

# LECTURE TOPICS

## GENES "R" US

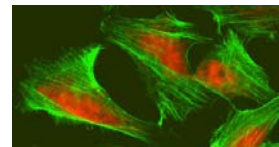
BS801, General Education Requirement – Prescribed Elective

Time: Wednesday, 1.30 pm – 4.20 pm

Room: **LT1A**

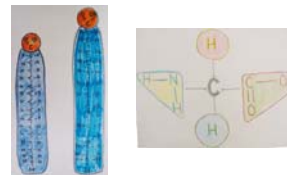
The study of genes and DNA is fascinating. Since the days of Gregor Mendel, an Austrian monk who puttered in a monastery garden, to Watson and Crick, who figured out the structure of the DNA molecule, to Ian Wilmut, who cloned Dolly the sheep from an adult ewe's DNA, a tremendous number of things happened in the field of genetics in a relatively short period of time. Just check today's newspaper, and you'll probably read about a new gene that some scientist has discovered. Therefore, we need to know more about how our genes work so we can understand more about ourselves. The lecture series *GenesRus* introduces students to general fundamentals of genetics, the history of discoveries in this field, genetic engineering and its application in medicine. By first walking through the cell it will become clear that the biological cell is really a kind of "biochemical factory" in which the chemical reactions necessary for vital functions occur. This is followed by an introduction of classical genetics and basic information about the elements making up a chromosome and a gene. Subsequent topics include the basics of genetic engineering and its application in medicine and the production of drugs. By discussing the principles of cancer, virus- and malaria infection and its relation to genetic changes, the lecture will shine some light on these very important human diseases. Finally, the role of genetics in the emerging field of plant engineering will be discussed at an introductory level.

15/08/07 **Me, My Cell, and I**  
- What is in a cell?



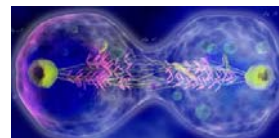
G. Grüber

22/08/07 **The chemical building blocks of life**



G. Grüber

29/08/07 **Walking to the poles**  
- Mitosis; what happens to chromosomes during cell division  
- Meiosis; sperm and egg are single cells with only half the normal number of chromosomes



Li Hoi Yeung

05/09/07 **DNA: The basis of life**  
- DNA? Is that a government agency?  
- The genetic code



G. Grüber

12/09/07 **Discovery of the gene**  
- How a monk found the gene.



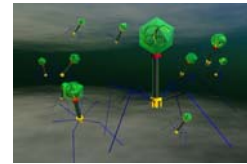
G. Grüber

19/09/07 **Molecular biotechnology**  
- Mutation, or a change of genes



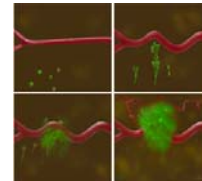
C. C. Sze

03/10/07 **Viruses, a sort of alive and not alive ...**  
- More than just bit of nucleic acid wrapped up in a protein  
- Landing of a bacterium and injecting it



R. J. Sugrue

10/10/07 **Gene and Cancer**  
- What are the cancer-critical genes?



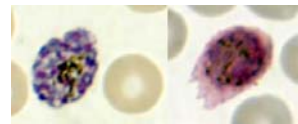
V. C. Lin

17/10/07 **Genetics and your health**  
- Mutation and inherited Diseases



Z. Bozdech

24/10/07 **Sexual or asexual that is the question?**  
- The life-cycle of the human malaria parasites



P. R. Preiser

31/10/07 **Genetics and your world**  
-Tasty cuisine or Frankenfoods?



G. Grüber

07/11/07 **Genetherapy**



P. Dröge

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