

Name _____

Period _____

Ms. Foglia

Date _____

AP: CHAPTER 9: RESPIRATION — EXTRA CREDIT 2

HANS KREBS & THE PUZZLE OF CELLULAR RESPIRATION

1. Compare the apparatus used by Krebs to the one used in our respiration lab.

2. Scientific discovery is often applying a technology and then asking the right questions so you can successfully interpret the data that you collect. In reference to this perspective, how was Krebs the right person in the right place?

3. Krebs work was rejected by the journal Nature. This is a common theme in scientific research: Innovative ideas are initially met with skepticism and sometime scorn. Why was Krebs work not initially appreciated by other scientists? Why does the scientific community often reject creative new ideas?

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4. Other scientists (Knoop and Martius) described most of the steps in the citric acid cycle. What was the critical concept elucidated by Krebs that finally clarified the true nature of this biochemical pathway.

5. What experiment did Krebs do to test his crucial hypothesis?

6. What other essential aspects of the Krebs cycle were discovered by other scientists working long after Krebs?

7. In what year did Krebs win the Nobel prize? For what specific contribution to science? Whom did he share it with? For what contribution to science did this other scientist win? (You will have to visit the Nobel Prize Web site for this)
