUC ACCGACACU AC A
CAGCUAAGUUUA C A G AU UUAUUA

```

### S-2

```

UU UA - - A A UUGAUA
UCUAA CUCA CAAAG UGG UGUGA AUG G
AGAUU GAGU GUUUC ACC ACACU UGC U
UC C- A G G A UUAAGA

```

```
>dpu-mir-1-p5_1ss3TG
CCGTGGCGTGGGTTC
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
UUC      AUG  C  UG  AU--  U
AAUUCAAUG  UGG G  GGUUU  UG C
UUAAGUUAU  GUC C  UCGAA  AC C
---      AA-  A  GU  ACUU  A
```

#### S-2

```
UC  UGUU--  -----  G      CAUA
UC      AUGAU      AC  UAUGCCA  A
AG      UACUA      UG  GUGCGGUGG  A
UA  UCUCUU  GCGAAU  G      CUUU
```

```
>dpu-miR-92_R+1_2ss10CT22CA
AATTGCACTTGTCCCGCCTGAT
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
U  C  G      GU  ----  GCAU
UGCA AGG UGGACAAG  CAAUGU  UGU  \
GUGU  UCC  GCCUGUUC  GUUAUA  ACA  U
U  A  G      AC  AGAA  AAUU
```

#### S-2

```
UU  AUA      A  UGU      U  C  C  AU
UUU  UUGUAGG  CG  CUGGUGC  AU  UG  UAU  A
AAA  AACGUCC  GC  GAUCACG  UA  AC  GUA  U
UU  A--      G  CCU      U  C  U  AA
```

```
>dps-mir-2534-p3_1ss3GT
GGTCTCCGGGCAGGA
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
AA  C  G  CU--  --  A  G      GCCCA  UUUA
UGU  UAU  GU  CCGG  GCAG  AU  UUUGUUU  GGGC  \
ACA  AUG  CG  GGCC  CGUC  UA  AGAUAAG  UCCG  A
G-  U  G  CUUU  UC  A  A      AUC--  UCAU
```

## S-2

```
CCA      UUAUUUU  UUCU  UU
      UUGUU      UCCG  CCG  \
      AACGA      GGGC  GGC  C
CA-     CAACGAC  CUCU  CU
```

```
>dme-mir-4976-p5_1ss1GT
TCGTTTCCCGCTCCA
```

### Identified by Sequence similarity

#### Loop-structure:

## S-1

```
CUG      UC  UCCC  UC--  U
      UGAAC  GUU  GC  AAC  C
      ACUUG  UAA  CG  UUG  A
AAA      UA  ----  UUAA  U
```

## S-2

```
-  CU  A-  G  CCCU  A
      UAGA  UGAAG  GGAG  C  AAUUUGG  U
      GUUU  AUUUC  CCUC  G  UUGAAUU  C
C  U-  AA  -  CCCU-  A
```

```
>dme-miR-2a-3p_L+7R+1
CGCGGCCTATCACAGCCAGCTTTGATGAGCT
```

### Identified by Sequence similarity

#### Loop-structure:

## S-1

```
UU  UA  -  -  A  A  UUGAUA
      UCUAA  CUCA  CAAAG  UGG  UGUGA  AUG  G
      AGAUU  GAGU  GUUUC  ACC  ACACU  UGC  U
UC  C-  A  G  G  A  UUAAGA
```

## S-2

```
A  G-  U  AU  U-  G
      UUG  CAUCAA  UUGGCUGU  UAG  GUU  C
      AAC  GUAGUUU  GACCGACA  AUC  UAA  C
A  GA  C  CU  UU  A
```

```
>bmo-mir-3316-p5_1ss15AC
ATCAGTGCCGCGGCC
```

### Identified by Sequence similarity

## Loop-structure:

**S-1**

```
AACUCGCGUU  CCA  C-  - C  UACAU
              GCG  GUGC  GCGG  C AG  C
              CGC  CAUG  CGCC  G UC  C
-----  C--  AC  C C  UCAAA
```

**S-2**

```
-  CUU  U  AG A  AGAAA  AC  U
GUUGGC  UGG  CUGUGG  U GA  UGCAGAGC  AUAGU  U
CAACCG  AUU  GCGGCC  G CU  AUGUUUCG  UAUUA  A
U  ---  -  GU A  ACA--  C-  U
```

```
>bmo-mir-3239-p5_1ss14TG
TGGATCACCTCGTGCT
```

## Identified by Deep-sequencing Loop-structure:

**S-1**

```
UU  CAAC-  AU  AUU
GCACG  AUCCA  GG  \
CGUGC  UAGGU  CC  U
AU  UCCAC  --  GUA
```

## Identified by Sequence similarity Loop-structure:

**S-2**

```
C  GAA-----  A  GAA  CU-  -----  C  G
UC  GAGG  UGGU  AG  CUUC  UUCACU  UC  A
AG  CUCC  ACUA  UC  GAAG  AGGUGA  AG  A
A  GUAUCGGUG  -  ACG  CAU  UUCUGA  -  G
```

```
>bmo-mir-2774b-1-p5_1ss5AT
AACATCACCCGGACC
```

## Identified by Sequence similarity Loop-structure:

**S-1**

```
CCAAC  C--  G-  CCUAUU
AUCACC  GGA  GGUG  \
UAGUGG  CCU  UCAC  A
AAGU-  UAA  AA  AUUAUA
```

**S-2**

```
UAA-  C  --  CGAAC  UUA
```

```

CAU AC CCGGAUC GCAA \
GUA UG GGCCUAG CGUU U
CUUG C CA ----- CUU

```

```

>bmo-miR-31-5p_L-5R-1_1ss16TA
GAAGTCGGCAAAGCT

```

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```

UUA -- UU G
AGUCG GCAAAGC CGUUU A
UCGGC UGUUUUG GUAAA U
C-- UU -- U

```

**S-2**

```

UAGAA- C GAAAA- C
UCGAAGU GGCAAAGC CGAA \
AGCUUUA CUGUUUUG GCUU A
CAGGUA - AGCUAA U

```

```

>ame-mir-989-p3_1ss1TC
CTCGTCGTCCTCCGC

```

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```

GCUC AAA - - UGAAGA
AGGAGGA AUGAU UCGU AUCGAA G
UCCUCCU UGUCG AGCA UGGUUU G
CUAC GC- C G UAUAAG

```

**S-2**

```

UUUUUU CAU GUAU U - AAAA
UCGGG ACG ACG GCG GA \
AGCUC UGC UGC CGU CU A
UAU--- UCC ---- U U CCAC

```

```

>ame-mir-3777-p5_1ss3CG
CGGGCTTGTCGGAAT

```

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```

CG      UU-  A  C      ACA-  CA
  CCGGC  CC CCA CACGA  GGUU  \
  GGCUG  GG GGU GUGUU  CUAG  A
AA      UUC  -  C      GCGG  GC

```

## S-2

```

C      C  UG      UUCA  -  UU
  GAAA AAU  UUUGAU  GC GAAUG  \
  CUUU UUA  AGGCUG  CG CUUGC  G
U      U  --      UUCG  A  GA

```

```

>ame-miR-92a_L+1R+2_1ss10TC
TATTGCACTCGTCCC GGCTATAA

```

### Identified by Sequence similarity Loop-structure:

## S-1

```

U      C  G      GU      ----  GCAU
  UGCA AGG UGGGACAAG  CAAUGU  UGU  \
  GUGU UCC GCCCUGUUC  GUUAUA  ACA  U
U      A  G      AC      AGAA  AAUU

```

## S-2

```

AUA      A  UGU      U  C  C  AU
  UUGUAGG CG  CUGGUGC AU UG UAU  A
  AACGUCC GC  GAUCACG UA AC GUA  U
A--      G  CCU      U  C  U  AA

```

```

>aga-mir-124-p5
ACTGTAGGCCTGTATG

```

### Identified by Deep-sequencing Loop-structure:

## S-1

```

C      C      AG  G      UUCGA
  UGGUUAU CACUGU  GCCU UAUG  U
  ACCGUA  GUGGCG  CGGA AUAC  A
A      A      CA  -  UUAAA

```

### Identified by Sequence similarity Loop-structure:

## S-2

```

G-      AAAU      U  GACA  AAAUAG  AA  AA
  CACG      GUAGGCCUG AU  GA  AGAAA  UAUGUG  \
  GUGU      UAUUUGGAU UA  CU  UUUUU  AUACGC  U
CA      C---      -  AG--  ACUCAA  CC  AU

```

```
>aga-miR-92b
AATTGCACTTGTCCCAGCCTGC
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
U   C   G           GU   ----   GCAU
UGCA AGG UGGGACAAG  CAAUGU   UGU   \
GUGU UCC GCCCUGUUC  GUUAUA   ACA   U
U   A   G           AC   AGAA   AAUU
```

#### S-2

```
UU   AUA           A   UGU           U   C   C   AU
UUU   UUGUAGG  CG   CUGGUGC  AU  UG  UAU  A
AAA   AACGUCC  GC   GAUCACG  UA  AC  GUA  U
UU   A--           G   CCU           U   C   U   AA
```

```
>aae-mir-2b-p5_1ss3CT
CTTTCAAAGTGGCTGTGA
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
UCCC   -           CU   UUAUUC
UUUCAAG  UGGCUGUGA  UG   A
GAAGUUUC  ACCGACACU  AC   A
A---     G           AU   UUAUUA
```

### Identified by Sequence similarity Loop-structure:

#### S-2

```
CGCUG           AAG   CUG-   CA
GUUUCA   UGG   UUCG  A
CAAAGU   ACC   AAGU  C
UA---     AA-   UUUA   UA
```

```
>aae-miR-2a-3p_R+4
TATCACAGCCAGCTTTGAAGAGCGTAT
```

### Identified by Sequence similarity Loop-structure:

#### S-1



```

AUUGUAAA----          C  -  -          CU  UUAUUC
          UCAAUUGCGUC CUUU CAAAG UGGCUGUGA  UG  A
          AGUUGGCGUAG GAGA GUUUC ACCGACACU  AC  A
CAGCUAAGUUUA          C  A  G          AU  UUAUUA

```

## S-2

```

UU      UA      -      -      A      A      UUGAUA
UCUAA  CUCA  CAAAG  UGG  UGUGA  AUG      G
AGAUU  GAGU  GUUUC  ACC  ACACU  UGC      U
UC      C-     A     G     G     A     UUAAGA

```

```

>aae-miR-278-5p
ACGGACGATAGTCTTCAGCGGCC

```

### Identified by Sequence similarity Loop-structure:

## S-1

```

AAUUGAACC  UU      U      GCU  CA      UA      U
          GAA  GAUU  UUG  AGA  UGCA  UGC  U
          CUU  CUGA  AGC  UCU  ACGU  ACG  G
AAAGUUCGA  --     U     AGU  CC      --     A

```

## S-2

```

AAAUGA  AC  U      CAAA  CAA-  A-|  G-      U
          UGG  GA  AGUCUU  UUC  CU  CAA  UGAA  U
          ACC  CU  UCAGAA  AAG  GA  GUU  ACUU  A
-----  GA  U      CUCA  AAGC  AA^  AA      G

```

```

>PC-5p-99539_10
AAGAGTGGCATGCCTGGCGGTA

```

### Identified by Deep-sequencing Loop-structure:

## S-1

```

CAAA      CA      ----      UAACC      CA
          GAGUGG  UGCCU  GCGGG  GGGGCAG  A
          CUCAUC  ACGGA  CCGCC  CCUCGUC  G
CUAA      --      GGUU      UGACA      AC

```

### Identified by Sequence similarity Loop-structure:

## S-2

```

ACUUACAGA  CA      G----      UAAC  A      CC
          GAGUAG  UGCCU  GCGG  UGG  GCAG  A
          CUCAUC  ACGGA  CGUC  ACC  CGUC  G
CCAUCCAA-  --      GGUUA  UAAC  A      AC

```

```
>PC-5p-188854_5
CCATTCTTCCTTGCATTTCGATT
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
UCA   A-   U   C   G   GUCUU   A
CGAA  GUUCCAU CUUC UUGCAUUC AUA   ACA A
GCUU  CGAGGUA GAAG AAUGUAAG UAU   UGU U
G--   AG    U   A   G   GC---  A
```

#### S-2

```
GCAAA   AAA   AA-   UUCAC   C-   CAU
CGAA   UAAG   GAAU   CGAAA   CAAAUCA U
GCUU   GUUC   CUUA   GUUUU   GUUUAGU A
ACUUA   AC-   CUC   UUUU-   AC   UGA
```

```
>PC-5p-168842_5
ACACAGTCCAGTACACACAGCATT
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
ACA-   A- CA -   AAG
UGU   CAGUCCAGUGC CA GC AUUA A
ACA   GUCAGGUCACG GU UG UGAU G
AUAC   AG CA C   AAA
```

#### S-2

```
AACACUAACAACAACACAC   CA   A- CA -   AG
UGCUA CAGUCCGGUGC CA GC AUUAA \
ACGAU GUCAGGUCACG GU UG UGAUU A
ACAUUUACUUAU----- AC   AG CA C   GA
```

```
>PC-3p-163550_6
ATCTGACTGATAGACCCTTCATA
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
UU   C   GAA ACACC   -   CU
CUG UGAAGGGUCUA AG   UUAGG GA C
GAU ACUUCCAGAU UC   AGUCU CU U
CC   -   AG-   -----   A   UU
```

## S-2

```
UUUU C GAA ACU C CA U
CUG UGAAGGGUCUA AG GGU GAAAGA CC U
GAU ACUCCAGAU UC CUA UUUUCU GG A
ACCC - AG- AGU C CA G
```

>PN-2b-3p-7090

TATCACAGCCAGCTTTGATG

### Identified by Deep-sequencing Loop-structure:

## S-1

```
UA - - A A UUGAUA
CUCA CAAAG UGG UGUGA AUG G
GAGU GUUUC ACC ACACU UGC U
C- A G G A UUAAGA
```

## S-2

```
A G- U AU U- G
UUG CAUCAA UUGGCUGU UAG GUU C
AAC GUAGUUU GACCGACA AUC UAA C
A GA C CU UU A
```

>PN-2b-3p-66096

TATCACAGCCAGCTTTGA

### Identified by Deep-sequencing Loop-structure:

## S-1

```
UA - - A A UUGAUA
CUCA CAAAG UGG UGUGA AUG G
GAGU GUUUC ACC ACACU UGC U
C- A G G A UUAAGA
```

## S-2

```
G- U AU U- G
CAUCAA UUGGCUGU UAG GUU C
GUAGUUU GACCGACA AUC UAA C
GA C CU UU A
```

>PN-2b-3p-52598

TATCACAGCCAGCTTTGATGAGT

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```
UU    UA    -    -    A    A    UUGAUA
UCUAA CUCA CAAAG UGG UGUGA AUG    G
AGAUU GAGU GUUUC ACC ACACU UGC    U
UC    C-    A    G    G    A    UUAAGA
```

**S-2**

```
A    G-    U    AU    U-    G
UUG CAUCAA UUGGCUGU UAG GUU C
AAC GUAGUUU GACCGACA AUC UAA C
A    GA    C    CU    UU    A
```

>PN-92a-3p-372  
TATTGCACTTGTCCCGCCTAT

**Identified by Deep-sequencing**  
**Loop-structure:**

**S-1**

```
U    C    G    GU    ----    GCAU
UGCA AGG UGGGACAAG CAAUGU UGU \
GUGU UCC GCCCUGUUC GUUAUA ACA U
U    A    G    AC    AGAA    AAUU
```

**S-2**

```
UU    AUA    A    UGU    U    C    C    AU
UUU    UUGUAGG CG    CUGGUGC AU UG UAU A
AAA    AACGUCC GC    GAUCACG UA AC GUA U
UU    A--    G    CCU    U    C    U    AA
```

>PN-2-3p-258  
TATCACAGCCAGCTTTGAAGAG

**Identified by Deep-sequencing**  
**Loop-structure:**

**S-1**

```
AUUGUAAA----    C    -    -    CU    UUAUUC
UCAAUUGCGUC    CUUU CAAAG UGGCUGUGA UG    A
AGUUGGCGUAG    GAGA GUUUC ACCGACACU AC    A
CAGCUAAGUUUA    C    A    G    AU    UUAUUA
```

**S-2**

```
AAA-----    C    -    -    CU    UUAUUC
```

```

      UCAAUUGCGUC CUUU CAAAG UGGCUGUGA UG      A
      AGUUGGCGUAG GAGA GUUUC ACCGACACU AC      A
CAGCUAAGUUUA      C      A      G      AU      UUAUUA

```

>PN-2a-3p-165

TATCACAGCCAGCTTTGATGAGCT

**Identified by Deep-sequencing**

**Loop-structure:**

**S-1**

```

UU      UA      -      -      A      A      UUGAUA
UCUAA  CUCA  CAAAG  UGG  UGUGA  AUG      G
AGAUU  GAGU  GUUUC  ACC  ACACU  UGC      U
UC      C-      A      G      G      A      UUAAGA

```

**Identified by Sequence similarity**

**Loop-structure:**

**S-2**

```

A      G-      U      AU      U-      G
UUG  CAUCAA  UUGGCUGU  UAG  GUU  C
AAC  GUAGUUU  GACCGACA  AUC  UAA  C
A      GA      C      CU      UU      A

```

>PC-3p-50487

TACATTCCGGCTACTTTCTATGCAT

**Identified by Deep-sequencing**

**Loop-structure:**

**S-1**

