



# MOLECULAR AND CELLULAR BIOLOGY

with Professor JoAnne Richards

## Talking points

### KNOWLEDGE

1. What is a woman's risk of getting ovarian cancer during her lifetime?
2. What is an oocyte, and what size is it?
3. Which cells is an oocyte attached to when inside a follicle?

### COMPREHENSION

4. What is oestradiol, and what does it do?
5. What is the difference between somatic cells and gamete cells?
6. What are the two pituitary hormones that JoAnne mentions, and what do they each do?

### APPLICATION

7. If you had the chance to meet JoAnne, what question about her work would you like to ask?

### ANALYSIS

8. What techniques are available to help women who have difficulty conceiving?
9. Why does ovarian cancer have a high lethality rate? Can you think of any way that this could be decreased?

### EVALUATION

10. In order to conduct her research, Jill has to create cancerous tumours in mice. How do you feel about the ethics of animal testing? What do you think are the pros and cons of these techniques?
11. One of JoAnne's top tips is to not let anyone take you for granted. How do you think this piece of advice might help you during your career?

## Activity

Molecular and cellular biology can be quite a confusing topic! Your task is to imagine that you must deliver a summary of JoAnne's research to students who are a few years younger than you. Create a poster or a PowerPoint for the topic. Think about:

- Which parts of the article did you find confusing? How would you explain these to a younger audience?
- Which drawings or photos would you include to help explain the ovarian processes?
- How you will make the poster or slideshow engaging for younger audiences? For example, what colours, font and vocabulary will you use?
- What questions will you ask to see if they understood the content?

Next, test out your teaching methods on younger siblings, friends or students in the year below you. If you cannot find anyone younger than you, you can also talk to people your own age and ask if they think younger pupils would understand it.

## More resources

- Very Well Family has lots of easy-to-understand information on the female reproductive system. Read of one of their articles here: [www.verywellfamily.com/follicle-female-reproductive-system-1960072](http://www.verywellfamily.com/follicle-female-reproductive-system-1960072)