

# MOLECULAR ONCOLOGY WITH PROFESSOR IAN PRIOR

## TALKING POINTS

### KNOWLEDGE

1. What is DNA, and what are genes?
2. What is CRISPR?

### COMPREHENSION

3. How do cells reproduce?
4. What causes cancer?

### ANALYSIS

5. Why is Ian concerned about drug resistance?
6. What are the motives behind Ian's work?

### SYNTHESIS

7. Can you think of some other research areas where CRISPR might be useful?
8. Some people disagree with animal testing. What do you think would happen if Ian and his team did not use mouse models?

### EVALUATION

9. Part of Ian's work is focused on building new facilities and opportunities for collaboration. Why is research collaboration so important?
10. What ethical concerns might there be around gene editing techniques like CRISPR?

## ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

Write a sixty-second speech explaining why research into the causes of cancer is important. Try to keep your speech short and include the most important information from the article to make your argument. You should explain why cancer is an important issue to address, and why understanding the genetic causes of cancer is useful for improving treatments for patients.

## EXPLORE LIVERPOOL UNIVERSITY'S FACILITIES!

The Liverpool Cancer Research Institute is currently developing its outreach activities, so watch this space!  
[www.liverpool.ac.uk/liverpool-cancer-research-institute/about/](http://www.liverpool.ac.uk/liverpool-cancer-research-institute/about/).

You can also take a 360 virtual tour of the Liverpool Shared Research Facilities: [www.liverpool.ac.uk/liverpool-shared-research-facilities/virtual\\_tour/](http://www.liverpool.ac.uk/liverpool-shared-research-facilities/virtual_tour/)

## MORE RESOURCES

The Teenage Cancer Trust offers some simple lesson plans and videos:

[www.teenagecancertrust.org/about-us/what-we-do/education-awareness-resources/what-cancer-lesson-plans](http://www.teenagecancertrust.org/about-us/what-we-do/education-awareness-resources/what-cancer-lesson-plans)

Ian mentions The Cancer Genome Atlas (TCGA) Program, which has helped turbocharge our understanding of cancer. To find out more about TCGA, visit the National Cancer Institute's website: [www.cancer.gov/about-nci/organization/ccg/research/structural-genomics/tcga](http://www.cancer.gov/about-nci/organization/ccg/research/structural-genomics/tcga)

TED Studies has curated some video collections and related educational materials, called 'Rethinking Cancer', which covers a wide range of subjects including big data, new technologies and the impact of cancer on our modern society: [www.ted.com/read/ted-studies/medicine](http://www.ted.com/read/ted-studies/medicine)