

Supporting Information

Thomson et al. 10.1073/pnas.1407207111

miRNA 1791

Gallus TGAAGCACCATGTTGGGCTGCATCGTCATGCCATGTTATGAAACCTAACCGATGTGACTGATGCAGGCTGACGTGATGTGCTA
Alligator TGAATGACCATGTTGGGCTGCCCTCAGTCATGCCATGTTATGAAACCTAATGCAATGTGACTGATGCAGGCTGACGTGATGTGCTA
Chrysemys TGAATGACCATGTTGGGCTGCATCGTCATGCCATGTTATGAAACCTAATGCAATGTGACTGATGCAGGCTGACATGACATGTGCTA

Gallus $\Delta G = -40.60$
U I A C U G G CCA UGA
GA GCA CAUGU G CUGCAUCAUCAUG UGUUA \\
CU UGU GUGCA C GACGUAGUCAGUGU GCAAU A
A^ G A GU G AGC CCA

Alligator $\Delta G = -37.20$
U I C C UG G C CCAI U GAA
GAUGCA CAUGU G CUGC UCAGUCAUG UGU AU A
CUGUGU GUGCA C GAGC AGUCAGUGU ACG UA C
A A GU G U A--^ - AUC

Chrysemys $\Delta G = -38.30$
U I CAC UG G CCA UGA
GAUG CAUGU G CUGCAUCAUCAUG UGUUA \\
CUGU GUACA C GACGUAGUCAGUGU ACAAU A
A^ ACA GU G AGC CCA

miRNA 1641

Gallus GATGCAGGGCATTTCCTGAGGATTAATGACTGTCTGGGGTCATCATCTCTCCAGTAGTATTATTAATCCC-AGGAAACTCTGTGCCCTGATC
Alligator AATGCAGGGCATTTCCTGGATTAATGACTGTCTGGGGTCATCATCTCTCCAGTAGTATTATTAATCCC-AGGAAACTCTTATACCTTGATC
Chrysemys GATGCAGGGCATTTCCTGGGATTAATGACTGTCTGGGGTCATCATCTCTCCAGTAGTATTATTAATCCCAGGAAACTCTGTGCCCTGATC

Gallus $\Delta G = -47.80$
GAU-----I C A U UCAUC
GCAGGG AUUUCUUG GGAUUAUAGCUG CUGGGG \\
UGUCUC UAAAGGAC CCAAUUAUUGAU GACCCU A
CUAGUUCG^ A C U CCUCU

Alligator $\Delta G = -48.40$
AAUC-----I C U UCAUC
AGGG AUUUCUUGGGAUUAUAGCUG CUGGGG \\
UUUC UAAAGGACCCCAUUAUUGAU GACCCU A
CUAGUUCGUA^ A U CCUCU

Chrysemys $\Delta G = -49.60$
A-----I G C U UCAUC
CGCA GG AUUUCUUGGG AUUAUAGCUG CUGGGG \\
GUGU UC UAAAGGACCC UGAUUAUUGAU GACCCU A
CUAGUUCG^ G A C U CCUCU

miRNA 1743

Gallus AAAGTAGGCTCCACTGTGTTAATCTCTTGGAAATGAGCAATTAATCACCTACCATATAGGTGTTAAGTGTGAATTTCAAGGGATTATCACTTTCCCTCTT
Alligator CAAGTGGTCTTATTGTGTAATCTCTTGGAAATGAGCAATTAATCACCTACCATATAGGTGTTAAGTGTGAATTTCAAGGGATTATCACTTTCCCTCTT
Chrysemys NNNNNNNNNCACTGTCTAATCTCTTGGAAATGAGCAATTAATCACCTACCATATAGGTGTTAAGTGTGACTTTTCAAGGGATTATCACTTTCCCTCTT

Gallus $\Delta G = -38.40$
I U CUCCACU U UC G A U CC
AAAG AGG GUG UAAUCC UUGGAU CAGCA UUA CACCUA \\
UUUC UCC CAC AUUAGG AACUUUA GUCGU AAU GUGGAU A
^ C UUU---- U GA A G U AU

Alligator $\Delta G = -40.60$
CI U UUCUUAU C UC G A U CC
AAG GGG GUG UAAUCC UUGGAU CAGCA UUA CACCUA \\
UUC CCC CAC AUUAGG AACUUUA GUCGU AAU GUGGAU A
-^ C UUU---- U GA A G U AU

Chrysemys $\Delta G = -34.20$
NNNNNNNNNCAUJ C UC UG A U CC
GUG UAAUCC UUGGA CAGCA UUA CACCUA \\
CAC AUUAGG AACUUU GUCGU AAU GUGGAU A
UUUCCCCUUU--^ U GA CA G U AU

miRNA 2964

Gallus AATCTCTGTACAGATGTCAGACACAATCTTGTTCTGACGGCTCCAGCGCACAGAATTGCGTTTGGACAATCAGGAGCAGAGATT
Alligator ACTCCCGCACAGATGTCAGACACAATCTTGTTCTGACGGTTCCAGCGCACAGAATTGCGTTTGGACAATCAGGAGCGAGACT
Chrysemys AATCTCTGTCACAGATGTCAGACACAATCTTGTTCTGATGATTCACATGACAGAATTGCGTTTGGACAATCAGGAGCAGAGATT

Gallus $\Delta G = -43.10$
ACA -I A GUU ACGG
AAUCUCUGCU GA UGUCCAGAC CAUUCUUG CGU \\
UUAGAGACGA CU ACAGGUUUG GUUAAGAAC GCG C
GGA A^ C AC- ACCU

Alligator $\Delta G = -35.90$
A--I CCG ACA - A GU ACG
CUCC CC GAU GUCCAGAC CAUUCUUG UUGU U
GAGG GG CUA CAGGUUUG GUUAAGAAC GGCA U
UCA^ CGA A-- A C AC CCU

Chrysemys $\Delta G = -39.70$
CACCA -I A GUU - A
AAUCUCUGC GA UGUCCAGAC CAUUCUUG UGUA UG U
UUAGAGACG CU ACAGGUUUG GUUAAGAAC ACGU AC U
AGGA A^ C --- U C

Fig. S1. Sequence alignment and predicted secondary structure for four microRNA families that were detected in the *Alligator* and *Chrysemys* genomes via BLAST similarity searches. The mature miRNA sequence from miRBase is underlined in the sequence and secondary structure of the reference species (*Gallus*). Substitutions relative to the reference sequence are highlighted in red. miRNA 1743 sits at the end of a contig in the *Chrysemys* genome assembly and is truncated by 10 bases on the 5' end as a result. We represent these as ambiguous bases and make no attempt to predict secondary structure in this region.