

Study Guide Genome Architecture

1. What is the relationship between epigenetics and the C-value paradox?
2. From the assigned reading - Why is Dark Matter not Junk?
3. Has genome sequencing revealed more genes than anticipated or more regulatory factors than anticipated?
4. Protein coding genes account for, on average, 2%, 20%, 100% of a plant genome?
5. What percentage of the average plant genome would you estimate is transcribed?
 - a. 5%,
 - b. 20%,
 - c. 80%?
6. Why does conservation of DNA sequence in non-coding DNA imply a functional role for the non-coding DNA?
7. How many orders of magnitude are there between *A thaliana* and *P japonica* genome
 - a. 1?
 - b. 2?
 - c. 3?
 - d. 4?
 - e. 5?
8. What is the major factor behind genome expansion?
9. Which of the following allows greater transcription of a gene?
 - a. Methylation
 - b. Acetylation