```

UAUA  UCC  C  CC      CC  A
      CAU  GAG  AGCU  AAUGUAUU  GGC  A
      GUA  UUC  UCGG  UUACAUGA  CUG  U
UUAC  UCU  A  CC      --  U

```

**S-2**

```

UUUUU  UCC-  C  UC      UCCGGC
      AUGCAU  GG  UAGU  GAAUGUAU  A
      UACGUA  UC  AUCG  CUUACAUG  A
GGCCU  UCUU  -  GC      CUUACU

```

## Group 3 --- miRNAs with three putative coding genes

>bmo-mir-6497-p3  
AGGATTGGCTCTGAGGAC

### Identified by Sequence similarity

#### Loop-structure:

##### S-1

```
AAA--      U   UAA   CG
      UUAGA CCG   CUU  G
      AGUCU GGU   GAA  G
UUAGA      C   UAG   UA
```

##### S-2

```
G   -   UCUGA   AAAAA   C   A   UAU
UUUG GC   GGACA   UUC AU AAAUUU \
AGAC CG   UCUGU   AAG UA UUUAAG  A
A   A   UUA--   -----   C   A   UAC
```

##### S-2

```
GCU      U   A   UCU   CA   -----   U GG
      CCUC GAG CA   UCGA UCCU   GUCAUC G A
      GGAG CUC GU   AGUU AGGA   UAGUAG C U
---      U   G   U--   --   AACGAC   - AA
```

>der-mir-6-3-p5\_1ss9AT  
AGTTCGAATCTCTCA

### Identified by Sequence similarity

#### Loop-structure:

##### S-1

```
UG   ----   C   UUC---   C   CCUC
      CGA   AAAGU GAGAG   GAAU UCU   \
      GCU   UUUUA CUCUC   UUUA AGA   C
UA   UUUA   -   UUUUUU   C   ACCU
```

##### S-2

```
-   A   CA   C-   UC   GCAAUACAAAAU
UGAA CGUU UU   AGA UUCG ACC   \
ACUU GUAA AA   UCU AAGC UGG   A
      A   C   AC   CU   U-   AUUUUAAUAAUA
```

##### S-3

```
GA-   UC   A   UCUCCG   U   UU
      GAGU   GA UC   UUG CAAAA \
      CUUA   CU AG   AGC GUUUU U
UAA   --   A   UCCG--   U   UU
```

>bmo-mir-33-p5\_1ss7CT

ATTGCATCGGTTCCA

### Identified by Deep-sequencing

#### Loop-structure:

S-1

```
-UUUG   CC  UU-   --   A--   A
      GCUG  GU   GCU  UGCAA  UUGG  U
      CGAC  CA   UGG  ACGUU  AACC  A
-----  A-  CCU   CU    AAC   U
```

s-2

```
ACUA    C  -    CC-    ACAUUUUCCA
      AUUG  AU  CGGUU  AUUGA  \
      UAAC  UA  GUCAA  UAACU   U
CA--    U  U    AAA    CUUUACUUCU
```

s-3

```
ACUUGC--  GU  CACUUCU--  UU
      AUCG  UC          AGU  U
      UAGC  AG          UCA  C
CUUUUAAA  UU  UUUUCAAUU  UG
```

>bmo-mir-3308-p5\_2ss16AG17AC

TGGATTTATGAAGCGGC

### Identified by Deep-sequencing

#### Loop-structure:

S-1

```
  A   G   UUA  AG-  C
UUGGU UUCU GAU  UGA  CGG \
GACCA AAGA UUA  AUU  GCC A
  C   G   CA-  GAG  C
```

S-2

```
AGAU    A   G   UUA  AG-  C
      UGGU UUCU GAU  UGA  CGG \
      ACCA AAGA UUA  AUU  GCC A
-----  C   G   CA-  GAG  C
```

S-3

```
GAAGA----  A   G   UUA  AG-  C
      UUGGU UUCU GAU  UGA  CGG \
      GACCA AAGA UUA  AUU  GCC A
AAUAAACAA  C   G   CA-  GAG  C
```

>ame-mir-2-2-p5\_1ss12AC

TGGTAACTTGGCCTC

### Identified by Deep-sequencing

#### Loop-structure:

S-1

```
CCU UA-- UU CUCU--- UG UG
   UGG AC GGC GGUGG C \
   ACC UG UCG CCACC G C
--- UAUC CU UGUUGCU GU GU
```

### Identified by Sequence similarity

#### Loop-structure:

s-2

```
G- AAC UC--- AUA
   UUGGU UUGGCC GCC U
   AACUA AACUGGG UGG U
AA --- UUUAC AAC
```

s-3

```
CA AA -- U- UG -- A
   AUUUG CC GUUACCA U G GUCA A
   UAAAC GG CAAUGGU G C CGGU C
-- C- UU UU GU GG A
```

>dme-miR-962-p5\_1ss13TG

AAATTGATGCTGGCT

### Identified by Sequence similarity

#### Loop-structure:

S-1

```
AAAUG G UUACU GAA AU C-- AAAC- AAUAA C U
   AGU AGU AUUCGAG UGUCAU UUCA A AUUUU UCU AAUC UAA U
   UCG UCG UAAGCUU ACGGUG AGGUU UAAAA AGA UUAG AUU A
GGCAG G UAGU- A-- -- CUC AAAAU AG--- - U
```

S-2

```
CA AAA- G C C AAAU---- UUCG GA U A
   AUG UU AUG UGG AAAAA ACAU UU AUA AUCGAA A
   UAC AA UAC ACC UUUUU UGUA AG UAU UAGUUU A
AA GUCA G - C CUCUUACU UA-- UC U A
```

s-3

```
G UCGUA GUCA C C - UUA
UGGU GGCAUU UUG UUUG CAUUG AAUU CUGU C
ACCG UCGUAG AAC GAAC GUAAC UUGA GACA A
G UUA-- AC-- U - C UUG
```



>bmo-mir-3272-p3\_1ss4AG  
TAAGTGTGAGTCATT

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```
      A      CC      UA-      AA      UUCA--  -      AAGUU
UUAAU UCAAU AAU  UCACAC  UAA      AG GCGG      U
AAUAA AGUUA  UUA  AGUGUG  AUU      UC CGCC      C
      A      UC      CUG      AA      CCAAAA  G      GAAGU
```

**S-2**

```
UUUCCAUU      CU-  A      A--      AC
      GAAGAUCGA  CUC  AGUGUG  GUCAUUU  \
      UUUUUAGCU  GAG  UUGCAU  UAGUAGA  U
AUCUGC--      UAC  C      CGA      AU
```

**s-3**

```
UUUCCAUU      CU-  A      A--      AC
      GAAGAUCGA  CUC  AGUGUG  GUCAUUU  \
      UUUUUAGCU  GAG  UUGCAU  UAGUAGA  U
AUCUGC--      UAC  C      CGA      AU
```

>isc-mir-5314-p5\_2ss7AC17AC  
TCATCACTATTTGCAC

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```
      C      CAA--      ACAA      -      -----      U---  U      UU
CGGU CGG      UGAU      CGUACAU  UGUU      UGGCAGCAAU  GC AUGUC  \
GCCA GCC      ACUA      GCGUGUG  ACGA      AUUGUCGUUA  CG UGCAG  U
      C      UUAUC      CUC-      C      CUACC      UGAU  -      UU
```

**s-2**

```
UU      CUU-  A      -      ACU      AUA      CGC
GGCGAA  UGA  UGGAAAAG  UGC      GUGU      CAGA      U
UUGCUU  ACU  ACUUUUUC  ACG      UACA      GUCU      G
--      UAUC  -      U      G--      ---      ACA
```

**S-3**

```
      A      GAAUA  AUG  GA      ---  C  UUUA
UUUA ACUGU      CGA  CA  GGUGU  AUG  UG  \
AAGU UGGCA      GCU  GU  CCACG  UAU  AC  A
      A      ACC--  GA-  A-      CUU  C  UUUA
```

>ame-mir-6058-p5\_2ss2TG17GA  
TGGCTGTGATGACAATA

**Identified by Sequence similarity**  
**Loop-structure:**

**s-1**

```
UG-      C      UUA
GC  UGAUGA AAU  \
CG   GCUACU UUA  U
      UAA      -   UUU
```

**S-2**

```
      UUU      UGUGAU      -   G
CAGCAUCA  GUUGC      GACAAU UGG C
GUUGUGGU  UAAUG      UUGUUA AUC U
      UU-      UUU---      C   A
```

**S-3**

```
CAC      CAAUA-      AA-      A
      UGUGAUGA      UAUUCUG  UCAA U
ACACUGCU  GUGGGAU  AGUU U
---      AAAACG      GAG      U
```

>dvi-miR-7-p5\_1ss13AG  
TTTCCGTATGGAGGA

**Identified by Sequence similarity**  
**Loop-structure:**

**s-1**

```
UUUUUAUUC      UA--      UC   A
      UUUUCCG      UGGAGUAU  UUGA A
      GAAAGGC      GCUUUAUG  AACU U
-----      UUAA      UU   U
```

**S-2**

```
      GGG      --  -   U      UGC
GCCGCUAUG  CGGAU  CGU UGG GAGGUAU  \
UGGUGGUAU  GCUUG  GUA GCC UUUUAUA  A
      A--      AG   U   -      UUU
```

**s-3**

```
      UGU      UCG      -   UGU      UAA      -   AG
CGU      UAUA      UCUA  CC      UCCGU      GAG  C   A
GCA      GUAU      AGGU  GG      AGGUA      CUC  G   C
      UCC      UA-      A   ---      UGC      U  AU
```

>bmo-mir-2780a-3-p3\_1ss7TC  
CATCGTCTGAATGCT

### Identified by Deep-sequencing Loop-structure:

s-1

```
U-      C      G  AU--  CUAC-  AUAUACAA
  UGAAUU GGAG CA      GAC      UUCAA      U
  GUUUGA CCUC GU      CUG      AAGUU      A
UU      A      -  AAGU  CUACA  AACAAACAC
```

S-2

```
UACGA  A  G      AA      U  C  UU  A      AAA  AAUC  U
      UC UC UCGU  UGCUU CA UA  GA UCGU  AGA      CG G
      AG AG AGAC  ACGAA GU AU  UU AGUA  UCU      GC G
GUA AAA  A  A      --      -  -  UU  A      AG-  AAU  A
```

### Identified by Sequence similarity Loop-structure:

s-3

```
UU  -      CU      GCUAUA-  UUU
  UCA  AUCGU  GAAU      CA  \
  AGU UAGCA  UUUA      GU  C
U-  A      U-  AUUACUC  UCA
```

>bmo-mir-3297-p5\_1ss14CT  
TCTGGACCTGGGCTT

### Identified by Sequence similarity Loop-structure:

s-1

```
      UCU      UG  UAU  AUUCACC  GA
CCG  GGACC  GG  GAGU      UUG  \
GGU  UCUGG  CU  UUCA      AAC  C
      CU-      GU  UU-  GC-----  AA
```

s-2

```
U      C--      UCGCA  AC  -----  CC  CUACG  CCGA
  CAGGG  GGCCCA      CCG  AGC      GGCUA  GGGU  GCA  \
  GUCCC  UCGGGU  GGC  UCG      CCGGU  CCCA  CGU  U
-      UUU      CCAG-  CC  CGAACUACUU  --  UA---  UCAG
```

S-3

```
AAU      -      A  A  C  CAAA  G  UA-  UC
  AACA  AAAUGCUU  UA  CUUA  GG  CGUGUU  UG  CAU  \
  UUGU  UUUGUGAG  GU  GGGU  CC  GUAUAA  AC  GUA  C
```

AU- G G C - AG-- G UAG UA

>bmo-mir-3351-p3  
TGATTATTTTCTACT

### Identified by Sequence similarity Loop-structure:

s-1

```
UUC ----- U U- U- CUUCAC C- UUCCGU UUU
  GAUU AUUUUC AC CAAU CAACA AAUCGC GAAG GGG \
  CUAU UAAAAG UG GUUG GUUGU UUAGUG CUUU CUU U
UCA ACACU U UU UU UAUUA- UC UU----- UUA
```

s-2

```
UUAAGA U - UAAA CG U- AU AG AA
  UUA UUUCUA CUGA UCAUUUU AUAAAUA AUAAGG UCAA UUU \
  AAU GAAGGU GACU AGUAAGA UAUUUGU UAUUUC GGUU GAA A
UCAGUA U C UG-- -- UU -- AU GU
```

s-3

```
ACAAU UU-- -- GAUU
  UAAAUAGA AUUUUCU ACUU \
  AUUUUUUU UAAAAGA UGAA U
ACU-- UAUU CU AUUA
```

>bmo-mir-1923-p3\_1ss2TA  
TATCATTAATTTTAAAT

### Identified by Deep-sequencing Loop-structure:

s-1

```
UU U - A- U UUG - - G
GCGU CG AUC AUU AUU UAAUUG AUA GC A A
CGUA GU UAG UAG UAA AAUAGC UGU CG U A
GG U A CG C UUA A G A
```

### Identified by Sequence similarity Loop-structure:

s-2

```
GAAACA UU- U UCCU----- C U AUUCAAA
  ACA UGAA UUGAUUUUGAA GUAAUU CAU UAAAAA A
  UGU GCUU GGCUA AUUUU UAUUAG GUG GUUUUU A
AA----- UCU C UUAUUACUAU C U ACUUAAC
```

s-3

```

AC      CG AACCA      A AAC      GG GAA-- G G AG
  UAAUAA A      UAAAAAU UAA  AAAAAAU U      UU CG CG A
  AUUAUU U      AUUUUUA AUU  UAUUUUA G      AG GC GU A
--      AU AGUAA      - AC-      UU AAGUG G G AA

```

```

>tca-miR-3817-p3_2ss7TG17GC
GTATTAGTTTTTTAAACT
>tca-miR-3817-p5_2ss7TG17GC
GTATTAGTTTTTTAAAC

```

**Identified by sequence similarity**  
**Loop-structure:**

**s-1**

```

U  UG  GUU  ACUUU  A
UU UU  UAUUA  UUUUA  GAAUAU U
AA AA  AUAGU  AAGAU  UUUGUA A
U  UA  AAU  AAUCU  A

```

**S-2**

```

AUA      A GGA      CUC  U  U  GGC
  UUUGA AU  AAAGAACU  GAA GAC UGA  A
  AAACU UA  UUUUUUGA  UUU UUG ACU  C
---      G AA-      UUA  U  C  AUG

```

**S-3**

```

AUG- GC      AU-  -  A CAAUC
  CG  GAAAAAC  UAUUU UACAC GU  U
  GC  UUUUUUG  AUGGG AUGUG CA  A
UUUA AA      AUU  U  C  UACUA

```

```

>tca-miR-3881-5p_L-3R-8_1ss4AT
TGTTTAAATTATGTT

```

**Identified by Deep-sequencing**  
**Loop-structure:**

**S-1**

```

AA  U  UUUAU-  U-  G  GG  AAUA
  UAA CAUA      AACAA CGAA AUA AA  \
  AUU GUAU      UUGUU GUUU UAU UU  U
--  U  UAAAU      UC  G  AA  AAGU

```

**S-2**

```

UCCU  --      CAUAAUUU      UA  UU  U  A
  UC  UGUUG      CAUGUU  AA  AUGUU AAUU A
  AG  ACAAC      GUACAA  UU  UGCGA UUAU U

```

```
UCCU UU UU----- GC -- U A
```

**S-3**

```
AAUU A A UUUU CU AA
  UG CUCUCUCA UAAU UU GAUA \
  AC GAGAGAGU AUUG AA UUGU U
AU-- - - UAUU AU GU
```

**>tca-miR-9c-p3\_1ss7TC**

**AATTATCTTTGAAAT**

**Identified by Deep-sequencing  
Loop-structure:**

**S-1**

```
U A UC AAUU
UUCAUU UUA GAUGA A
AGGUAA AGU CUAUU C
C - UU AAAA
```

**S-2**

```
AUUUAG UGU UUUUAUUU - UC - U
  UAGUGAAA UAAUCGAU AUUUAAUU A UUUGAAAU AGAU \
  AUUAUUUU AUUAGUUA UAAAUUAA U AAAUUUUA UCUA U
AA---- U-- UUAU----- A UU A A
```

**S-3**

```
AAA UC AAAUA A AAUCG
  AAAAAUUA UUUG UUGGCA UAG G
  UUUUUUAAU AGAC GACUGU AUC A
--- U- CACA- A ACUUU
```

**>bmo-mir-3400-p3\_1ss15GC**

**GTTGTTGTACCTGGC**

**Identified by Sequence similarity  
Loop-structure:**

**S-1**

```
--- U U UGA--- G A AAUA U G
CAGCC UC GGU UAACA CGAUA UUAG AU CU GAUUG U
GUCGG AG CCA GUUGU GCUGU AGUC UA GG UUAGC A
  UUA U U UGGUAA - C CGAA C U
```

**s-2**

