

## Listen to the complete interview: Peter Doherty

[Laureate Professor, Department of Microbiology and Immunology](#)

[The University of Melbourne](#)

[Michael F. Tamer Chair of Biomedical Research](#)

[Co-Leader, Infection & Host Defense Program](#)

[St. Jude Children's Research Hospital](#)

### Track 1: Introduction

- Research Scientist
- Influenza
- St. Jude's Children's Research Hospital
- Memphis, TN
- University of Melbourne
- Australia
- Avian influenza viruses
- Dr. Robert Webster
- Viral Immunity
- Immunology

### Sample Questions

- Search the web and find an article discussing flu vaccines or avian influenza. What new information did you review which can be used for understanding the larger context and the importance of scientists who study influenza?
- Professor Doherty directs research in laboratories on two continents. What do you think are the most important things he has to emphasize in order to make sure both labs continue to perform research at a very high level? What type of preparation and planning do you think takes place in order to keep both of these labs exploring important topics and producing important results?
- Identify at least two additional scientists, research labs, universities, or companies performing biological or medical research in the cities of Memphis, TN or Melbourne, Australia. What about the research areas you identified do you believe is of most relevance and importance to the general public?
- What do you think are the most rewarding things about being a research scientist? What other careers do you feel have similar types of rewards? Provide a couple of examples.

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### Track 2: Becoming interested in research

- Questions
- Evidence-based
- Aristotle, Archimedes
- Scholasticism, Dogma
- Analyze
- Experiment
- Observation
- Publish
- Search for the truth
- Results and Conclusions
- Broad scrutiny

### Sample Questions

- Professor Doherty states that he is always asking the question “why?”. What interests you the most academically? What are some steps you can take to continue to develop this interest?
- Why is the phrase evidence-based important in the field of science? Provide a real world example of how the evidence-based foundation of science is important to things you might take for granted every day.
- What is Professor Doherty’s laymen’s definition for science? Do you agree or disagree with this definition? Provide some evidence to support your opinion.
- What is dogma? Why do you believe Professor Doherty use this phrase in providing a background or context for his description of the role of modern science and scientific research?
- Why do you think broad scrutiny is important to furthering the field of science? Provide a real world example of how you think “broad scrutiny” could potentially improve the amount of effort any individual puts into a particular task. What is the last thing you worked on or participated in which required broad scrutiny?

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### Track 3: Current Focus of Research

- cellular immune response
- cancer
- virus infected cells
- Killer T Cell
- virus particles
- infection
- molecular medicine
- molecular dna technology

### Sample Questions

- Professor Doherty talks about cellular immune response. Search the web and find at least three sources that provide a description of this concept. Once you have found your sources, create a paragraph of how you would describe a cellular immune response to one of your friends. Feel free to be creative but still accurate in your explanation.
- Professor Doherty talks about a “Killer T Cell”. Why are Killer T Cells important in the body? See if you can find any other cells in the body which have nicknames and describe their function. Based on your own personal characteristics and qualities, what type of biological cell do you think you would be? What would be your role and function?
- Professor Doherty talks about advances in technology and implications for improving biology / medicine. Search the web and learn about a new advancement in medical technology or biomedical research occurring within the past 12 months. How did the development of this technology make an improvement in the field of medicine and/or biology?

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### Track 4: Implications of Research

- Infection
- Influenza
- Cellular immune processes
- Autoimmune Disease
- Vaccines
- AIDS
- Immunotherapy
- Cancer

### Sample Questions

- Professor Doherty talks about “controlling infection” in the body. What does the professor mean when he talks about “controlling infection”? What examples does he use? Can you think of other examples which might be related to controlling infection?
- Professor Doherty talks about a spectrum. Why do you think he provides this example in his explanation?
- Professor Doherty talks about vaccines. Besides the examples he provides, what examples would you use to explain the overall importance of vaccines? Search the web and find at least three sources which talk about challenges faced in your country related to the production, administration, or research of vaccines.
- Professor Doherty talks about immunotherapy. What is immunotherapy? How would you explain the benefits of this type of therapy to one of your friends who might need it to treat a certain condition?