

# Learning from Patients: The Science of Medicine

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The goal of this DVD is to show how information collected from patients often allows scientists to achieve a deeper understanding of the genetic and molecular basis of a specific disease. This level of understanding is crucial to developing treatments for disease and, consequently, to relieving patients' suffering.

The first of two DVDs contains four captivating presentations from two prominent investigators in the field of biomedical sciences, delivered at the Howard Hughes Medical Institute's Holiday Lectures on Science in December 2003. The audience consisted of high-school students. In the first two presentations, Bert Vogelstein (Johns Hopkins University School of Medicine) explains the nature of cancer, what causes it and how it can be prevented and treated. In the final two presentations, Huda Y. Zoghbi (Baylor College of Medicine) presents her discoveries on two neurological disorders, spinocerebellar ataxia type I and Rett syndrome.

The second DVD contains the animations and video clips from the presentations; biographies of Vogelstein, Zoghbi, and two graduate students who work in research labs; and a set of five special features – a bioethics discussion with the active participation of the students, information about the use of animals in research (transgenic mice), an interactive activity that engages the viewer in pedigree analysis, and presentations on

two highly significant genetics topics, the proteins p53 and proteasome.

The main target group of this DVD set is biology teachers and upper secondary-school students with an interest in the biological sciences and medicine. However, after watching these presentations, *anyone* could be inspired to follow a career in these fields. The viewer watches real-life scientists talk about their investigations to unravel the mysteries of diseases that could affect any one of us. The lectures are lively and interactive; they include excellent animations about the genetic, molecular and cellular mechanisms that cause the diseases as well as short video clips in which patients and their families talk about their problems and hopes. The student audience asks questions, providing the opportunity to have common questions answered by the specialists.

The viewer not only acquires scientific information about the diseases under investigation and the efforts to cure them, but also learns what it means to work in a research lab. People often think of scientists as eccentric individuals who hide away in their secret labs where they perform strange experiments that nobody understands. This impression is obviously wrong and the material in the DVDs does an excellent job revealing the truth about scientists and their work. Conducting research in a lab might mean a lot of hard work, but these DVDs show that it

could prove to be a rewarding and fun experience. The life of a scientist in the lab is not a solitary one; instead, it involves collaboration among co-workers on a daily basis and even direct contact with patients.

In recent years, the world has experienced spectacular advances in the field of genetics and biomedical sciences. This progress has generated a number of crucial ethical questions as to how to manage an individual's genetic information. The bioethics discussion in the second DVD is very informative on this subject and could easily be used to promote similar activities in the classroom.

## Details

Publisher: Howard Hughes Medical Institute

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## Ordering

This and other DVDs can be ordered free from the Howard Hughes Medical Institute:  
[www.hhmi.org/biointeractive/](http://www.hhmi.org/biointeractive/)