```
AUCA UUA -- -- ----- U
```

```

    ACG   UUC   GUAU  CAAU   GUCC \
    UGU   AAG  CAUG  GUUG   UAGG G
CCCCG  UA-   UC    UU    UUUUC  G

```

### s-3

```

C-----   U   A---   G   -   AAAAAUUCAC
      AACUG UGU   CCUG CCGUG AAUUA   \
      UUGAU ACG   GGGC GGUAC UUAUU   G
UCGGAUUU   U   CUAG   G   G   ACCAAAACAA

```

## >rmi-mir-5335-p5\_1ss6GC

TCGTTCCGTTTTTGT

### Identified by Deep-sequencing Loop-structure:

#### S-1

```

UAUU---   -   UGU   UU--   AA
      UCGAG UAA   ACCG   ACAU U
      AGCUC GUU   UGGC   UGUA A
CAAUACC   U   UU-   UUGC   GU

```

#### S-2

```

CG--   UAU   AA-   UA   CGGUUUU   A   GAA-   A
      UUUCAUAAA   UGUG   CAAUU   AUCGUU   UGUC   GCAAUG   UC G
      AGAGUGUUU   ACGU   GUUGG   UGGUAA   ACAG   CGUUUAU   AG U
AGUA   U--   AUG   --   UUGUUC-   -   AAUA   A

```

#### s-3

```

      C   UUC   UUACCAU   UUUU   UC
GAAAGAAC GA   AG   AUCGAAUG   UUGAGUG \
CUUUUCUUG CU   UC   UGGCUUGC   AACUUUAU C
      -   UUU   UGUUUU-   UUU-   UA

```

## >ame-mir-6052-p3\_1ss2AC

TCGATATTTTGCTAT

### Identified by Deep-sequencing Loop-structure:

#### S-1

```

UC U   -   AG   CC
      GA AUUUUG CUAUU   AAUAU \
      CU UGAGAC GGUAG   UUAUA C
-- -   A   AA   UA

```

#### S-2

```

AAUC   AUAU----   UU-   CCUAC   UU   UC   C   C   -   UC
      ACGAUG   UCCA   GC   AUC   GCAA   ACA   CGUUUAU   ACAA   UAU   A
      UGCUAU   AGGU   CG   UAG   CGUU   UGU   GCAAUA   UGUU   GUG   A
AAA-   GCCCCAUC   UAU   UUUUA   CU   --   U   C   U   CU

```

### s-3

```
C   A   CCACAA   G GAU   -   UGCCCA   A   UU
GUUC ACAG   GGAGCU GA   CAA AGUAAG   UGA GAUA \
UAAG UGUC   CUUUGG CU   GUU UCGUUU   GCU CUAU U
U   A   UAACA-   G   ---   A   UUAU--   A   UU
```

### >api-miR-315-p3\_1ss4AT

CATTTATTGTACGGT

#### Identified by Deep-sequencing Loop-structure:

##### S-1

```
CAAUA   UCA   CAUUUUCUAAAGUU-   A
AACAG   AACU   GUACGAUG   CC U
UUGUC   UUGG   CAUGUUAU   GG A
ACCCG   ---   UUACAUAAAUCUAGU   U
```

##### s-2

```
AUC--   AUU   UA   UU--   U   A   AACG---   A
CAAAGAUG   CAA   CGU   UA AUAA CA   CG C
GUUUCUAC   GUU   GCA   AU UAUU GU   GC C
CGCUC   ---   UG   UGUU   U   C   AACUUA   A
```

##### s-3

```
UAAA   U   --   UU
AUU AUUGU   ACGG \
UAA UAACG   UGCU   A
----   C   CU   UC
```

### >tca-miR-87b-p5\_1ss4TA

CTTAGTTTTTCCTGT

#### Identified by Sequence similarity Loop-structure:

##### S-1

```
GUC   C-   A   UCCAUA   C--   UA   UG   UU   U   CC
AACA   AAAAAC AAUAU   GAU   CA   GA   A   GC   UAAUU \
UUGU   UUUUUG   UUAUG   CUA   GU   CU   U   CG   AUUGG   C
---   CC   A   -----   AUU   UA   GU   UU   C   CU
```

##### S-2

```
CC   UCUU-   ACU--   UU
CGU   GU   UGAUA   GACUGAG   A
GCG   CG   ACUGU   UUGAUUU   U
AC   UUAUU   CCUUU   UU
```



### S-3

```
U--      A      -----      U      U      UAUU      CA      A
      GUGGAA      AAGAU      UGC      GGG      AAGAUU      UG      UGGCUG      \
      CACCUU      UUUUA      AUG      UCC      UUUUGA      AC      AUUGAC      U
UAC      A      UGUUAUGU      -      U      UU--      AA      U
```

### >PC-5p-110994\_9

TGCGCCGGTGTTAAGTAATTCAAATC

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
UAAAUGUGCA      GC      AUU      A      AA      G      CU
      UGC      CGGUGUUAAGUA      CA      AUCA      GG      AUCAU      U
      AUG      GCCACGAUUUAU      GU      UGGU      UC      UGGUA      U
UA-----      AC      C--      C      AA      A      AU
```

#### s-2

```
UAAAUGUGCA      GC      AUU      A      AA      G      CU
      UGC      CGGUGUUAAGUA      CA      AUCA      GG      AUCAU      U
      AUG      GCCACGAUUUAU      GU      UGGU      UC      UGGUA      U
UA-----      AC      C--      C      AA      A      AU
```

#### s-3

```
UAAAUGUGCA      GC      AUU      A      AA      G      CU
      UGC      CGGUGUUAAGUA      CA      AUCA      GG      AUCAU      U
      AUG      GCCACGAUUUAU      GU      UGGU      UC      UGGUA      U
UA-----      AC      C--      C      AA      A      AU
```

### >PC-5p-87420\_12

ACGTGTCTCAATTCGAATCGAAT

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
U      A      C      A      GA      A      A
UC      UUCGA      UCGAAU      GA      AUA      UUUUU      CAU      \
AG      AAGCU      AGCUUA      CU      UGU      AAAAG      GUA      A
U      A      A      C      GC      -      A
```

#### s-2

```
AAACGUGUC      A      GAUACU      A      AUCGUCU      UG
      UCA      UUCGAAUCGAAU      UGGAA      AC      AUUUU      \
      AGU      AAGCUUAGCUUA      ACCUU      UG      UAAAA      C
UUUUA-----      -      -----      C      CUAUU-      UA
```

#### s-3

```

CAUCAAAUAAAAACGU UC- - A G CU AAA
GUC AAUUC GA UCGAAU AAA UGAA U
CAG UUAGG CU AGUUUA UUU GCUU A
ACU----- UAU U C A UU GCA

```

>bmo-mir-2774a-3-p5\_1ss8AG  
AAAAACGTTTCGGACC

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```

ACACCG - UC A CA CG G
UUG AUCU AC UUUU GUUU UC A
AAC UAGG UG AAAA CAAA AG A
CUAG-- A CU C AA AA G

```

**s-2**

```

AA A AAAG-- GCA
GGA UUGGAU UC A
CCU GGCUUG AG A
-- A CAAAA ACA

```

**S-3**

```

AA CGU - C G
GGCA AAA UCGG AU GUACCG A
UCGU UUU AGCU UG CAUGGC G
GG AU- A C U

```

>bmo-mir-3328\_L-6R-4\_1ss14CA  
TGCACTTAAGGGAAT

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```

A C AA G CACCC CUUAUA AGACCU CC UC CU AA
UUGG UGAA GUUUU CCU GC GUCC UGC CG CGA AC \
AAUC ACUU CAAA GGA CG CAGG ACG GC GCU UG A
- - CG G AUUCA ----- ----- UA UA U- UU

```

**S-2**

```

GCAGAA C A G AA
CG ACUU AG GAA \
GU UGAA UC CUU C
----- - A G AG

```

### s-3

```

CC GA- AU-- C ----- CUUA -- ----- UC GUA
AU UGGCU UG AUCGAGAAU GCACA AGG GA AUCAA GAG A
UA GCCGA AC UAGCUUUUA UGUGU UCC CU UAGUU CUC U
UA AGA CUUU - AACAA AUUA GA UUAAC UA AUU

```

>dps-mir-2523-p5\_1ss13AG  
AATGAGAATGAAGTGA

### Identified by Deep-sequencing Loop-structure:

#### s-1

```

G A AAA A A AUU
CAUU UCG UA UCUUA UGU C
GUGA AGU GU AGAGU ACG G
G - GAA A - GUA

```

#### s-2

```

ACGC-- U AUGAA- C-- ----- AAUAAUAAAAAAAAAU
GG AUUUAAUGAGA GUG AUUCAU UUAUGCAAUA \
CC UAGGUUAUUCU CAC UGAGUA AGUAUGUUUUA U
CUUUUA - GAAUGG CAA CUACG AAUACAAGAAAAAAAAU

```

#### s-3

```

A AAUA AUC AAAA A A AAAACAAACCAG- A
GAACAG GG UGUCCA CG UUUCA UG CC A
CUUGUC CC ACAGGU GU AGAGU AU GG C
- A--- --- GAA- A A AGCAACCAAAUAA A

```

>ame-mir-3792-p5\_1ss16GA  
CCGTGGAGGACTGAGA

### Identified by Sequence similarity Loop-structure:

#### S-1

```

AAAAA GAACAC - ACU CAA
UAUGGUC CG UGGAGG UUAUU C
AUAUCGG GC GUCUCC AAUUAA C
AAA-- ACUA-- U --- CGG

```

#### S-2

```

U UU GAG C UUCA
UCUUUUUUU U CACUG GA UGAGUA A
AGAAGAGAG A GUGAU UU ACUUAU U
U GG AA- U UUAU

```

s-3

```

UA   AG C   U UUC   CA
AG  GUGG GA UGAU CG   AUGGA C
UC  CACU UU GCUA GC   UGCUU G
GC  CU  A   C   ---   UU

```

>ame-mir-932-p3\_1ss7TG  
TCGAATGGACGAGAA

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```

A   -   G AA   CGU
GUU UUGA AAUAUUUUUGU UA  UGUUUUG  A
CAA AACU UUAUAAGAGCA GU  CGGAAGC  G
G   C   G AA   AAA

```

S-2

```

A--   CU   U   AAU   -   AUG   GUCACC
AAUAUAGUU UUUUUC UUCA   UUC UGUGUUU   UCUUUG   \
UUAUGUUAA AAAGAG AGGU   AAG GUACAAA   AGGAAC   A
AGC   AU   C   ---   C   ---   AUCUCA

```

s-3

```

G AAU AA- CA   A U   GAG--   AAAAAA   C   UUGG
AAAUACACA AA  CA   UUC   UCCG UU GAA   CGAUG   UCUGAA AAU   \
UUUGUGUGU UU  GU   GAG   AGGU AG CUU   GUUAU   AGAUUU UUA   C
G   GU- GAA   C-   A   C   AUACA   AAG---   -   UAAU

```

>dme-miR-1001-p3\_1ss5AC  
GGCACGGTCAGTAGT

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```

GA--   -   GUGGC   UUCAU   UG   A
GGGGUCU   UAACGG UCAGUA   CAA   GAAAU   UUGA U
UCCCAGA   GUUGUC AGUUAU   GUU   UUUUA   AAUU G
AAUA   U   AU---   UU---   GU   G

```

s-2

```

ACG   UA   CA-   CA-   AUUU
GUCAG   GUG   GAUCCA   CAUAC   \
CAGUU   UAC   CUGGGU   GUGUG   U
G--   UA   AUA   AGC   AUUA

```

s-3

```

A   A   UCUUUCUAA   UUUG   C--   -----   UU   AUUUG   U

```

```

UUG AUA          ACGUU   GCA   GGUCA          GUGAG GA   AUCUC A
AAC UAU          UGCAA   CGU   CCGGU          CACUU CU   UAGAG A
-   A   UCAUUACG-   CCUA   UUU   AAAUAAGA   --   GUA--   A

```

>bmo-mir-2828-p5\_2ss2TA18TA  
AATCGATATGTGAACGGAT

### Identified by Deep-sequencing Loop-structure:

#### S-1

```

CAACCA-- C          AAC   U   U   A          UUAUCAAU U   AA   U
      AU GAUAUGUG   GGA   AGG GA AUAUACC          UU GA   AC U
      UG UUGUGUAC   CUU UCC CU UGUGUGG          AA CU   UG C
AUCGUUUA U          AAA   U   -   A          UUU----- C   GG   U

```

#### S-2

```

AC          UA   GAAC          A   CAU
CAAUCGA   UGU   GGAUU GUGA   A
GUUGGCU   ACA   UUUAA UACU   A
--          UC   AGU-   C   CCA

```

#### s-3

```

CA-----   --   UAU- UG   --   G   AA--   -----   CU   U   U   AA   U
      ACCAA   UCGA   G   A   ACGGAUA GUG   AUA   UAC   UAUCAA UU GA   AC U
      UGGUU   AGCU   C   U   UGUUUUGU UAC   UAU   AUG   GUGGUU AA CU   UG C
UAUCCUC          CA   UAAU GU UA          G   AAAC   UCCCC   U-   U   C   GG   U

```

>bmo-mir-6497-p3  
AGGATTGGCTCTGAGGAC

### Identified by Sequence similarity Loop-structure:

#### S-1

```

AG          U   A   G   UAAAGG   -   UCUGA   AAAAA   C   A   UAU
AAUUC UUG AGC GU          UUUG GC   GGACA   UUC AU AAAUUU   \
UUAAG GGC UCG CG          AGAC CG   UCUGU   AAG UA UUUUAG   A
--          U   -   A   UUA---   A   UUA--   -----   C   A   UAC

```

#### S-2

```

GCU          U   A   UCU   CA   -----   U   GG
      CCUC GAG CA   UCGA   UCCU   GUCAUC G   A
      GGAG CUC GU   AGUU   AGGA   UAGUAG C   U
---          U   G   U--   --   AACGAC   -   AA

```

#### S-3

```

AAA--      U   UAA   CG
      UUAGA CCG   CUU  G
      AGUCU GGU   GAA  G
UUAGA      C   UAG   UA

```

>dme-miR-4946-p3\_1ss12AT  
GAAATCAATTGTAAA

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```

UU      U   AAAUAA   AUCA      A   UUCA
UUUUU  CGUU      UGAA   AUUGUAAAA GU  \
AAAAA  GCAA      ACUU   UAACAUUUU  CA  A
--      U   C-----  GG--      A   UUUU

```

s-2

```

      AAUC      UAAAA  CAA   GCU
AUUCAUUGGA   AAUUG      GG   UAC  \
UAAGUAACCU   UUAAU      CC   AUG  G
      AAA-      UAAG-  UA-   AAU

```

s-3

```

A      AAUC      UAAA  CAA   GCC
UUCAUUGGA   AAUUG      GG   UAC  \
AAGUAACCU   UUAAU      CC   AUG  G
-      AAA-      UAAG  UA-   AAU

```

>dwi-mir-304-p3\_1ss13CA  
ATCCATTCGATGAAC

**Identified by deep-sequencing  
Stem-loop structure:**

S-1

```

AA--      A-      C   A-   GC
UUGGU      CUG  UCAUU AAU  AUU  C
GACCA      GGC  AGUAG UUA  UAA  A
      AACG   CA      C   CC   AA

```

s-2

```

AUCC--      --      CAAU
      AUUCGA  UGAA   U
      UAAGUU  ACUU   C
UAACAC      UA   AACA

```

s-3

```

-      CAA--  A      CGAUGAAC      A   CU   G-----  AACC
CUAUCA UUGC      GA  UCCAUU      CAGAU AGC  GGUC      CCCAG  A
GGUAGU AACG      CU  AGGUAA      GUUUA  UUG  UCAG      GGGUC  A

```

A ACCAC C A----- G UU AAAUA AAUC

>bmo-mir-92b-p3\_1ss14CA  
TCATATCAAATTGAA

### Identified by deep-sequencing Stem-loop structure:

S-1

```
ACUUUAUAA      AAACAUC      UUG  A  A  AUU
      CAUGAA      AUAUCAA  AA  UGAA CU  U
      GUAGCUU      UAUAGUUU  UU ACUU GA  A
UUG-----  -----  UG-  C  -  AAU
```

S-2

```
CA      UUC      AAA-  A
  CAUUUU  UUAAUU  AUG G
  GUAAGG  AGUUAA  UAC A
--      UA-      ACUA  U
```

s-3

```
ACACAAAUCAUAUCA      AUCGAA      UUA
      AAUUGA      UCAAA  A
      UUAACU      GGUUU  A
ACUACUC-----  GCAUAC      CCA
```

>ame-mir-3756-p5\_1ss9CG  
GAGGATTTGAAAAATAAT

### Identified by Sequence similarity Loop-structure:

S-1

```
GAU      UCG      -  AAA-  AUG
  GCGA      GAUUU  GA      AUA  A
  CGUU      CUAAA  CU      UAU  A
---      UUA      U  CGCG  GAA
```

s-2

```
G      -  AAA-  AUG
  GAUUU  GA      AUA  A
  CUAAA  CU      UAU  A
-      U  CGCG  GUA
```

s-3

```
GAU      UC      AAAAAUA  GA
  GCAA      GGAUUUG      AU  A
  CGUU      UCUAGAU      UA  A
---      UU      CUCGCG-  AA
```

