BIOSCIENCE IN THE 21ST CENTURY:

HIGHLIGHTS AND FUTURE PROSPECTS
BIOSCIENCE IN THE 21ST CENTURY

• What biologically-relevant problems confront society?
• What are the strategies for studying these problems?
• What are the prospects for solutions to these problems?
MULTIDISCIPLINARY APPROACHES

NEUROBIOLOGISTS
BIOCHEMISTS
BIOLOGICAL ENGINEERS
CHEMISTS
CELL BIOLOGISTS

PHYSICISTS

MATERIALS SCIENCE ENGINEERS
MOLECULAR BIOLOGISTS
MICROBIOLOGISTS
VIROLOGISTS
CHEMICAL ENGINEERS

COMPUTER SCIENTISTS

BioScience in the 21st Century
SURVEY OF TOPICS IN BIOSCIENCE

• Neurophysiological processes
• Cancer and novel treatment strategies
• Genomics and bioinformatics
• Stem cell biology and disease treatment prospects
• Advances in engineered biosystems, biodevices, and bioimaging
• Ethical issues in biotechnology and medicine
• Infectious diseases
• Human physiology: cardiovascular disease, obesity, aging
ACKNOWLEDGMENTS
Bioscience PLAYBILL: Participating Faculty and Guests

Lehigh Departments and Programs represented:
Biological Sciences, Bioengineering, Chemical Engineering, Chemistry, Computer Science & Engineering, Materials Science & Engineering, Physics

Guests: St. Thomas Aquinas College, BD Biosciences, Sanofi Pasteur, University of Medicine & Dentistry of New Jersey
**Lehigh University Participants:** Barry Bean, R. Michael Burger, Xuanhong Cheng, Matthias Falk, James Gilchrist, Ned Heindel, M. Kathryn Iovine, Stefan Maas, Linda Lowe-Krentz, Daniel Lopresti, Jutta Marzillier, John Nyby, Susan Perry, Colin Saldanha, Jeffrey Sands, Neal Simon, Robert Skibbens, Dimitrios Vavylonis, Vassie Ware

**Guests:** Ryan Wynne, St. Thomas Aquinas College  
Jay Reuben, BD Biosciences  
Joseph Frantz, Sanofi Pasteur  
John Glod, Robert Wood Johnson Medical School, UMDNJ

American Society for Cell Biology, iBioSeminars© lectures by Brian Druker, Elaine Fuchs

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THANK YOU!