

## Feedback — Quiz 1: Overview and Molecular Biology

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You submitted this quiz on **Mon 3 Aug 2015 4:21 PM PDT**. You got a score of **9.00** out of **10.00**. You can [attempt again](#), if you'd like.

### Question 1

The central dogma of molecular biology tells us that information is passed from

Your Answer	Score	Explanation
<input type="radio"/> DNA to methylation to RNA to protein		
<input type="radio"/> DNA to protein to RNA		
<input checked="" type="radio"/> DNA to RNA to protein	✓ 1.00	
<input type="radio"/> DNA to RNA to methylation to protein		
Total	1.00 / 1.00	

### Question 2

Which of the following is one of the major drivers of the sequencing revolution that began after 2008?

Your Answer	Score	Explanation
<input type="radio"/> Increased sample collection		
<input checked="" type="radio"/> Decreased cost of sequencing	✓ 1.00	
<input type="radio"/> Easier access to proteomic data		

☐ Decreased computational analysis time

Total

1.00 / 1.00

## Question 3

Which of the following is an exclusive characteristic of genomics compared to traditional biology?

Your Answer	Score	Explanation
<input checked="" type="radio"/> Studies considering the entire genome	✓ 1.00	
<input type="radio"/> Measurements of molecules in the Central Dogma		
<input type="radio"/> Targeted studies of one or a few genes		
<input type="radio"/> Clever experimental design		
Total	1.00 / 1.00	

## Question 4

Genomic data science involves techniques from which of these disciplines?

Your Answer	Score	Explanation
<input type="radio"/> Molecular Biology		
<input type="radio"/> Statistics		
<input checked="" type="radio"/> All of the these options	✓ 1.00	
<input type="radio"/> Computer Science		
Total	1.00 / 1.00	

## Question 5

Which of the following is an activity that genomic data scientists do not perform?

Your Answer	Score	Explanation
<input type="radio"/> Preprocessing and normalization		
<input type="radio"/> Experimental design		
<input checked="" type="radio"/> Sample collection	✓ 1.00	
<input type="radio"/> Integrative genomics		
Total	1.00 / 1.00	

## Question 6

Which of these is not one of the DNA nucleic acids?

Your Answer	Score	Explanation
<input type="radio"/> Cytosine		
<input type="radio"/> Thymine		
<input type="radio"/> Adenine		
<input checked="" type="radio"/> Tyrosine	✓ 1.00	
Total	1.00 / 1.00	

## Question 7

Transcription is a process that converts DNA to

Your Answer	Score	Explanation
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☒ RNA  1.00

☐ polymerases

☐ ribosomes

☐ Any other molecule

Total 1.00 / 1.00

## Question 8

The cost to sequence a human genome today, in U.S. dollars, is approximately

Your Answer	Score	Explanation
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<input checked="" type="radio"/> \$1000 	1.00	
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☐ None of these options

☐ \$30 million

☐ \$20,000

Total 1.00 / 1.00

## Question 9

DNA encodes instructions for

Your Answer	Score	Explanation
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☐ Helping us to see objects

☐ Enveloping viruses that infect a cell

☐ Helping us digest food

☒ Producing all the proteins that a person requires for life  1.00

Total

1.00 / 1.00

## Question 10

One major difference between humans and bacteria is

**Your Answer****Score****Explanation**

☐ The human genome is made of DNA, while bacteria are made of RNA.

☒ Human proteins are made of combinations of 20 amino acids, while bacterial proteins use a smaller set of 12 amino acids. ✗ 0.00

☐ Human genes are first transcribed to RNA, while bacterial genes are not.

☐ Human cells have a nucleus, and bacterial cells do not.

Total

0.00 /  
1.00