>PC-5p-14294\_106  
TGGATGAAATTTATGA

**Identified by deep-sequencing  
Stem-loop structure:**

**S-1**

```
GAAAAU      -  AAUUU      UUG      AAA-----  A
UUUGU      GUUUUGGA UGA      AUGAGC  UUUGAU      AUUAU  U
AAACG      UAAAACCU ACU      UACUCG  AAACUA      UAUAU  A
          ACUCU-      C  CGU--      UAG      AAUAUCG      U
```

**S-2**

```
AAGUG      UC  --  U  U
UGGAAUUUU  GGA  UCAU CCA U
AUCUUAAAG  UUU  AGUA GGU U
-----      UA  AA  -  A
```

**s-3**

```
A      UG      AAU      -----  A
UGCAGA  GAUGA  UUAUGAAUGA      AAGC  \
GCGUUU  UUAUU  AAUACUUUU      UUCG  C
A      UA      ---      AAGUACUA  A
```

>dme-miR-2493-5p\_L-1R-4\_1ss3TA  
CACACACACACACACA

**Identified by deep-sequencing  
Stem-loop structure:**

**S-1**

```
AUACC      GCAAA      AA      CCG      --  C  C  AA
          GCAUU      UGUG  UGUGUG  GUGUGUA  UG GA CGG  C
          UGUAA      ACAC  ACACAC  CACACAU  AC CU GCU  A
-----      AA---      AC      ACA      UU  -  A  AC
```

**S-2**

```
A-      U  C-      CA-      CAAA      UAAUAAUA
          GACAU  CACA  ACACA  CACAAU  CUACA      \
          CUGUA  GUGU  UGUGU  GUGUUA  GAUGU      A
AC      U  UA      UAA      C---      UUGCCAGU
```

**s-3**

```
-      AAUAA      A  AAAUA      GCA      AUU-      UUCC
CGUG  UGCA      UUG  UGU      UGUG  UGUA      UGAUA      A
GCAC  ACGU      GAC  ACA      ACAC  ACAU      ACUGU      A
          A  GUGA-      -  CACAC  AC-      ACAC      UAAC
```



```
>dme-miR-313-5p_L-4R-3_1ss17AC
GCGGATGGGGCCGT
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
U      ---      A  -      --      AG  GG  UA
GCGCUG  CCGCA  CU  GUGGU  GCC  CA  CUG  \
GCGGAC  GGCGU  GA  CAUCG  CGG  GU  GAC  A
-      AAA      G  C      GC  GG  AG  GC
```

#### s-2

```
CUUU      GGG  -      A      UUCA      AUUUGCUCUUUUC  U
      UUGAUG  GC  CGUUA  UUGGA      UUGC      AGA  A
AACUAC      CG  GCGGU  AACUU      GACG      UCU  A
-----      AA-  U      -      UC--      GUUUUAAUUCCUU  A
```

#### s-3

```
A      AGACU  A      ACUUU      U  GG      UUAAUU-      UUC  G      CUC
GAUG      UUG  CGUGU      UUGA  GG  GCCG      GGA  AUU  CAUUUG  \
CUAC      AAC  GUACG      AACU  UC  CGGU      CCU  UAA  GUAGAC  U
A      -----      -      GU---      U  GA      UUUUAUGU  UUU  -      UUU
```

```
>dme-miR-4941-5p_R-6_1ss1CG
GCTCGAGCTGCTCAC
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
UCA--      CU-      GCUCAUUCGU  U
      AUAUGAAA  CGAGCU      UUGG  \
      UAUACUUU  GUUUGG      AGCC  C
UUUAC      ACU      AAAAUAAU--  U
```

#### S-2

```
AU      UC  UC      C  UACG
      GUUU  AC  GAGCUG  UCA  \
      CAAA  UG  CUCGGC  AGU  A
U-      C-  U-      -  UCUU
```

#### S-3

```
CGA      -----      A  CC  UG
      CGGU      UGGGUA  GC  CGA  \
      GCCA      ACUCGU  CG  GCU  G
CC-      GUACGC      -  A-  UC
```

```
13. >hme-mir-11-p5_1ss5GA
CACCACGTCCCGTGG
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
AUUGA - CCG A C
ACCA CGUC UAA CAA C
UGGU GUAG GUU GUU A
----- A UA- A A
```

#### S-2

```
AUA AAAUUUA- C
UGACAC AUUG A
ACUGUG UAAC C
--- CCCUGCACC A
```

#### S-3

```
- --- ACCAUUUCAACGAC
AUUUUACA GC ACGU \
UAAAAUGU CG UGCA A
U CCC CCACUAACCUACC
```

```
>aae-mir-2a-p3_2ss22GA23CA
TATCACAGCCAGCTTTGAAGAA
```

### Identified by Sequence similarity Loop-structure:

#### S-1

```
AUUGUAAA---- C - - CU UUAUUC
UCAAUUGCGUC CUUU CAAAG UGCGUGUGA UG A
AGUUGGCGUAG GAGA GUUUC ACCGACACU AC A
CAGCUAAGUUUA C A G AU UUAUUA
```

#### S-2

```
UU UA - - A A UUGAUA
UCUAA CUCA CAAAG UGG UGUGA AUG G
AGAUU GAGU GUUUC ACC ACACU UGC U
UC C- A G G A UUAAGA
```

#### S-3

```
AAAACAUCA CA GAAGAAA U U- AA
UCAA GCCAGCUGU UG GU UGG \
AGUU CGGUUGGCA AC CA GCC A
CA----- A- AAGUAG- - UU UU
```

```
>PC-3p-66272_17
TCCTGGTCAAGTACTTCTTGTGGCT
```

## Identified by Deep-sequencing Loop-structure:

### S-1

```
UU ---- A - U GA GAUU CAA
G GC GGUGC GCC CAAGAAG ACU CCAG \
U UG CUAUG CGG GUUCUUC UGA GGUC G
CU UUAG G U U A- ACU- CUA
```

### S-2

```
CCUU - GA GAUU CAA
CCGGUGCA CCUUAAGAAG ACU CCAG \
GGCUAUGU GGAGUUCUUC UGA GGUC G
---- C A- ACU- CUG
```

### S-3

```
UC - U GA GAUU CAA
CCGAUGC GCC UAAGAAG ACU CCAG \
GGCUAUG CGG AUUCUUC UGA GGUC G
U- U U A- ACU- UUA
```

```
>mse-mir-92a-p3_1ss4GT
CGATCGGGCCGGGTC
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
UUCUGC UC --- U
UGUUUGUU GAUCGG GCCGGU \
ACGAACAA UUAGUC CGGUUA G
A----- -- ACA G
```

### S-2

```
AU AU C- U GUC UU
GCGUUUCUG GU GCCCG CG GGUCGUA UGG \
UGCGAGGAC CG CGGGC GC CUAGCAU GUC G
C- GC UA - --- GC
```

### S-3

```
G C-- GG C U
GGAUU AC GAUC GC GGA U
CCUAA UG UUAG UG CCU U
G ACC -- A U
```

```
>mse-mir-2565-p3_1ss14TC
GGGGTGCTTGGAACT
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
AUUAUU      U   U   UGC
      UUCCG GGC CUG  \
      AAGGU UCG GGC  U
UUACUC      -   U   CUC
```

### S-2

```
AUCAUUG      C   G   U   AAC   AA
      GUGC UGGU CU GG   UUG  \
      CAUG ACCA GG UC   AGC  A
UUCAUAA      U   A   U   AA-   UC
```

### S-3

```
AUUUAU      -   CCGACG      -   CAC
      CUGU CAAUU      CCA GCGCUG  \
      GACA GUUAA      GGU CGUGGC  A
CAUACU      A   UCAA--   U   ACU
```

```
>dme-mir-4976-p3_1ss5TA
GATGACAGCCAGCGGT
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
AAAUUGAUCUAA      CAG      -   AAUU--      -   A   A
      AUGA      CCAG CGGC      UUUAG GUGA UA C
      UGCU      GGUU GCCG      AAGUU CACU GU A
AAAUAAAACG--      AAA      U   GUAAAU      G   G   A
```

### S-2

```
A-      C-      -   A   U
      GAUGA      AG CC GCGC A
      CUGCU      UC GG CGUG C
AA      CA   A   -   A
```

### S-3

```
A-----      C-      -   A   U
      GAUGA      AG CC GCGC A
      CUGCU      UC GG CGUG C
CAUCAA      CA   A   -   A
```

```
>dme-mir-4954-p3_1ss10TC
CGGTTCGAGCGCTCGAGT
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
UU   CCC   -   C   A-   GGCUC   AC
   CGG   CGC   CGA   CC   GGC   GGUCA   U
   GCU   GCG   GCU   GG   CCG   CCAGU   U
CG   UC-   A   U   CA   ACAA   GC
```

### S-2

```
AA   UU-   CU-   UG   AU
   AAGCAU   CCGAGCG   CGAGUGU   GGU   C
   UUCGUA   GGCUCGC   GCUCGCA   UCA   G
UC   UUU   UUU   UG   CG
```

### S-3

```
CA   A   A   AU   CGUG   UCUGAA
   GGG   UAUAAAUCGAGC   UUU   GGAA   CCUC   G
   CUU   AUGUUUAGCUCG   GAG   CUUU   GGGG   C
AA   A   C   --   AA--   UGUUGU
```

```
>dme-mir-31b-p5_1ss6GA
GCACAACGGATCGAA
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
GU--   AAA   -   A   CGCCACC
UUUCGAU   UC   UUG   AC   G   UUCAU   \
AAAGCUA   AG   AAC   UGCC   AAGUG   G
   AGCU   GC-   A   A   UAAAAGA
```

### S-2

```
ACAGGCAAGG   CAAC   AA   UUUUCA
   UGAGGA   GGAUCG   AUU   \
   ACUUUCU   UUUAGC   UAA   U
A-----   UC--   AA   UCUAUU
```

### S-3

```
AACAAAAACAA   AU--   UUU
   CGGAUCGAA   GAU   \
   GCUUAGCUU   CUUA   U
A-----   CUCC   UUU
```

```
>dgr-mir-9b-p5_1ss13TG
ATGGTGTGCGCAGAA
```

**Identified by Deep-sequencing**  
**Loop-structure:**

**S-1**

```
A      U  GCAGAA  UU  G
CAAUGGUG GC      GUGC  GGC U
GUUACCGC CG      UACG  CCG G
-      -  AGG---  U-  A
```

**S-2**

```
G      GG-  A-      U  GCAGAA  UU  G
UAGGA  GU  CAAUGGUG GC      GUGU  GGC U
GUUCU  CA  GUUACCGC CG      UACG  CCG G
-      AGA  CG      -  AAG---  U-  A
```

**Identified by Sequence similarity**  
**Loop-structure:**

**S-3**

```
A-  GUA  -      AA  GU  A  UUU
UUGUUCA UC  GC CAUUCG AA  G  UUUA  U
AGCGAGU AG  CG  GUGGGC UU  U  AAGU  C
      GA  ACG  U      CG  UG  A  UGC
```

```
>bmo-mir-3211-p3
GCCAGTTGTCCGACT
```

**Identified by Sequence similarity**  
**Loop-structure:**

**S-1**

```
ACAUU      CCGACAAU-  UU
      GCCAGUUGU      AGUU  \
UGGUCGACA      UCGG  G
AUCU-      UACAUUAGU  AA
```

**S-2**

```
UUC  UG      U---  U      U  AAA  UA
      GG  UUGGAUA  GCAU  UGGUAUU  GGU  AUC  C
      UU  AGCCUGU  CGUG  GCCAUAG  CCA  UGG  A
CU-  GU      UGAC  U      -  AC-  UA
```

**S-3**

```
CC-  C  UU      UAUU  UC
      AUUC  G  UAAUUG  GC  \
```

```
UAAG C GUUGAC CG A
CAU - CU ---- UU
```

```
>bmo-mir-2859-p5_1ss15AT
GAGCCTGGCGGACCT
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
----- C CU U CC - UCG
CUGGGCCAGU UGCC GGCUCU GG ACA GCC UUGAUGA C
GACCUGGUCC GCGG CCGCGA CC UGU CGG AGCUAUU C
AGUUCCAG U -- - AC U UGG
```

### S-2

```
CC GA GC AC UUUC - U
UU GCCUG GG GCGUA GCGC CGG \
AG UGGAC UC UGCGU CGCG GCC C
CA G- UA CA C--- U G
```

### S-3

```
U UU UC UA
GUCG GUCCGCU GGCCG A
UAGC CAGGCGG CCGGU G
- UC U- UC
```

```
>bmo-mir-2847-p5_1ss15GA
GTGCGTAGAGTGTA
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
UCAC UGC-- UGCGU- UGU UAAU C
CGUUAUAA AGAA AGAG AGA AAAAA C
GUAAUAUU UCUU UCUU UCU UUUUU C
UUUU UUAUU UUUUCU CU- UUU- G
```

### S-2

```
- - ACC - C GUCUG
GCCGCAC CUGC CA GGC GUCGA GCU \
CGGUGUG GAUG GU UCG CAGUU UGA C
A C AAC C C AUGAG
```

### S-3

```
GA CAU G U UUUU
ACUU CG A CCAAGUU \
UGAG GC U GGUUUA U
```

CG AU- G - UUUC

>bmo-mir-2761-p3\_2ss4CA17AC  
CGTAGTCGATGGAAAACA

## Identified by Sequence similarity Loop-structure:

### S-1

```
C   UCGA GA   G   GGCA
   CGUAG   UG   AAUU CUU   A
GCAUU   AC   UUAG GAA   A
C   UAAG AG   G   GUUU
```

### S-2

```
AUAAUAAUUUC   ACUUGAA   AAC   AU
                CCAA       UCAUUGA   UGG G
                GGUU       GGUAGCU   GCC G
AAAC-----   CGUUAAA   GAU   AA
```

### S-3

```
UCAG G   AA - -   CG
   UC AUGGA AC AU CGUU G
   GG UACCU UG UA GCAA C
G--- G   C- A C   AG
```

>api-miR-3044\_L-7\_1ss9TC  
TCATGTGAGCTTTGC

## Identified by Sequence similarity Loop-structure:

### S-1

```
AA -   U - CU   UGAA
  AUUC AGGUUU UGU AG   UGU   U
  UAAG UUCGAG GUA UC   ACG   U
GA   U   U   C   CC   UUAU
```

### S-2

```
UGUU CA   GC   GGAACUA- A
  UGG AAUGUGA UUUGC   GCC \
  ACC UUACGCU AAAUG   CGG A
GUU- --   AA   AGUAUGUG A
```

### S-3

```
U-   AAG A U   CGGUUCC   U- GA
  GCUUC UGUC UG GAGCUUUU   AAAG GAU A
  CGAAG ACAG AC CUCGAAAA   UUUC UUA U
UU   --- - U   -----   UU AC
```



>PC-3p-148029\_6  
TCGTACTGGAGCACTGGACTGT

## Identified by Deep-sequencing Loop-structure:

### S-1

```
      C          ACA CA -      AG
UGUA ACAGUCCAGUGU CA GC AUUAA A
AUAU UGUCAGGUCACG GU UG UGAUU G
      A          AG- CA C      GA
```

### S-2

```
UAACAC AC          ACACA C UAAAAA U
      UGU ACAGUCCAGU CAG AU      GAC \
      ACG UGUCAGGUCA GUC UG      CUG C
AUCUAC C-          CGAG- A ----- A
```

### S-3

```
UAACAC AC          ACACA C---      AG
      UGU ACAGUCCAGU CAG AUUAA A
      ACG UGUCAGGUCA GUC UGAUU G
AUCUAC C-          CGAG- AUGC      GA
```

## Group 4 --- miRNAs with four putative coding genes

>bmo-miR-2779\_L-3R-2\_1ss9CT  
TCCGTTCTGAAGGAC

### S-1

```

AUUU      -   AAUU AU      -   G   A   G   CU
      GCAA CAU      UG   UUCUUC AAU GGA GAC GC \
      CGUUU GUA      AC   AGGAAG UUG CCU CUG UG U
-----   U   -----   C-      C   G   -   G   UU
  
```

### S-2

```

UG ACUAAAAC      -   G   A   G   G
G   A      UUUUUC AAU GGA GAC GCC \
C   U      AGGAAG UUG CCU CUG CGG G
GU GUAAAACC      C   G   -   G   U
  
```

### S-3

```

      UC-   A-   CCU   AUU   CGAC
GUUCCAGC   UGG   CUUC   GAAUC   GU   U
UAAGGGUUG   ACC   GAAG   CUUGG   CA   U
      UAA   AG   ---   CCU   AACU
  
```

### S-4

```

      CACUU   AGUC   CG   UAUGU-----   CA
AUAG      UCU   CGGUU   AAGG      UUGU   A
UAUC      AGA   GCCAA   UUUC      AACAA   A
      UUUU-   A---   AU   UUUUUUUUU   UA
  
```

>api-miR-3024\_L-7R-2\_1ss13AC  
GATTCATAGAGCCG

### Identified by Sequence similarity

#### Loop-structure:

#### S-1

```

      UU      UC      C      CCA   UC--   CA
GAUGG   GUGAUU   AUAGAG   CACUG   UCA   AUUGU \
UUACC   UAUUAG   UAUUUC   GUGAU   AGU   UGAUA   U
      UU      UA      A      UG-   UGAU   AA
  
