

CHEM 4400. Dr. Stone. Reading a journal article

Read the abstract:

1. Is this a primary source? Describe how you know this.

2. What is this paper about? Why is it interesting? What knowledge does it contribute?

Read the introduction:

1. Write down the acronyms and what they mean-they should be defined in the text. If not add them to #2 below.

- a. _____
- b. _____
- c. _____
- d. _____

2. Write down every word that you do not know the meaning. Every word. You should have a long list.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____
- i. _____
- j. _____

3. What foods may be beneficial to prevent heart disease or cancer.

4. What was measured in this study?

Read the Results section, page 9428

1. Write down any new acronyms and their meanings

a. _____

b. _____

c. _____

d. _____

2. How does HPLC work? What does it do?

3. What is electrochemical detection?

4. Some peaks were detected but not identified, what do the authors' say they are? How is this interesting/significant? What figure shows the results?

5. What is an ELISA assay? What were the results?

6. Why did they need to make a specific antibody? What figure shows the results?

7. How does immunohistochemical staining work? What were the results? What figure(s) show the results?

8. What is RT-PCR, how does it work? What were the results? What figures show the RT-PCR results?

9. What is present in early atherosclerotic lesions?

10. What are SR-A and CD36, how are they relevant to this study? What is a scavenger receptor?

11. What were the RT-PCR results for the mRNA expression of these receptors? What figure(s) shows this?

12. What is COMT and how is it involved in atherosclerosis?

13. If COMT is inhibited, what is the effect on the activity of the quercetin-aglycone?

Read the Discussion

1. Write down any new acronyms and their meanings

a. _____

b. _____

c. _____

2. In your own words, describe the authors' conclusion(s)? How do the molecules in food prevent heart disease and cancer?

3. What results support their conclusion(s)?

Note: Read the methods section for the two experiments that you are going to explain. (last writing assignment)