How Does DNA Determine the Traits of an Organism

Introduction: In this simulation, you will examine the DNA sequence of a fictitious organism: the Snork. Snorks were discovered on the planet Dee Enae in a distant solar system. Snorks only have one chromosome with 6 genes on it. You job is to analyze the genes of its DNA and determine what traits the organism has.

SNORK DNA AND TRAITS

tRNA triplet	Amino Acid Number
ACC	20
AGC	16
CGA	2
AAC	4
CGC	3
GGG	5
AGG	7
AAA	8
UUU	9
GGU	12
UAU	13
CCC	1
AUC	6
CUA	10
GGA	11

Amino Acid Sequence	Trait
20-11-13	hairless
20-12-13	hairy
20-21-21	plump
13-14-15	skinny
16-2 - 5	4 legged
16-4 - 5	2 legged
12-7-8	round head
5-7-8	block head
9-8 - 8	no tail
9-4 - 8	tail
11-3-2	slanted eyes
11-3-3	wide round eyes
6-6-10	male
6-6-14	female

Observations and Analysis of Snork DNA

You are given a chromosome from a Snork with the following sequence. Each gene has only **3** amino acids. Your job is to determine the sequence of amino acids for your specimen. Write the complimentary mRNA, tRNA, the amino acid (A.A.) sequence it codes for and the related trait in the chart below.

DNA	A C C G G T T A T | A G C C G A G G G | T T T A A C A A A | G G A C G C C G A | G G G A G G A A A | A T C A T C C T A
mRNA	
tRNA	
A.A.	
Trait	

Draw your Snork in the space below. Be creative!