```

#### S-2

```

      CAA-   GA-   UGUUUAU   U   AA-   UG-   G-   UUCAU   GCA
GCC      UUG   AUGGCUUU   UGAA UCUC   CUU   UGGAUU   AUU   GU   A
UGG      AAU   UACCGAGA   ACUU AGAG   GAG   ACCUAA   UAG   CA   C
      AUCG   AAA   U-----   U   CAG   UAA   GA   CUUUC   AAA
  
```

#### s-3

```

      UAUCU   AA   UUCUCAUC   UUAUU
GGUAUAUAAUU   UUGC   UUUUAU   GUGAUUAU   \
UCGUAUAUUA   AGCG   GAGUAU   UAUUAUAUA   U
      -----   CC   CUU-----   UAACU
  
```

S-4

```

-- C AU CAUC- UUAUU
UUG AAUUUU UUCU GUGAUUAU \
AAC UUAAAAG GAGA UAUUUAUAU U
CA A CC UACUU UAACU

```

>hme-mir-2c-p5\_2ss13TA17CT  
 GTGGTTGTGGAAAGTTT

**Identified by Sequence similarity**  
**Loop-structure:**

S-1

```

-CCG G U AA
UUGU GAAAGU UU A
AACAA UUUUUA AA C
--A G U AG

```

s-2

```

UG GAAA A UG
UUGUG GUUUUGUG UC \
GACAC CAAGACAC AG G
GA A--- A UU

```

S-3

```

UG GA UCCUUU U UCGCU GC UGAA--- AAA
-GGU UG AAGU GGUUUUU UGC GGU UGUUUC UGAUUC \
CUA AC UUCG CCAAAAA ACG UCG GCAAAG GUUAAG A
GU AC ----- U UU--- AA UCAAAAG AUA

```

S-4

```

A GUA UGUA GU---- ACAU- U
CU CAC CACC UGAG UUUU U
GA GUG GUGG ACUC AAU A
A AAG UUG- AUAAUU CUUUU G

```

>tca-miR-279d-5p\_L-1R-8\_1ss16TC  
 GGCGATTGTGGGTTC

**Identified by Sequence similarity**  
**Loop-structure:**

s-1

```

CG C U A - A- AUU UAU C G
AACAA CAAA GCC AC AUC UCGA GUA CUUA AUCUGAU \
UUGU GUUU UGG UG UAG AGCU CGU GAGU UAGAUUA U
G- A - G U CG AUU CGU U C

```

s-2

```

GAA U UUCGAA
UCGAUUG GGG \

```

```
AGCUGGC CUU A
A-- U UGAAAU
```

### S-3

```
AGUC U ---- A- UA
GAU GUGGGUUCG GUGUAAU AC \
UUG UACCUAAGU CACGUUA UG U
---- C GCGG AG UU
```

### S-4

```
U CAAAUAAA C UG UG UA
UUGGUAAU UUA UGGG GAU UGGG GG \
AACCGUAG AAU GCCU CUG ACCU UU U
U CAAAAA-- - GU UU UU
```

## >dps-mir-2507a-p5\_1ss6CT

```
TTGTGTCAATATTTT
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
ACGUUUUU U AUUU AUU
UGUG CAAU UCUGA \
AUAC GUUA AGAUU A
UUUUU--- - CCU- AGC
```

#### s-2

```
U AU- U
CAG UUGUGUCA AUUUU \
GUC AGGCAUAGU UAAAG C
C GUU U
```

#### s-3

```
GAA CAUCAA AAU C-- GA
AAAAAUAU AUAAU CAU CAAU A
UUUUUAUA UGUUG GUA GUUA C
--- ACUG-- C-- CAA AG
```

#### s-4

```
AAACUAU GAA C A--- GUCAAUUAU U AAUU----- AA
AAAG CAU AUAA GAAUUGU UUUAGA GCUG UCG \
UUUC GUA UAUU UUUAACA AAAUUU CGAU AGC U
ACCU--- AA- - AAAC AAUGAC-- - CAUUUAUUU UU
```

## >bmo-mir-2840-p3\_1ss5CT

```
TTCTTCCTCTTCTTC
```

### Identified by Deep-sequencing Loop-structure:

### S-1

```

UUUC      U  CU--  -  UCU  UCUC--  UUC  UUU  UU  --  UU
      UUCU CCU  UCU UCU  UCU  UUC  UUC  UCAC  UUU  UAAG  \
      AAGA GGG  AGA GGA  AGG  AAG  AAG  AGUG  AAG  AUUC  A
UA--      C  UUUU  U  UUU  UAUUAA  UU-  CU-  UU  UU  AG

```

### S-2

```

ACAU      UAUUU      CCUC      CU      AUUAU----  U
      UUUCGA      UUUUUUUCUU  UUCUUUCUU  UUUUUU      UAUUUG U
      AAAGUU      AAAAAGGAA  AAGAAGAG  AAAUGA      GUGGAU C
UC--      CGGC-      AAAA      U-      CCUGUUCUU      U

```

### s-3

```

--      AAAACAUU  C-  U  U  GG      ACA
      GAGA      GAA  GG  GG  AG  AUCGUAAA  U
      UUCU      CUU  CC  UC  UC  UAGCAUUU  A
CC      GCAUUCUU  CU  U  U  AU      AUU

```

### S-4

```

UU-----  C  C  --  CU  UCC-  AAGA  GU  UU
      UUUCUU  UU  CUC  UUCUU  UC  UUC  UCG  UGA  U
      AAAGAA  AA  GAG  AAGAG  AG  AAG  AGC  ACU  U
UACUCAUAGUGU  U  A  UA  UU  UUGC  GG--  UU  UU

```

### >PC-5p-154641\_6

TAGAATACGACTTTTGATGAATTCAAAA

### Identified by Deep-sequencing Loop-structure:

#### S-1

```

U  UU  G  C  U-  A-      A  U  U
GCU  CUA  AAUA  GACU  UUG  UGAAUUCAAAA  UA  UG  U
UGA  GAU  UUAU  UUGG  AAU  GCUUAAGUUUUU  AU  AC  U
U  GG  G  C  CU  CA      A  U  A

```

#### s-2

```

U  G  C  U  --  U      C  U  G
UCUA  AAUA  GACUG  UGA  UGAAU  CAAAA  UA  UG  U
AGAU  UUAU  UUGG  AUU  GCUUA  GUUUUU  AU  AC  G
C  G  C  U  CA  U      A  C  A

```

#### s-3

```

U  G  C  -  A-      A  U  U
GCUUUCUA  AAUA  GACUG  UUG  UGAAUUCAAAA  UA  UG  U
UGAGAGAU  UUAU  UUGG  AAU  GCUUAAGUUUUU  AU  AC  U
U  G  C  U  CA      A  U  A

```

#### s-4

```

UAGU      G   C   -   A-      A   U   U
      GCUUUCUA AAUA GACUG UUG  UGAAUUCAAAAA UA UG U
      UGAGAGAU UUAU UUGGC AAU  GCUUAAGUUUUU AU AC U
UU--      G   C   U   CA      A   U   A

```

>PC-3p-159377\_6

CTGAATATCACTCTTGCCGAG

### Identified by Deep-sequencing Loop-structure:

s-1

```

AUC      UAU---  CUUGC-----  AA
      UGAA      CACU      CGAG  \
      ACUU      GUGA      GCUC  U
---      UUAAAU      UCUAUUUUA      UU

```

s-2

```

U      G      UAUCACUCUUGCC-      CG      U
GAAUCA CUCAUCUGAA      GAGAAUUUCU AUUU A
UUUAGU GGGUAGGCUU      CUUUUAAAGG  UGAA U
-      -      UUUUAACCAUUUUA      --      C

```

s-3

```

AUC      UAU---  CUUGC-----  AA
      UGAA      CACU      CGAG  \
      ACUU      GUGA      GCUC  U
---      UUAAAU      UCUAUUUUA      UU

```

s-4

```

      C      C      UAUCACUCUUGCC-      CCCG      UU
GAAUCA CCCAU UGAA      GAGAAUUU      AUU      A
UUUAGU GGGUA ACUU      CUUUUAAA      UGA      U
-      -      UUUUAACCGUUUUA      UG--      UC

```

>bmo-mir-3217-p3\_1ss15AG

AATGGCAGAGAAATG

### Identified by Sequence similarity Loop-structure:

S-1

```

      CA      AAAUU      U   U      -      CCACUA      U
UAAUGG GAG      GUU G GAUG UGCC      GA A
GUUACC CUC      CGA C CUAC ACGG      CU U
      AC      C-----  - U      U      CUA---  G

```

S-2

```

CACG      AGA      C      AG
  AAAAUGGC  GAAAUU  GUUUUG  U
  UUUUAUUG  CUUUAA  CAAAAU  U
-----  ---      -      GU

```

### s-3

```

G      GAGAAA      AAGC  G
  AUGGCA      UGCGCUC  CA  U
  UGCCGU      AUGUGGG  GU  A
-      GCAG--      GUA-  C

```

### s-4

```

  A  A  --      GAA      G  UG
AUUCCA  UU  UC  CCAUU  UUUCA  UUU  A
UAAGGU  AA  AG  GGUAG  AAAGU  AAG  G
  A  G  AC      GCC      -  CC

```

```

>dan-mir-312-p5_2ss7CG17TG
GCGTCTGTAGTGCAACG

```

## Identified by Sequence similarity

### Loop-structure:

#### S-1

```

U      CG  A  UUG      C  --      CAA  -  -  U
  UUUG  UG  CA  GUGU  UGU  AGUG  UU  UGUCG  CAAAA  \
  AAAC  AC  GU  UACA  ACA  UUAC  AA  ACGGU  GUUUU  G
U      AU  -  UCA  U  AC  ---  C  U  C

```

#### S-2

```

AAU      A  CA--      C  AUUA  UAAGA
  UGUCUGU  GUG  AAACA  GU  UUUG  A
  ACAGAU  UAU  UUUGU  UA  AAAC  A
CU-      C  UUUG  U  AUUA  CAAAA

```

#### s-3

```

U      UC      UG-----      A  ----      -  A  A  -      G  UUUCUU
  GAG  UGUAG      CAAU  CAC  GGGC  UGCC  GG  CG  AUUUUUGAA  GA  A
  UUC  AUAUC      GUUA  GUG  UCCG  AUGG  CC  GU  UAAAGACUU  CU  A
U      CA  UGCAGUUA  A  ACAU  C  -  A  G      G  UGUGUU

```

#### s-4

```

G      C  A--      AAU  UU
  GAUUUCGGU  UGU  GUGC  CG  \
  CUAAGUCA  AUA  CACG  GU  C
-      A  GGC  AAU  GA

```

```

>PC-5p-27312_51
GAGAGTAGCATGCCTGGCGGTA

```

## Identified by Deep-sequencing

## Loop-structure:

### S-1

```
UAGUCACUUACAGA CA G---- UAAC A CC
      GAGUAG UGCCU GCGG UGG GCAG A
      CUCAUC ACGGA CGUC ACC CGUC G
AA----- -- GGUUA UAAC A AC
```

### S-2

```
UUACAGA -- AUGCCU UAAC C CC
      GAGU UGC GCGG UGGAG AG A
      CUCA ACG CCGC ACCUC UC G
CUUCUAA UU AAGUUC UAAC A AU
```

### S-3

```
UUUGCAA CA ---- UAACC CA
      GAGUGG UGCCU GCGG GGGGCAG A
      CUCAUC ACGGA CCGC CCUCGUC G
AA----- -- GGUU UGACA AC
```

### S-4

```
AAA C-- AUG U- - AAC U CA
      GAGU GC CC GCGG C GGG GCAG A
      CUCA CG GG CCGC G CCC CGUC G
AA- ACA AA- UC U ACA - AU
```

```
>tca-mir-6017-p5_1ss2TA
TACCACCCTGTCGTG
```

## Identified by Sequence similarity

### Loop-structure:

#### S-1

```
U C U- CAUAUU CG AG
GC AU GGU UGAA UGGUCAA U
CG UG CCA AUUU ACUAGGUU U
A C UC CC---- AU CU
```

#### S-2

```
CC U UAAAUGA - G
GUGUGCA AUUGGCGG GU UUGG AU A
CGUACGU UAGCUGUC CA GAUC UG A
U- C CCA---- G U
```

#### S-3

```
UC U U - AG CA CUG UCC
G CA CA GAAC GC CC UCG U
C GU GU CUUG CG GG AGC U
UA - C A CU A- CCA UCC
```



## S-4

```
A--      AAA      --      UC- C  AU-      A
  AGAAAC  AAGUA  CCUU   AC GCA  UGGAA C
  UUUUUG  UUUAU  GGAA   UG UGU  ACCUU C
ACA      GAC      UA      UUU   C   CCC   A
```

```
>tca-mir-3856-p3_1ss15TC
TTTCGTTGCGGAAACT
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
GU  GA  AAAG  GA      U      GUU-----  GUC
  CAU  CGA      AUG  UUUUGUA  GCGAG      AAAACCU  \
  GUA  GCU      UAC  AAGGCGU  UGCUU      UUUUGGA  A
UC   A-  ----  A-      -      AACUAACUUAU  AAA
```

### S-2

```
AA      UUUA  CU      --      UA      UU  U
  UCAAA      UGA  GCA  UUCGUA  ACGAA  UA  A
  AGUUU      GCU  CGU  AAGGCGU  UGCUU  AU  U
AC      CGUG  U-      AA      --      UU  U
```

### S-3

```
GAAU      U  ---  A  -  UGAAU
  UUCGU  GC  GGAA  AC  CAUU  C
  AAGCA  CG  CUUU  UG  GUAG  U
AAUC      -  AAA  A  C  UGUUC
```

### S-4

```
UUUG      C-      U      UG      UUCAUUUGU
  UUCGC  CGAAA  AAAU  AAAAAA  U
  AAGCG  GCUUU  UUUG  UUUUUUU  U
UUAA      UU      -      GU      UUUUUUUUU
```

```
>mse-mir-193-p5_1ss2TC
GCCTTGCGGTCTGG
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
GA      A      G  UG  A  AU
  AUUG  UUGGC  GUC  GAU  UC  C
  UAAC  GACCG  CGG  UUA  AG  A
AG      -      A      --  -  AA
```

## S-2

```
AA----- CCG C A
          GCA CGCU AGC C
          CGU GCGG UCG U
ACUAGCA CUG U U
```

## S-3

```
U CAA CG- ----- U
AUUCA UUGG GUCUGG GAUUUAU A
UAAGU AACC CGGGCC CUAGGUA U
C UAA AAA ACGCACGCAAA U
```

## S-4

```
UU UAA UUA AAA
GGCGGUC CA GUACGU A
CCGUCAG GU UAUGCA G
AU UCC CUC AUA
```

```
>isc-mir-275-p5_1ss10TG
TCAGGTGCTGGTGAC
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
ACAAGCA U- U GGU U UC C C
UCGGU CAGG GCU GC GC CAGC GGAGC G
AGUCG GUCC CGG CG CG GUCG CCUCG C
A----- UC C AGU C UC A U
```

### S-2

```
UU UG -- A- G -- GG- UU UAAU
G UUCCA UCA AU UGAAU GUGUU AC AAAU \
U AAGGUG GGU UG ACUUG UACAG UG UUUG A
UC GU GU CG G GU UAA UU UGUU
```

### S-3

```
U CACG-- GGUG G UU
CA UUUCA CUGGUG UG \
GU AAAGU GGCUAU AC G
U CCAGAA AAAA - UU
```

### S-4

```
ACCACCA U G- A U C
GGUGCUGG GAUC UCGC GU GGU A
CUACGACC UUAG GGCG CA CCA U
-----AG U AA - - C
```

## Group 5 --- miRNAs with five putative coding genes

>ame-mir-3766-p5\_1ss9CT  
TTTTTCATTGAAATC

**Identified by Sequence similarity**  
**Loop-structure:**

>ame-mir-3760-p3\_1ss11CG  
TTTTTCATTGAAATC

**Identified by Deep-sequencing**  
**Loop-structure:**

S-1

AU	UUUC	AAUC	G	G-	UUA	A---	AUUU	G
AUUGUUG	UUUUCUU	AUUGA	AGUCU	AGU	UAA	AUCCAGUGA	UUUCA	GAU G
UAACAAU	AAAAGAG	UAAUU	UCAGG	UCA	AUU	UAGGUCACU	AGAGU	CUA A
C-	UU--	CCU-	-	AA	UUG	AGUA	GAAU	U

S-2

AUA	U	CGC	UCAAU	CG--	UA
UUUG	UUUUAG	UGAA	GGA	UCA	A
AAAC	AAAGUU	ACUU	CCU	GGU	A
GUC	U	---	UUUU-	AAGA	CA

s-3

```

AA      UU  UCU--  CACU      GGAU--  U
  UGGUUA  UU      UUCGU  UGGUUGA  UGAAAAAGAU \
  AUUAAU  GA      AAGCA  AUUAACU  ACUUUUUUUA A
--      UU  UAUUU  AAAU      AAAGUU  G

```

s-4

```

UGUAAA  G      GAUAUC  UGU  U
  UUUUUU  UUGAU  CAGUG  AAUA A
  AAAAAA  AGCUA  GUUAC  UUGU U
AAA---  G      AA----  UUU  A

