

# Double stranded DNA

One strand:

$s = \text{ACAATGAG}$

Complement:

Pair up  $A \leftrightarrow T$  and  $C \leftrightarrow G$ .

Double stranded DNA:

5'	—	A	C	A	A	T	G	A	G	—	3'
3'	—	T	G	T	T	A	C	T	C	—	5'

Complement of  $s$ :

TGTTACTC

Reverse complement of  $s$ :

CTCATTGT

# Complementary DNA/RNA

- RNA is single-stranded with four possible bases, represented by letters A, C, G, U.
- It binds with a single strand of DNA with the bases paired

RNA		DNA
A	↔	T
C	↔	G
G	↔	C
U	↔	A

- Compute the complement or reverse complement in the same fashion as before, but use T in DNA and U in RNA:

**RNA reverse complement of DNA strand ACAATGAG:** CUCAUUGU

**DNA reverse complement of RNA strand ACA AUGAG:** CTCATTGT