

September 18, 2003

# The Genomics Evolution and Revolution: Scientists, Discoveries, and Societal Impact

V50.0304, Fall 2003  
Wednesday, 12:30–3:00 p.m.

## Reading List for Course and Reading Dates

(All ISBN numbers refer to paperback editions unless otherwise indicated;  
prices are from Amazon.com unless otherwise indicated.)

### Science People and Related Discoveries

- P. Parnell. *QED: A Play (Inspired by the Writings of Richard Feynman and Tuva or Bust by Ralph Leighton)*, Foreword by Alan Alda. Applause Theater & Cinema Books, New York, NY, ISBN: 1557835926 – \$8.95, 2002.  
**BRING QED TO SECOND and THIRD CLASS!!**
- O. Sacks. *Uncle Tungsten: Memories of a Chemical Boyhood*. Vintage Books, New York, NY, ISBN: 0375704043 – \$11.20, 2002.  
Read before Class 3
- P. Hoffman. *The Man Who Loved Only Numbers: The Story of Paul Erdos and the Search for Mathematical Truth*. Hyperion Press, New York, NY, ISBN: 0786884061 – \$11.20, 1999.  
Read before Class 4
- S. Nasar. *A Beautiful Mind: A Biography of John Forbes Nash, Jr., Winner of the Nobel Prize in Economics, 1994*. Simon & Schuster, New York, NY, ISBN: 0684853701 – \$11.20, 1999.  
Read before Class 4 Or See Film
- R. M. Henig. *The Monk in the Garden: The Lost and Found Genius of Gregor Mendel, the Father of Genetics*. Houghton Mifflin Company, New York, NY, ISBN: 0618127410 – \$11.20, 2001.  
Read before Class 5
- J. D. Watson and A. Berry. *DNA: The Secret of Life*. Alfred A. Knopf, New York, NY, ISBN: 0375415467 (hardcover) – \$27.97, 2003.  
Read before Classes 6 and 7
- K. Mullis. *Dancing Naked in the Mind Field*. Vintage Books, New York, NY, ISBN: 0679774009 – \$10.40, 2000.  
Read before Class 10 (You may choose to read Mullis or Werth books)

## Science People – Optional

- B. Maddox. *Rosalind Franklin: The Dark Lady of DNA*. HarperCollins, New York, NY, ISBN:0060985089 (hardcover) – \$20.97, 2002. (Paperback due October, 2003 - ISBN: 0060985089 – \$11.17).
- A. Zewail. *Voyage Through Time: Walks of Life to the Nobel Prize*. World Scientific Publishing Co., New York, NY, ISBN: 9812383409 – \$18.50, 2003.
- S. Crotty. *Ahead of the Curve: David Baltimore's Life in Science*. University of California Press, Berkeley, California, ISBN: 0520239040 – \$13.97, 2003.
- R. Levi-Montalcini. *In Praise of Imperfection: My Life and Work*. Basic Books, New York, NY, ASIN: 0465032184 – \$22.00 (out-of-print: price refers to a used copy), 1989.

## Science – Discovery

- B. Werth. *Billion Dollar Molecule: The Quest for the Perfect Drug*. Simon & Schuster, New York, NY, ISBN: 0671510576 – \$11.20, 1995.  
Read before Class 10 (You may choose to read Werth or Mullis books)

## Science and Society

- P. R. Reilly. *Abraham Lincoln's DNA and Other Adventures in Genetics*. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, ISBN: 0879696494 – \$15.00, 2002.  
Read before Class 11 (You may choose to read Reilly or Sulston & Ferry books)
- J. Sulston and G. Ferry. *The Common Thread: A Story of Science, Politics, Ethics, and the Human Genome*. Joseph Henry Press, Washington, DC, ISBN: 0309084091 (hardcover) – \$17.47, 2002.  
Read before Class 12 (You may choose to read Sulston & Ferry or Reilly books)
- J. Tolins. *The Twilight of the Golds: A Play in Two Acts*. Samuel French, Inc., New York, NY, ISBN: 0790979012 – \$6.00 (direct from publisher), 1995.  
Read or View Film before Class 13

## Other References and Articles

- T. Schlick. *Molecular Modeling: An Interdisciplinary Guide*. Springer-Verlag, New York, NY, ISBN: 038795404X (hardcover) – \$79.99, 2002.  
Read Chapters 1 and 2 before Class 2
- *Nature* **421**, Jan. 23, 2003 issue: The Double Helix – 50 Years, pages 396–422:  
– *The Eternal Molecule*, C. Dennis and P. Campell.

- *Quiet Debut for the Double Helix*, R. Olby.
- *Discovering Genes Are Made of DNA*, M. McCarty.
- *The Double Helix and The ‘Wronged Heroine’*, B. Maddox.
- *The Mosaic That Is Our Genome*, S. Pääbo.
- *Nature, Nurture and Human Disease*, A. Chakravarti & P. Little.
- *The Double Helix in Clinical Practice*, J. I. Bell.
- *The Mona Lisa of Modern Science*, M. Kemp.

#### Read before Class 2

- *Science* **300**, Building on the DNA Revolution, pages 277–293:
  - *A Hothouse of Molecular Biology*, E. Pennisi.
  - *DNA’s Cast of Thousands*, E. Pennisi.
  - *The Human Genome Project: Lessons from Large-Scale Biology*, F. S. Collins, M. Morgan, and A. Patrinos.
  - *Realizing the Potential of the Genome Revolution: The Genomes to Life Program*, M. E. Frazier, G. M. Johnson, D. G. Thomassen, C. E. Oliver, and A. Patrinos.

#### Read before Class 6

- L. O. Elkin, Rosalind Franklin and the Double Helix, *Phys. Today* **56**, 42–48, 2003.

#### Read before Class 7

- *Nature* **422**, Apr. 24, 2003 issue: *A Vision for the Future of Genomics Research*, pages 835–847, F. S. Collins, E. D. Green, A. E. Guttmacher, and M. S. Guyer on behalf of the US National Human Genome Research Institute.

#### Read before Class 11