```

s-5

```

      UU  A      UAU-  AUU  UUCU  -  GCAUCUAU
AAUUUUUCUGUU  AGA  UUUCGAU  GAUG  UCAUAU  AAU  UUAGC  \
UUGAGAGGGUAA  UCU  AAAGUUA  UUAU  AGUAUA  UUA  AAUUG  U
      CC  -      CUUU  AU-  UUAU  U  AACAAUCU

```

>ame-mir-3737-p5\_1ss10GA

TTTGTATATATATATT

### Identified by Deep-sequencing Loop-structure:

s-1

```

C-----  U  U  UUUGAU  -  GG  AA  G  UUU---  U  U  UGC
  UUUUGUAUA  AUA  AU  GCGA  UG  G  AA  GCU  GGGAA  UUA  UU  \
  AGGACAUGU  UAU  UA  UGCU  AC  U  UU  UGA  UUCUU  AGU  AG  U
CUUUU      C  C  UUUGUU  U  UU  AC  G  CUUACU  C  U  UUG

```

s-2

```

      AGAU  A      ---  UAU-  A
GUGAUA  UUU  UUUGU  AUAUAUA  UUUUAUUU  \
CACUGU  AGA  AGACA  UAUGUAU  GGUAUAG  U
      GU--  C  CUU  UUUC  U

```

s-3

```

AAGA-  UU---  U  AUU  UCAU
  AGGUAUGA  UGU  UG  GUUA  \
  UCCGUAUU  AUA  AU  UAAU  C
CAAAA      UUAU  U  GUU  UUAU

```

s-4

```

      G  -  CUUU  UA
UAUAUAAUA  AUAU  UACA  AAAAUU  \
AUAUGUUUAU  UUAU  AUGU  UUUUAA  U
      A  U  U---  UU

```

s-5

```

A  CA  UU  C  UAU
  ACGA  ACGA  GAAUA  AUUAUAUUGUAUA  A
  UGCU  UGUU  UUAU  UUAUAUAUAUGU  U
-  --  UU  -  UUA

```

## >tur-mir-1-p5\_1ss3TA

TTATGATATTGAATT

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
AA  A      G      UU      ---      UGAUA      UUC      CAUUUUUAA
AAU UCUCAUU UAUUA  UUAGU  ACAUUUA  UUGAAU  AUUUUUUU  A
UUA AGAGUGA GUAGU  AGUCA  UGUAGGU  AACUUA  UAAAUAAA  U
G-  A      -      C-      UCU      UAUG-      C--      CUACUUCGU
```

#### S-2

```
UCGAAUUA      A-  U  UAU  UCA-      C  CAC-      U--      CA
GAACUAA      UACAUA  AAU AUGA  UGAAU  AAUGAA  GUU  GGUG  CCGG  \
CUUGAUU      AUGUAU  UUA UACU  GCUUA  UUACUU  CAA  UUAU  GGCU  G
U-----      AC  U  UAU  CUAC  A  CAAC  UGC  AU
```

#### S-3

```
UA-      UGAAUUA--      A  AC
UUAUGAUU      AAAUGAAU  CG  \
AAUACUAUG      UUUGCUUA  GC  G
CUA      CAUAAAGCG      -  UA
```

#### S-4

```
A  U  GG  UGGA  A
AAUA  UUUU  AAUUU  AUCAU  A
UUAU  AAAA  UUAAG  UAGUA  U
-  U  AG  UUA-  U
```

#### S-5

```
C  G  AU  AACU  AAGC  GA---  -  C  AAA
AG  AACA  CCAAA  UAA  AUGAAU  AUCAUA  UC  AC  A
UC  UUGU  GGUUU  AUU  UACUUA  UAGUAU  AG  UG  C
A  G  C-  ACU-  ----  AGUUA  U  A  CAA
```

## >dwi-mir-6-2-p3\_1ss5TA

TATAAAATTTAAAAA

### Identified by deep-sequencing Stem-loop structure:

#### S-1

```
AGUAACAGCCAC      G  A--      A  UA  ACA
      GUGU  UUAU  AAAUUUAA  AAGA  CG  A
      CAUA  GAUA  UUUAAAAU  UUCU  GU  A
UAA-----      A  ACC      G  CC  CUC
```

**S-2**

```

UU      U      U      UU-      UUU
  UUUUC UUUU  UUUUUUU  UUUUGU  G
  AAGAG AAAG AAAAAAA  AAAAUA  C
--      U      U      UUU      UAG

```

**s-3**

```

      U      AUAA      AAAA      - AAU      GG UC
UGUCUCA GAAUU  AAUUU  AUUU CC  UUAA UU \
ACGGAGU UUUGA  UUAAA  UGAA GG  AAUU GG C
      U      GC--      AAG-      C      ---      UU  UG

```

**s-4**

```

AAUA      ---      GCG-      UU G      UU
      GUUUU  AUU      AUGAC  UU GCACU  C
      CAAAA  UAA      UACUG  AG CGUGG  A
----      AUU  AAUA      U- G      UA

```

**s-5**

```

UG      UAAA      AA-      AAA      C
  UCAAUA  AUUU  AAUU  ACGUUUU \
  AGUUGU  UAAA  UUUG  UGCAAAA G
--      UAAA  AAG  ---      U

```

>tca-miR-3808-p5\_1ss13GA  
TGACATATTTTGAAT

### Identified by deep-sequencing Stem-loop structure:

**S-1**

```

AAAU      U  ACA      A      U
  AUUUUU  UG  UUUUUUGA  UUGAU \
  UGUAAA  AC  GUAAAAUU  GACUG  G
----      U  ---      A      C

```

**S-2**

```

AAUA      G  AUU  A  UU
  CAUU  ACAU  UUG  AUA \
  GUAG  UGUA  GAC  UAU  C
----      -  GU-  C  UU

```

**S-3**

```

GAAAAU      A  AAUCCAA  A
  UUAUUUAAAA  AUGU  AUUAA  U
  GUAAGUUUU  UACA      UAAUU  A
-----      A  GUCUUC-  A

```

**S-4**

```

C  C  C  A  A-  -  AU  U  -  -----  GUU--  GCAU
GC UA AUGU AUAU  UUAC GG  CGUUUAA  AUGUG  CGG  GAGCA  AAUAU  \
CG AU UACA UGUUA  AGUG UC  GUAAGUU  UAUAC  GUU  CUCGU  UUAUA  U
C  U  A  C  CG  A  CG  U  A  AAAUA  GGUUU  AUAC

```

## s-5

```
AUUUAUCCA      AA      UU      CA      GAAGA
      AUGCAA  UUAGA  UAUG  GAUU  \
      UACGUU  AGUUU  AUAC  UUAG  U
-----      A-      U-      AG      AGAAU
```

```
>tca-mir-29-p5_1ss13GA
ATTGCGCTTGGACA
```

## Identified by Sequence similarity Loop-structure:

### S-1

```
UUUAAACA      C  UG  AUUCAUA      CAUCCCG
      UUUGG  UU  GAC  UGGCCU  \
      AAACC  AG  UUG  GCUGGA  U
UUAAAGAAA      A  GU  GUAAAAA      AAUUACA
```

### S-2

```
-      AAUU      G--  A
UCGG      UGGCUUU  GAC  G
AGCC      ACUGAAA  UUG  U
A      C---      AAA  C
```

### S-3

```
UCCA      A  U  -  -  UUUU
      UCCAAAGC  AAAA  GU  UGGU  UUC  G
      AGGUUUCG  UUUU  CG  ACUA  GAG  U
AAAC      G  -  C  C  CUGG
```

### S-4

```
C  U  -----  UU  -  G  A  U
UUC  GAU      UUGGC  UGG  AC  AC  GAACA  C
AAG  CUG      GAUUG  ACU  UG  UG  UUUGU  G
U  -  AUCUCGC      UU  A  -  A  U
```

### S-5

```
UAA      UG  A  UU  A
      UGUC  GA  GU  AAG  A
      ACAG  UU  CG  UUU  U
ACA      GU  -  GU  C
```

## Group 6 --- miRNAs with 6 putative coding genes

>ame-mir-3760-p5\_1ss1AG

GTTTGTTTAATATTT

**Identified by Deep-sequencing**  
**Loop-structure:**

**S-1**

```
U  CUUUU  A-----  U-  -  UG  --  U  UG  U
GU  UGCG  GAGUU  GU  UUAUUUUU  GA  AAUU  U  GU  \
CG  ACGC  UUCGA  CG  AGUUUUAAA  UU  UUAA  A  UA  U
-  AU---  GUACC  UU  U  GU  CC  C  GU  U
```

**s-2**

```
G-  AUUCCAG  UUU  A  UG  --  AA
AUUUU  UUUG  AAU  UU  ACAG  GAAC  \
UAAAA  AAAU  UUG  AA  UGUC  CUUG  A
AG  GAAAA--  CC-  A  GU  AU  UA
```

**s-3**

```
A  U  UAAUAA  G-  CCUAAAAA  CU  C  UCAC
```



```

AAUAA UGUUAG      AAUCAAU UCA      AUCAAUGUAUUCAGAU GGAGCG AA      A
UUAUU AUAUUU      UUAGUUA AGU      UAGUUGCGUAAGUUUA UUUCGC UU      A
-      U      UGUUUG      AA      A-----      U-      U      UUAU

```

### S-4

```

A      UA      UC      C      UU-      GCACA      ACAAUC
UGA      GAAUU      AAUAUUA AU      CAAUA      CGGU      G
ACU      UUUAA      UUAUAAU UG      GUUGU      GCUA      A
-      --      CU      U      UUU      ACUCA      CACCCA

```

### s-5

```

U      C      UAUCAG      AAUA      -      UG      UA
GG      GUGUAU      GUUUGUUU      UUUUUU AUU      U      A
CC      UACAUAA      CAAACAAA      AGAAAA UAA      A      A
-      -      CAGA--      AA--      C      GU      UC

```

### s-6

```

      UG      GAUUC      UC      UU      CACUUA
ACAC      GUUAU      AUAU      AUAUUA      CGGACGUU      \
UGUG      CAGUA      UUAU      UAUAU      GUUUGUAA      G
      --      AACU--      UU      UU      AAAUUU

```

>bmo-mir-3208-p5\_1ss12TG  
AGAGAGAGAGAGAGAGAGAGG

## Identified by Deep-sequencing Loop-structure:

### S-1

```

AGAAAGAGA      A-      G      -      GAGA      GCAC      UA
      GAGAGAGAG      GAGA      AGAGA      GGAG      GAGAGAAA      CG      \
      UUUUUUCUU      UUUU      UUUUU      CCUU      UUUUCUUU      GC      U
-----      AG      G      A      AUAA      AUUU      UU

```

### S-2

```

UCCAAGU      -      ---      AA      -      GCA      GUAA
      GUUC      UUUG      GCAUU      UUUUC      CUUUU      UUUUAU      \
      UAAG      AAAC      CGUAG      GAGAG      GAGAG      AGAAUG      G
UAAG---      U      AAA      GA      A      AG-      AUAU

```

### S-3

```

      -      ACCA      -      A      AA
UUUUUUUC      CCCU      UCUC      CUUU      UUC      \
AAAAAGAG      GGA      AGAG      GAGA      GAG      A
      A      GAG-      A      -      AG

```

### s-4

```

      AUA      G      AUAAAAGUUG-      ACG      AUAAGU-      C-      C
AG      UUCU      UC      CU      UCUGUC      CUG      GGUUU      \
UC      AGGA      AG      GA      AGACAG      GAC      UCAAA      C
      GG-      G      AGAGAGAGAGA      GAA      AUACUAU      AA      G

```

### s-5

```

GAGA----- GAG AGAG- GAGA G GAGAA
      GA AG AGA GA AGAG \
      CU UC UUU UU UUUC C
AAAAACAAAAA AAA AGAUA AAAA G AAGUG

```

**s-6**

```

UUCCA- CCAA- CAAA- GA AA- G
      ACAUC UC UCU CU AU A
      UGUGG AG AGA GA UA A
GACACG AGAGAG AGAGAG G- GAG U

```

**>dps-mir-2564-p5\_1ss4GA  
CCAAAAACAAATTTT**

**Identified by deep-sequencing  
Stem-loop structure:**

**S-1**

```

AU AAAACA U AUU
  UCCA AAUUU AGUA U
  AGGU UAAAA UUAU U
-- GACUUA C CUA

```

**S-2**

```

  UUCC C UU AA UA
AUCA AAAAA AAA UUGU UUU U
UAGU UUUUU UUU AACA AAG A
  UUCU A UU -- UU

```

**s-3**

```

- C CAAAA AAU U-- AU-- AU- A
UAUU AAC AAUCAUC ACA UUUG AAUUUU CU UC A
AUAG UUG UUGGUAAG UGU AGAC UUAAG GA AG A
  U A AAA-- GU- UUC ACCU CUU U

```

**s-4**

```

A AAAAC U UAUCUU- A----- U----- CAAU A CA
  UCCA AAUU UGUAUUU AAUGA AGAAUUUUUUU CUCUU AC UUUA \
  AAGGU UUUAG GUAUAAA UUACU UUUAAUAUAGA GAGAG UG AGAU G
G AAUAA U CAAAAACU AACCAA UUUUACCUGAAU CU-- A AC

```

**s-5**

```

UGAUUC AAC UUUU A UU
      CAAA AAA GUAUUUU UC U
      GUUU UUU UAUUAAGA AG A
AACUA CUC UAU- A UA

```

**s-6**

```

A UUCCA AUU AAUU
  AUCA AAAACAA UUCU A
  UAGU UUUUGUU AAGA A
A UUCUC AUU AAGU

```

```
>dsi-mir-137-p3_1ss8TG
GATTTGTGCAGCAATC
```

### Identified by Deep-sequencing

#### Loop-structure:

#### S-1

```
AAC---      GU      A  -  C  -      CAU
      AGAUUU  GCAGCA UC  UU  UAAAC  UUUCAA  \
      UCUAAG  UGUCGU AG  AA  GUUUG  AAAGUU  U
AAACAC      --      -  U  A      U      UGG
```

### Identified by Sequence similarity

#### Loop-structure:

#### S-2

```
A  -  UG  A  UA-  GGCAAA
UAUU UUG  CAAA UUUA  UGU  A
AUA  GAC  GUUU AAAU  AUA  U
C  C  GU  A  UUG  ACUAUU
```

#### S-3

```
UC  UU  UU----  C  A  U
GUUGC  AA  UGUG  AGCA  UU  U
CAAUGU  UU  GCGC  UUGU  AA  G
UU  GG  UUGGUU  -  A  U
```

#### S-4

```
UUUUU  U  GCA  AAU  UA-  AAA
GCG  GAUUUUGU  GC  UUUCG  UCGAU  U
CGU  CUUAAACA  CG  AAAGC  GGUUA  U
CCCCC  U  A--  GU-  UAC  AAU
```

#### S-5

```
A-  AUCGAG-  UGU-  A-  G
GUUG  UAAUU  GC  GCAAU  A
CAAU  GUUAA  UG  CGUUGA  U
CG  GUUAAAA  UAUU  AG  U
```

#### S-6

```
C  AUU  GA
UUAUUGUUGUG  AUUAU  A
AGUAACGACGU  UAAUA  A
A  GUU  GC
```

```
>bmo-mir-2821-p5_1ss1AG
GGATATTCGGCGCT
```

### Identified by Sequence similarity

## Loop-structure:

### S-1

```
UAAA----- GAAAA AAUA ----- AC
          CGG AUU UCCG GCGC \
          GCC UGA AAGC UGUG A
UUACACCAGAAAA AG--- GAGAA GUUUA CC
```

### S-2

```
UUCUUUAUC U A U U - U U
          AGU CCG GGAUGUUU GU GC AG CGUUGC G
          UUA GGC CUUAUAGG CA UG UC GUGACG U
UUCCUUUU- C - - U C - U
```

### S-3

```
AUUC - AUAU- C--- CAGAAUCA A
      GU CCAU UCCGG GCAAUA AUUUU C
      CA GGUG GGGCC CGUUUA UAAAA A
U--- U CUUGU UACA AAUACG---- C
```

### S-4

```
A U AAA - GACAGC
UCUG GAU CGGAA AUCCGU U
AGAC CUA GCCUU UAGGUA A
- - CG- A ACCUUC
```

### S-5

```
CAUA UU AU- UUU UG AAC
      UCU GUGUC AUAAA UG AGGCG U
      AGA CGCGG UAUUU AC UUCGU U
AUUU U- CCU --- GU AGU
```

### S-6

```
CAUA UU AU- UUU UG AAC
      UCU GUGUC AUAAA UG AGGCG U
      AGA CGCGG UAUUU AC UUCGU U
AUUU U- CCU --- GU AGU
```

## Group 7 --- miRNAs with more than six putative coding genes

>tca-miR-279c-p5\_1ss14TA  
AATTCATATTTTAT

Identified by Deep-sequencing  
Loop-structure:

S-1

```
UUUUUCAUU  A--  U  AUA  UUU  --  C  CG
      GUGA  UUCA AUUUUU  GUCG  GU  UGGU GGC  \
      CGCU  AAGU UAAGAA  CAGU  CG  ACCA CCG  C
UCUACAUAU  GAA  -  ---  UUU  UC  -  CU
```

s-2

```
AAAUAAAU  AA--  AAUUA  GC-  UCGUUUUU  A  CA  CUA
      CAGAAUAAAAG  AAUUA  UGUCA  AACAA  UGUUUA AUU  AU  \
      GUUUUAUUUUU  UUAAGU  ACAGU  UUGUU  ACGAGU UAA  UA  G
-----  AUAC  GACG-  ACU  UUUUUUUU-  A  --  AAC
```

s-3

```
U  CA---  UG U-  CACG  C
```

```

UUGGAAU   AU  U  GAAUGUGAGU   UCCG A
AAUUUUG   UA  A  UUUUAUCUUA   GGGU C
-         UUGUG  GU UU           AA--  A

```

**S-4**

```

UU  C    --  AU-----  UUU  U
  UAC UUGUU  GUCA      UCAUA  UUAU G
  AUG AAUAA  UAGU      AGUAU  GAUA C
U-  A      UU   CGUUUC   UUU   U

```

**s-5**

```

AUGACA   U      UAU           UGCG
  GCAA GAAUUCA  UUUUAUUU  \
  CGUU UUUAAAGU  AAGGUAGG  A
-----  -      UGU           UUUC

```

**s-6**

```

U  UU  ---  UCG--  -  UU  -----  UAU  U
GAU ACC  UCGUUG  AUAUCAAUAUA  UUUUUU  GC  AGUU U
CUA UGG  AGUAAU  UAUUAGUUAAGU AU  GAAUAA  CG  UCAG A
U  U-  UUA      UUAAA      C  UU      UUUAGU  UU-  U

```

**s-7**

```

U  -----  UAAU  U  UAU  C  U  A
GAUGUAUA      CU  UCA AUUUU  UUUAGA AA AAU A
CUACGUAU      GA  AGU UAAGA  AAGUCU UU UUA U
U  ACAAUCA  UGU-  C  CC-  U  C  A

```

**s-8**

```

CA  -      AU  C      CG  C  CA
  AUUC AUUUUUU  UUG GUUUUAU  UUG GG  \
  UAAG UAUAAGAG  AAC UAAAGUG  AAC CU  C
--  C      --  U      --  A  UA

```

**>ame-mir-3761-p5\_1ss2GT**

TTTCTTTTTCATTATT

**Identified by Deep-sequencing  
Loop-structure:**

**s-1**

```

AUUCAGCUC  -  U           UUCU
  UUUU CU  UUUCAUUUUUUC  \
  AAAA GA  AAAGUAUAAGAG  U
-----  U  U           CGAC

```

**S-2**

```

U--  AUUAAAUG  C      UU  UUACC-  U  AA---  UU-  CA  G
AAUUUCA  UGG      AAAG UUGAAUU  UA      AAGAAAUU CUU  AG  GU  GUGGU U

```

```
UUAAAGU ACC UUUC AGCUUAG AU UUCUUUAA GAG UC CA CGCCG U
UCU GUGUA--- C UU UACUUU - CUCUG CCU -- U
```

### S-5

```
UA A A UU UG UUC UGU UCU UC
AUUU UUU UUUUUG UG G GAUGCGA AUGG GGA U
UAAA AAA AAAAGC AC U UUACGCU UACU UCU U
-- A - UU GU UUA UAU UUU UU
```

### s-4

```
UGUAAA UU- CUUGUCU UCC-- C- AAA
AC GGGU AUA AUG GAAAAU CUUU A
UG CUCG UAUUAC CUUUUG GAAG G
UGUAGG UAU UCU---- UUUUU CA ACU
```

### s-5

```
UA A A UU UG UUC UGU UCU UC
AUUU UUU UUUUUG UG G GAUGCGA AUGG GGA U
UAAA AAA AAAAGC AC U UUACGCU UACU UCU U
-- A - UU GU UUA UAU UUU UU
```

### s-6

```
U-- G UU-- - A UUAU U CAA- U UUAACGU
GCU UUU CUU UUCUUUUUC UUA UUCGUG CUUGAAU AG CA A
CGG AGG GAA AAGAAGAAG AAU GAGCAC GAAUUUA UC GU A
GCA A UUCU U A UUAU- U ACUA C CCACUUUU
```

### s-7

```
UUC UU UUAU UAUCA- UUCCUC - C U
UUCU AG GAAAAG AAUG AAAAAG UGAGU UAAAG \
AAGA UC CUUUUU UUAC UUUUUC ACUUA GUUUU U
CU- CU UU-- UUUUUA UUUUUC G C A
```

### s-8

```
ACU A GG AUC-- UC- C UUUUAUUA
AUGC CGAA CG GA AAAU GAA AGGG U
UACG GCUU GC UU UUA CUU UUCU U
--- - UU GUUUU UUA U UUUUUAGC
```

### s-9

```
AUCUA-- UUU U
UUUUC UUCAUUU \
AAAAG GAGUGGUG A
CCUUUUC U-- U
```

## >bmo-mir-7-p5\_1ss2TG

TGTTGTTGTTTTGT

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
CA-- U UAU UUU-- UU AUU -- U AUA
```

UGUU UUC GGGU AA GUUU UUUGUUGUUGUUUU UGUU CA \  
AUAA AAG UCCA UU CGAG AAAUAGCAGCAAAG ACAA GU U  
ACAA U U-- UUUUU UU AUU UA - AAA

### S-2

A UC C GCC U UC UCUCGUU C UAUU  
AUU GAA GAU GUUGCAU CAAAAU CAAUAUUU UGU GC U  
UAA UUU CUA UAAUGUG GUUUUUG GUUGUAGA ACG UG U  
G CU A GUU U UU UGUU--- U UCAC

### s-3

G GUU U UU--- U--- AU GA A UG  
UUGUU GUUG UUUUG GC AUACA CA ACA ACACAU \  
AACAA UAAC AAAGC CG UGUGU GU UGU UGUGUG U  
A GC- U UUGCU UGUU GU G- G UG

### s-4

ACUU GAAACA C UUGUU-- UU GU  
GGCUU UGU ACACUGAAUGC GGUG GUU UGUU C  
UCGAG ACA UGUGGCUUAUG CUAC UAG ACAG A  
GUCU A----- U UGUGUGU UU UA

### s-5

----- U-- U UU-- UA  
UUUGUUG UGUUU UG UAUA \  
AAAUAAC GAAA AC AUAUU C  
GCAUU UAU U UAAU UA

### s-6

GA---- - GU GUUUUU - - UCG UCGUUAUU  
GCUU UAU UGUU GUUGCUGUUG UUGUUGU GG UC U  
CGGG AUAA ACAA UAACGGUAGC AAUAUA CC AG C  
UAUCGG U AU ACUGUU U A UA- UUAUCUU

### s-7

CUACU UUGU U U----- UC  
GUUG UGUUGUUU UGU GUUGU A  
CAAC GCAGCAAA ACA UAAUA A  
----- UUAU C CUGUCU CC

### s-8

AG A ---- UG -- UGU  
UCA UUUUUUUU UGU U UUGUUGUUU UUGUAC \  
AGU AGAAGAAA ACG A AACGAUAAA AACGGUG U  
GA A GUAA GU CA UUG

### s-9

A - UCAUAA UGA AU  
UUAUG AUA AAU AGCG \  
AAUAC UGU UUG UCGC U  
- C UUUUG- UUG UU

### s-10

AA UAUUG UU- UU- UUUU GU  
UCAAA UUG GUUG GU GUUG \  
AGUUU AAC UAAC UA UAAC U  
-- UAA-- UUU UUU UGUU AU

### s-11

AAGU-- UG UUUU GG UU-- GA UAU  
UAUUUG GAA AU U UAUUAUUUU UCAUUGAU CG \  
GUAAAA UUU UG G GUAGUAGUAG AGUAGCUA GC U



GAUGUU GU UU-- UU UAGU AA UCG

s-12

CAA C A UU AUU UG - ---- GUA C- G GA AA  
AUGC CA AA GGA GAAA AUAAC ACU UC AAGUUA UAC UG AUUC A  
UACG GU UU UCU UUUU UGUUG UGG AG UUCAGU AUG AC UAAG A  
C-- C C U- GU- GU U UUUU GUC UA - G- CU

s-13

AUCUU UU UUUUU UU UGCU---- CAUC U  
UUUGAUUAUUGUUG GUUGUU UGCUG GCCGU GUUGCG AGUUA U  
AAGCUGGUAGCAGU UAGCAA ACGGU UGGUA UAACGU UUAGU G  
GCUCU UG ----- U- UUUUAACU UUCC U

s-14

UUC UC UC C UUUU UCC UG U  
GA GGCAA GGC ACG CAAU UAGAAA AA G  
CU CUGUU UUG UGU GUUG GUUUUU UU U  
--- CU U- U UGUU UU- GU U

s-15

UUC UC UC C UUUU UCC UG U  
GA GGCAA GGC ACG CAAU UAGAAA AA G  
CU CUGUU UUG UGU GUUG GUUUUU UU U  
--- CU U- U UGUU UU- GU U

s-16

U UUC UG U CGU C A  
GU G GAAACA CAAC GUGUG AUUUA \  
CG U UUUUGU GUUG UAUAC UAAAU A  
- CUU GU U UUU U G

s-17

C C U - UG UU AU  
GGA UA AAGC ACAA G GUUU AGU U  
CCU GU UUUG UGUU U UAAA UUA U  
U U U G GU C- AC

s-18

G AUUAA A - AAAAAA C U  
CAUUU AUGUA ACAAAA CAACAA CAG UAC A  
GUAAA UAUAU UGUUUU GUUGUU GUU AUG A  
- GGA-- G U GUA---- A U

s-19

UUU UU- - --- UACC AAA UAUAU UG AA  
GACAA CAA ACAUU GC GCUUA UG GAAAUUG UAACG \  
UUGUU GUU UUGUAG CG UGAGU AC CUUUAAC GUUGC A  
--- UUU G UUG CAAC A-- UUAAC- UA UU

s-20

UUGCGU UUGU U U U U U UGUUUUU- UGU  
GUGUUG UGU GUU CGGUAGU GU GU GU GU \  
CACGAU GUA UAA GUCAUUA UA UA CA CG U  
G----- UU-- U U U U C UUUUCUGU UUG

s-21

-- UU UUUUUUUUU  
UGUUG UUG GUUUUUG C  
AUAGC GAU UAAAAAC U  
CU UC UAUAUGCA

s-22

```

AUCG      UGUU      U      UUUUU  UUU
      UCAAUGU  GUUUUUUGU  AUAU      UC  C
      AGUUACA  CAAAAACG  UGUG      GG  U
UAA-      ----      -      CUCCC  CUA

```

s-23

```

AGA-      A  A  A      UG  -  UG  G      UG  A
      UUCAAAUUG  UAA  UA  UCGA  AA  A  G  AAC  GAAC  \
      AGGUUUAAAC  GUU  AU  AGUU  UU  U  U  UUGU  UUUG  U
AAAA      A  G  A      GU  U  GU  G      UU  U

```

s-24

```

A      UUGAA      GUU  UUUG
AAUAAAA      AACAA  GCA  A
UUGUUUU      UUGUU  UGU  U
-      UGUUG      GU-  UAUG

```

s-25

```

GUUGUU  UU  UUGU  C  UG  GU  G  A-      C  AA
      GUUG  GUUU  UGC  UGU  UCA  UUG  GUUU  GGGUUGAU  AAUGG  \
      CAAU  CAAA  GCG  GCG  AGU  AAC  CAAA  UCUAGCUA  UUGUC  A
GUGUCU  CU  UU--  U  --  --  A  AG      C  GU

```

s-26

```

GUUU      UU  C  UCU  U
      GCAAA  UAAC  GAUG  CU  A
      UUGUUU  GUUG  UUGU  GA  U
GUGU      UU  -  UU-  U

```

s-27

```

      G  U  G  G  UUU  -  AAU  U  UUU
UAUUUUU  UUGU  GUU  UUGUU  UUG  UUG  UUC  UUAUC  CUA  A
AUAAGA  AACA  CGA  AACAA  AAC  AGC  AAG  AGUGG  GGU  G
      G  -  G  -  UUU  U  GUU  U  UUU

```

s-28

```

U  C  A      UCU  AU
ACA  CAA  AAAGAU  UGAU  \
UGU  GUU  UUUUUG  GUUG  A
U  U  G      UU-  UU

```

s-29

```

UUAUUA      GGAG  UUGU  U  U  U      AA
      UUAUUUU  UUG  UGUUU  UG  UG  UAUC  U
      AAUAGUAA  AAC  ACAA  AC  AC  AUAGG  G
A-----  GA--  UU--  C  U  U  AC

```

s-30

```

UUUAUA      A      UU--  U-      UUA  GAUG  UGGUU  UA
      CGAA  AAAAAUA  UGAU  CGAUUUUU  AUU  UUG  GUUGU  U
      GCUU  UUUUUUG  GUUG  GUUGUAGUAG  UAG  AAU  CGAUA  U
UUGCAA      G      UGUU  UU      UAG  UA--  GUGGU  UG

```

s-31

```

A      GA  U      U-      CU  UCA      CAG  -  A  CU
UUUUC  GUUAU  GUUGUUGU  UUUGUCU  UU  AUUAUU  UUC  AUUG  GA  \

```

AAAAG CAAUG UAGCAGCA AAGCGGG AA UAAUAUAA AAG UGAC CU U  
U AA U CC UU CUA UAA C - UU

### S-32

UUG UUUU UUUUUUUUU UUU  
GAUUG UUGUUG UG UG A  
CUAAC AACAAAC AC AC G  
UA- UUCU UUUUUCU-- UUC

### S-33

G U GUUUU - UU UUUU  
GAAUGU AC GUUGUU UGU UUUUCUU UU \  
UUUGUA UG UAACAG ACA AAAAGAG GG U  
A U AUAU- U UU UUUU

### S-34

G - U- U- - AA U  
UGC CAGCGA AUAAC CAU GAAUGAU UAA G  
ACG GUUGUU UGUUG GUG CUUGCUG GUU U  
- U UU UU G AG U

## >dps-mir-2505-p3

TTGTGTGTGTGTGTGTGT

## Identified by Deep-sequencing Loop-structure:

### S-1

AAA- UU UUGUUU U UG G  
UUGAAUG GUU GUGUGUG GUGUG U U  
AGCUUGC UAG CGCGUAC UACGU G G  
GAAA UU UCCU-- U GU U

### S-2

CA UG UG UG GUAUGU GUUG  
UUUUUG UGUG UG UGU AUGU \  
AAAAAU AUAU AU AUA UACA G  
-- UG GU GU AAGGUU AUUU

### s-3

GUA- U GUG--- G A  
UUGUG GU UGUGUGUGU UGGUUG C  
GAUAC CA ACACGCGCA GCUAAC G  
UAAA - AAUGAA G A

### s-4

UAAA---- UUU- U -- AA - AUG  
CAUU GUGUG GUGUGUGU GUGUGUA UG GAUCG U  
GUAA UACAC UACACACG CACACAU AC CUGGC G  
AAUAUGGC CGUU U GC -- G CUU

### s-5

GUAUU UG -- UG UAC

GCGU GUGUG UGU G UGUGUUG A  
UGCA CAUAU GUA U GUAUAAC U  
AUGUU GU AA GU UAA

### s-6

UGAAU G GA GUG--- UG GUG GU-- CG G AU  
GGAU AAAUU AUCUG UU U UGU GUGUGU UGUAGU UAUGAA \  
UUUA UUUGA UAGGU AA A ACA UAUACA AUAUUA AUUUU G  
UUCAU G G- AUAAAA GU AGA AAAG -- A GA

### s-7

AUAU - A G G AC UCGCA GA CA CA AACAAUA  
CAUAAC CA ACA AUA AUAAA CA CG AAA AAGAACAAA AAG \  
GUGUGU G UGU UGU UGUUU GU GU UUU UUCUUGUUU UUC A  
---- U G G G AU UAAUA AA AA UA AGAAACC

### s-8

A C - UG UG AUU-- U UC UUCU U U  
UCAG GUGGUGUGC UAC UAUGCACACAU AG GA GGA GUUU AG GUG GU G  
AGUU UAUCGCGCG GUG GUGUGUGUGUG UU UU CCU UAGA UC CGU CG U  
G C U UG GU GUUUU C CU UUUC - U

### s-9

UGU U U U UG AU--- UU  
GUGUU GUGUG GUG GUGUG UGAA GGU A  
CAUAA UACAC CGC CAUGC ACUU CCG C  
GUU - - C UA GGUCU UU

### s-10

- UUAUU AUUU - U UUUU  
GGGAA CG UAUGCA CAC CA UC A  
CCCUU GC GUGUGU GUG GU AG A  
A UUGU- GU-- U U UAGU

### s-11

G-- G UG G G U G U GU UG GCC UAUUG  
UAUUUUU UG U UGU UG GU UG GUGU G U UUUGAGCCCU A  
AUAAGAA AC A GCA AC CA GC CACA U A AAACUUGGGA A  
UAA A CU A A C - C GU GU AA- CAGUA

### s-12

ACUGA----- U GUG UG- U G UGA  
GAU UUGU UGUG UGUGUUUG GU UU \  
CUA AGCA AUAC ACGCAAU CG AG C  
CAAUUAAAAUUA C AA- UAA - A UGA

### s-13

A UG U - GUA CAAG GCG  
GA UGUU GUGU GUGUGUGUGU UG UGAU A  
CU ACAA CGCA UAUACAUACA AC GCUG A  
- CA U G AAG AUA- ACU

### s-14

AACAG UU U U U G A UG UGU  
UGU GUG GUG GUG GUG GU UGCAUGUA U UG G  
ACG CAC UAC UAC CAC CG ACGUAUUAU G AU U

A---- UU - - - C - A GU UUG

### s-15

CU-- UCC UC U U  
GCAUUA CACAU CAUG CAUA U  
CGUGUG GUGUG GUGU GUGU A  
UGUG UGU U- - U

### s-16

UAU - UG--- U U U GUG GUG UG G  
UGUGA C UAU AUUG GUG GUGU UGU UGUG U U  
AUACU G AUG UAAC CAC UACA ACA AUAU G C  
--- U UAAAA U - U GCA AAA GU U

### s-17

- U UG-- GU-- UG U GU- UG-- AA AU  
ACGUU GUG UGU G UGUG GU GUG UGUGUAC UGUACAAG U  
UGCAG CGU AUA U ACAU UA UAU AUACAUG ACAUGUUU U  
A U UAUA AAAU GU U AUU UUA AC CA

### s-18

AAA U UG - UU  
AAU UAUAUA UA AUAUG \  
UUG GUGUGU GU UGUGU G  
UA- U GU G UU

### s-19

AAACAAAA----- UUACAGAAU CA  
UACACACACACACACAU GC \  
GUGUGUGUGUGUGUGU UG A  
CAAAGUUGAUAAAA UAAAGGAGU UA

### s-20

AU- GUG U G U CU C - UA  
AUUGU UGUG GU UGUGUGUGG GUCA CA CU CG C  
UAAUA AUAU CA GUACGUACC UAGU GU GA GC A  
CUU AA- U - - UC C A CU

### s-21

UU- --- AAA- UAC- UUU UC U U  
GC UGAU UUAUUUG AUUUGC CAU CAU UACGUA UGUC A  
CG ACUG GAUAAAC UAAGCG GUG GUG GUGUGU ACAG U  
UUU UAU GACG UUUU UGU U- U A

### s-22

U U U A UG  
GC CAC GC CAUG ACACGAA C  
CG GUG UG GUGU UGUGUUU U  
U - U G CC

### s-23

----- UG U U UG UUG U GUG  
UUG UGUG GUG G UG CUAAGUUGAG GC \  
AAC ACGU CAU U AU GGUUUUAGCUU CG C  
CCUAUG CU U U GU UA- U AUC

>bmo-mir-3374-p5\_1ss8TA  
ACAGCCGATGAAGAT

## Identified by Deep-sequencing

### Loop-structure:

#### S-1

```
AA      UGAA      GCAUUCGAAACAAAA      CU C
CAGCCGA      GAUGCU      GAUG GC G
GUCGGCU      CUAUGA      UUAC UG C
--      UAGA      AAC AUG-----      AU C
```

## Identified by Sequence similarity

### Loop-structure:

#### S-2

```
A      ACAGUG-      AAA      G      A
AUUG      CA      GCUGCA      AGAUUCA      G
UAAU      GU      CGACGU      UUUAGGU      C
G      CAUAGAA      AGC      A      A
```

#### S-3

```
GG      GC      U      AUG-      GUAC      A      UUG
ACA      CGA      GAAGA      GUUA      ACUCAA      AACAAUAGU      U
UGU      GCU      UUUCU      CGGU      UGAGUU      UUGUUGUC      U
G-      A-      -      GUUA      ----      G      UCG
```

#### S-4

```
AU      U      AUC--      UGA      CC      UU
AG      GU      AGCCGA      AGAA      AAUGUUU      \
UC      CG      UUGGUU      UUUU      UUACAAG      G
C-      -      GUGAU      UAA      AC      CA
```

#### S-5

```
G-      GA      AA      C-      GAAAUGGACGAUG
AAGCC      UG      GAUUA      UCACUU      G
UUUGG      GC      CUAUA      AGUGGA      A
CA      AA      --      CA      AUAAGCGUAAAGA
```

#### S-6

```
AUUU      A-      -      UUUUU      GUUUC      A      AU
GAGUUCUUUUUUAU      GUUGU      CG      GCU      GUGAUG      UG      \
CUUAAGGGAAGUA      CGACA      GC      CGA      CACUAU      AC      G
UAUU      GC      A      UCU--      AA---      -      UA
```

#### S-7

```
CC      CAAA      C      GC      CCU      G      AGU      AAA
GAUGC      CU      CA      UG      GCUAU      CA      UC      A
CUACG      GA      GU      GC      CGAUA      GU      AG      U
AA      UA--      A      A-      ---      -      ---      CCU
```

## S-8

```
C A   UG      GA-   AAA
CC AACU AGUCUUUG GCUU  \
GG UUGG UUAGAAGU CGAA  G
A  -   --     AGC   GCG
```

```
>ame-mir-3720-p3_1ss7TC
TCCAGACTATGAAAG
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
AAAAAUC   G AUU   ACU   GC   CA   UUCGACAAAAG
      UAAU GA   CCAG   AUGAAA CGC GCGA   U
      GUUA CU   GGUU   UGCUUU GUG CGCU   A
UUGUCA-   G ---   GUU   AC   A-   UUUUAACUUAA
```

### Identified by Sequence similarity Loop-structure:

#### S-2

```
GAAUA   U ACA   AU
      UCGUG UC   CAC  \
      AGUAU AG   GUG  U
AUAA-   C ACC   GC
```

#### S-3

```
CGAU   UAUUUA   GAAA   CAA
      AGC   AUAGUU   AUUG   A
      UCG   UAUCAG   UAAC   U
U---   CAAG--   ACC-   CUC
```

#### S-4

```
CA   C--   UGA   AA   ---   UGCCU
      UUUUC   AGACUA   AC   GUUCG   AGAUU   \
      AAAAG   UUUGAU   UG   CAAGC   UUUAG   G
A-   UUA   ---   AG   CAU   UUUUA
```

#### S-5

```
ACCAG   A   AA   AC
      ACU UGA   CAUA   U
      UGA ACU   GUGU   A
AGAUG   A   AC   AU
```

#### S-6

```
A   -   C--   UG G   A   GA
      UUCAU GUC   GU   U CCG UUU   G
      AAGUA CAG   UA   A GGC AAA   C
C   U   ACC   GU -   A   AU
```

## S-7

```
UUGGC - UU AC
CAU GUCU AUCGGA A
GUA CAGA UAGUCU A
AAUAA U CC GU
```

```
>PC-5p-107087_9
AGCGATATTGAACCTTATTCAC
```

### Identified by Deep-sequencing Loop-structure:

#### S-1

```
UAAA U U A A
AGUGC GUUAGCGAUUUGAACCUUAUUCAC GG AC \
UCGCG UAAUCGUUAUAACUUGGAAUAAGUG CU UG U
---- U - A A
```

#### S-2

```
U U A A
CGGUGUUAGCGAUUUGAACCUUAUUCAC GG AC \
GCCACAAUCGCUAUAUUUGGAAUAAGUG CU UG U
C - A A
```

#### S-3

```
UUAAA U G
AGCGCUGUUAGCGAUUUGAACCUUAUUCACU GAA U
UCGCGACGAUUGCUAUAACUUGGAAUAAGUGG UUU U
UG--- U G
```

#### S-4

```
AA A G
AGCGCUGUUAGCGAUUUGA CCUUAUUCACUAGAA U
UCGCGACGAUUGCUAUAACU GGAAUAAGUGUUUU U
G- C G
```

#### S-5

```
ACCUU GAUACU
GGUGUUAGCGAUUUGAACCUUAUUCAC A
CCACAAUCGCUAUAACUUGGAAUAAGUG U
CG--- ACCUUG
```

#### S-6

```
UAAA UG G
AGCGCUGUUAGCGAUUUGAACCUUAUUCAC GAA U
UCGCGACGAUUGCUAUAACUUGGAAUAAGUG UUU U
UG-- GU G
```

#### S-7



```
UUAAA                               U G
AGCGCUGUUAGCGAUUUGAACCUUAUUCACU GAA U
UCGCGACGAUUGCUAUAACUUGGAAUAAGUGG UUU U
UG---                               U G
```

## S-8

```
U                               U A A
CGGUGUUAGCGAUUUGAACCUUAUUCAC GG AC \
GCCACAAUCGCUAUAUUUGGAAUAAGUG CU UG U
C                               - A A
```

## S-9

```
GCACAU----- C GAUACU
CGGUGUUAGCGAUUUGAAC UUAUUCAC A
GCCACAAUCGCUAUAACUUG AAUAAGUG U
ACCUUAUUUUC U ACCUUG
```

## S-10

```
ACCUU AAUACU
GGUGUUAGCGAUUUGAACCUUAUUCAC A
CCACAAUCGUUAUAACUUGGAAUAAGUG U
CUCG- ACCUUG
```

## S-11

```
AA                               U A A
AGCGGUGUUAGCGAUUUGAACCUUAUUCAC GG AC \
UCGCCACAAUCGCUAUAACUUGGAAUAAGUG CU UG U
GU                               - A A
```

## S-12

```
AAA U AG
GUGC GUUAGCGAUUUGAACCUUAUUCAU U
CGCG CAAUCGUUAUAACUUGGAAUAAGUG A
UGC U CU
```

## S-13

```
U U C U A A
GUUUGCGAUUUGAACCUUAUUCAC GG AC \
CAAACGUUAUAACUUGG AAUA UG CC UG U
G U C - A A
```

## S-14

```
ACU- A --- G AAG
GUC CCGAUA UUGAACCUUAUUCAC GG U
CAG GGUUGU AACUUGGAAUAAGUG CU U
AUCG C UAA G AUG
```

## Group 8 --- miRNAs with no putative coding gene

>aga-mir-2-2-p5\_1ss10TA  
CTTGGTTGTAGTAGC

No loop structure

>dps-mir-2546-p3\_1ss14AC  
GCACTAATCGGTTCG

No loop structure

>mse-mir-33-p5\_1ss3CT  
CATCTGTTCGTAATAA

No loop structure

>der-mir-9b-p3\_1ss3GC  
ATCTGTTCCATAGAGCT

No loop structure

>mse-mir-6094-p3\_1ss9CA  
CTGCTGATACTGGAT

No loop structure

>bmo-mir-3206-p3\_1ss1TC  
CTTTTCTGAGCATGA

No loop structure

>tca-miR-927a-3p\_L-7R-1\_1ss14TC  
TTTGGACTCTGAATC

No loop structure

>bmo-mir-3304a-p5\_1ss8GA

TATTAATAATATTCC

No loop structure

>ame-mir-3792-p3\_1ss11CT

ATCGACATTTTGAAC

No loop structure

>dps-mir-2510-p5\_1ss7TA

TTTGAAATCACATTC

No loop structure

>dme-miR-9c-p5\_1ss6TG

AUUUUGGCUGUUUCU

No loop structure

>der-mir-283-p3\_1ss6CG

CTAAGGCTAAATATG

No loop structure

>tur-mir-7-p3\_2ss4TA18CA

AAUAAAACAAGAAAUCGAU

No loop structure

>mja-mir-6490-p5\_2ss10AG18CT

AGCGGAGGAGAAGAAACT

No loop structure

>PC-5p-27802\_49  
TAGAGCAGCTGCCATACT

No loop structure

>bmo-mir-3416-p3\_1ss14TC  
ACATGAATTCGAACG

No loop structure

>dme-miR-971-p5\_1ss13GT  
TCGCTGTAAATTTTAAT

No loop structure

>rmi-mir-5321-p5\_1ss5TA  
CGGAACAATTTCTAT

No loop structure

>dpe-mir-263b-p3\_1ss2AT  
CUAAAUCGAAUGUUC

No loop structure

>hme-mir-6308-p5\_2ss7AC17CT  
ACACACCGCCCGTCGCTC

No loop structure

>cqu-miR-2951-3p\_L-8R-6\_1ss11AG  
CTGCCCGGTTCGTACT

No loop structure

>bmo-mir-2808e-p5\_1ss1CA  
AACGGGGCTCAAACC

No loop structure

>bmo-miR-2779\_L-3R-2\_1ss9CT  
TCCGGTTCGAAGGAC

No loop structure

>PC-3p-41550\_30  
TAATCGAGATCCGGTGCTTTTAATTCATG

No loop structure

>tca-miR-3889-3p\_L-3R-4\_1ss4TC  
CACGGATTGAACACG

No loop structure

>mse-mir-79-p3\_1ss9CG  
TACCAAAGGACCGGT

No loop structure

>isc-mir-317-p5\_2ss6GC18GA  
ACAGTCTACCACCCTGAA

No loop structure

>isc-mir-133-p5\_1ss6GC  
TGGCTCAAGCCGGGC

No loop structure

>hme-mir-981-p3\_1ss6GC  
GTGCGCCGAACTCCA

No loop structure

>hme-mir-92b-p3\_1ss2CA  
CATCGGCTCTGGTAGC

No loop structure

>hme-mir-6308-p3\_1ss12TG  
CCCGTGGCTCGGGGC

No loop structure

>hme-mir-307-p3\_1ss14AC  
CCGTGGGTGGGACCTC

No loop structure

>dya-mir-87-p5\_2ss10TG17TC  
GCTGAACCGGTACAATCA

No loop structure

>dsi-mir-993-p5\_2ss10CG17TG  
AATGGCGTTGGGCGCAGTGTC

No loop structure

```
>dsi-mir-967-p3  
CTCTCTCTCTCTCTC
```

No loop structure

```
>dps-mir-2574b-p3_2ss2CA18TC  
TACATTTGGTATTGCGTC
```

No loop structure

```
>dps-mir-2519-p5_1ss14GT  
TGCCTGGCGGCCGTA
```

No loop structure

```
>dme-mir-967-p3_1ss1GC  
CTCTCTCTCTCTCTT
```

No loop structure

```
>dme-miR-317-5p_1ss1TC  
CGGGATACACCCTGTGCTCGCT
```

No loop structure

```
>bmo-mir-3415-p3_1ss15AG  
TCAGAGTCGTTCCAG
```

No loop structure

```
>bmo-mir-3392-p5_1ss9AG  
TCGAACCCGCGACCC
```

No loop structure

>bmo-mir-3319-p3\_2ss7GA17TG  
AACCCGACTCCGTGAAGC

No loop structure

>bmo-mir-3262-p3\_1ss11CG  
TAAGCGTGGGGTCGAA

No loop structure

>bmo-mir-3218-p3\_1ss5TG  
TCACGCCCTCCTGA

No loop structure

>bmo-mir-2733g-p3\_1ss3GC  
CTCTCTTCTCTCTCT

No loop structure

>bmo-miR-2738\_L-7\_1ss18TG  
AGAACGGCCAGCTGATG

No loop structure

>ame-mir-6066-p3\_1ss4TG  
CTCGTCTCTCTCGTC

No loop structure

>ame-mir-3801-p5\_2ss9TG18CT  
GGATCCGGGACAGTGTAT

No loop structure

>ame-mir-3797-p5\_1ss15GC  
AACCTCCGCTCCGTC

No loop structure



>ame-mir-263a-p3\_2ss13CG17GT  
CCCGTGGAGCTCGCGTT

No loop structure

>aae-mir-7-p3  
CAATAAATCTCAAGTCTTTCT

No loop structure

>aae-mir-282-2-p3\_1ss12CG  
ATTCCACTAGCGAGA

No loop structure

>aae-mir-124-p5  
TATCCACTGCCGGCCTATATG

No loop structure

>aae-miR-996  
TGACTAGATTACATGCTCGTC

No loop structure

>aae-miR-309a\_R+1  
TCACTGGGCAAAGTTTGTGCT

No loop structure

>aae-miR-1174\_R+1  
TCAGATCTACTTAATACCCATA

No loop structure

>PC-5p-154646\_6  
GACTGGTCGAGAGACACCTTCGG

No loop structure

```
>PC-3p-174923_5  
TGAAGACGATGTGTAGTACGTTGGAGCT
```

No loop structure

```
>bmo-mir-6497-p3_1ss16CT  
ATTGGCTCTGAGGACTGG
```

No loop structure

```
>PN-2779-5p-3623  
TCCGGTTCGAAGGACCAT
```

No loop structure

```
>PC-5p-32133  
AAATGAGTTGATTGAATTGCT
```

No loop structure

```
>mja-mir-6490-p5_2ss13CT20GA  
GAGGAAAAGAAATCAACCGAGATT  
>mja-mir-6490-p5_2ss12CT19GA  
AGGAAAAGAAATCAACCGA
```

No loop structure

```
>dps-mir-2518-1-p3_1ss11CG  
GGTTCGAGTTGGAGC
```

No loop structure

```
>bmo-mir-282-5p_L-8R-3_1ss10CG  
TGTCCCTGGCTTTGTC
```

No loop structure

>ame-mir-3720-p3\_2ss12GT19AT  
GTCATAGTTACTCTGAGTT

No loop structure

>aae-miR-2940-5p\_R-1  
TGGTTTATCTTATCTGTCGAGG

No loop structure

>isc-mir-3931-p5\_2ss8CA18GA  
GACTGCAAACCTGGATACA

No loop structure

>isc-mir-317-p5\_2ss6GC18GA  
ACAGTCTACCACCCTGAA

No loop structure