

Fall, 2010

## History of Twentieth Century Biomedicine

### Contact

*SOM 150.714*

*Prof. Nathaniel Comfort*

*302 Welch Library*

*Thursdays, 11–1*

[\*comfort@jhmi.edu\*](mailto:comfort@jhmi.edu)

Course website (contains assignments and links to articles):

[\*http://web.me.com/ncomfort/Biomedicine\*](http://web.me.com/ncomfort/Biomedicine)

### Rationale

This is a course about levels of understanding. On one level, it is a tour through some signal episodes in the history of biomedicine in the last 100 years or so: the discovery (or invention) of insulin; the revolution in human genetics; cancer; and others.

On another level, it is about how one might go about understanding those and other episodes. Through the experiments and laboratory work? Via the clinic? From the patients who were either helped or not? These, of course, are themselves levels of analysis.

On a third level, it is about discovering how you best understand something complicated like biomedicine—my hope is that this seminar will change the way you study what you study, whether it be science or history.

### Assignments

Writing:

- At the end of the course, you are to turn in a research paper. The assignments differ for history and science students. All students, however, should be sure to investigate their research question at two or more levels of analysis (e.g., intellectual, technical, social, political, cultural, philosophical).

*For history students, this should be a preliminary research essay or research proposal—an investigation of a research question, including historiographical review, theoretical framing as appropriate, and preliminary survey of primary sources. You are welcome to use this as an opportunity to pursue a topic you have begun elsewhere or to develop an idea pertinent to your thesis research. If you already have primary sources, deep analysis of them is welcome. However, students who do not have such materials will not be penalized; in such cases, grading will be based more on the coherence of your research question and the sophistication of your framing of it than on the thoroughness of your primary research. The paper should be approx. 20 pp. in length.*

*For basic science students, the paper should be a historical investigation of your own field of research. Be sure to include some aspect of broader historical context. It should be 10–15 pp. in length.*

## Books (all available in campus bookstore, on Amazon, and elsewhere)

Landecker, Hannah. *Culturing Life: How Cells Became Technologies*. Cambridge, MA: Harvard University Press, 2007.

Feudtner, John Christopher. *Bittersweet : diabetes, insulin, and the transformation of illness*, Studies in social medicine. Chapel Hill: University of North Carolina Press, 2003.

Lerner, Barron H. *The breast cancer wars : hope, fear, and the pursuit of a cure in twentieth-century America*. New York: Oxford University Press, 2001.

Skloot, Rebecca. *The Immortal Life of Henrietta Lacks*. 1st ed. New York: Crown Publishers, 2010.

Haiken, Elizabeth. *Venus Envy : A History of Cosmetic Surgery*. Baltimore: Johns Hopkins University Press, 1997.

Unit	Date	Title	Reading
Insulin			
	09/02	<b>No class (make up 12/09)</b>	
	09/09	Over-determination	<p>Banting, Frederick G., and C. H. Best. "The internal secretion of the pancreas." <i>Journal of Laboratory and Clinical Medicine</i> 7, no. 5 (1922): 256-71</p> <p>Banting, Frederick G., et al. "Pancreatic extracts in the treatment of diabetes mellitus: preliminary report." <i>Canadian Medical Association Journal</i> 2, no. 141 (1922): 141-46</p> <p>Banting, Frederick G. "The early story of insulin." 1-6, 1934 <a href="http://www.ntpl.ca/ws_par/banting/main.html">http://www.ntpl.ca/ws_par/banting/main.html</a>.</p> <p>Macleod, J. J. "History of the researches leading to the discovery of insulin: with an introduction by Lloyd G. Stevenson." <i>Bull Hist Med</i> 52, no. 3 (1978): 295-312.</p> <p>Bliss, Michael. "Texts and documents: Banting's, Best's, and Collip's accounts of the discovery of insulin, with an introduction by Michael Bliss." <i>Bulletin of the History of Medicine</i> 56 (1993): 554-68</p>
	09/16	Constructing a myth	<p>Pratt, Joseph H. "A reappraisal of researches leading to the discovery of insulin." <i>Journal of the History of Medicine and Allied Sciences</i> 11 (1954): 281-89</p> <p>Feasby, W. R. "The discovery of insulin." <i>Journal of the History of Medicine and Allied Sciences</i> 13 (1956): 68-84</p> <p>Fulton, John F., C. H. Best, and Elliot P. Joslin. "Reminiscences of the discovery of insulin." <i>Diabetes</i> 5, no. 1 (1956): 64-68</p> <p>Bliss, Michael. "Rewriting medical history: Charles Best and the Banting and Best myth." <i>Journal of the History of Medicine and Allied Sciences</i></p>

			48 (1993): 253-74 Jurdjevic, M., and C. Tillman. "E. C. Noble in June 1921, and his account of the discovery of insulin." <i>Bull Hist Med</i> 78, no. 4 (2004): 864-75
	09/23	Transformative disease	Feudtner, <i>Bittersweet</i>
Tissue culture			
	09/30	Cells as reagents	Landecker, <i>Culturing Life</i>
	10/7	Cells as agents	Skloot, <i>The Immortal Life of Henrietta Lacks</i>
Malaria			
	10/14	Tropical disease, molecular disease	Packard, Allison, Anthony C. "Protection Afforded by Sickle-Cell Trait against Subtertian Malaria Infection." <i>British Medical Journal</i> 1 (1954): 290-94. Neel, James V. "The Inheritance of Sickle Cell Anemia." <i>Science</i> 110 (1949): 64. Pauling, Linus, H. A. Itano, S. J. Singer, and I. C. Wells. "Sickle Cell Anemia: A Molecular Disease." <i>Science</i> 110 (1949): 543-48. Strasser, Bruno J. "Linus Pauling's "Molecular Diseases": Between History and Memory." <i>Am J Med Genet</i> 115, no. 2 (2002): 83-93.
	10/21	Antimalarial research	Slater, L. B. "Malaria Chemotherapy and The 'Kaleidoscopic' Organisation of Biomedical Research During World War II." <i>Ambix</i> 51, no. 2 (2004): 107-34. Comfort, Nathaniel C. "The Prisoner as Model Organism: Malaria Research at Stateville Penitentiary." <i>Studies in History and Philosophy of Science, Part C</i> 40 (2009): 190-203. Hornblum, A. M. "They Were Cheap and Available: Prisoners as Research Subjects in Twentieth Century America." <i>BMJ</i> 315, no. 7120 (1997): 41 ( <a href="http://www.bmj.com/cgi/content/full/315/7120/1">http://www.bmj.com/cgi/content/full/315/7120/1</a> ) Harkness, J. M. "Nuremberg and the Issue of Wartime Experiments on US Prisoners. The Green Committee." <i>JAMA</i> 276, no. 20 (1996): 1672-5.
	10/28	Genetic screening	Wailoo, Keith, and Stephen Gregory Pemberton. "A Perilous Lottery for the Black Family: Sickle Cells, Social Justice, and the New Therapeutic Gamble." In <i>The Troubled Dream of Genetic Medicine</i> , 116-60. Baltimore: Johns Hopkins University Press, 2006. Cowan, Ruth Schwartz. <i>Heredity and Hope: The Case for Genetic Screening</i> . Cambridge, Mass.: Harvard University Press, 2008,

			chap. 6. Lindee, Susan. <i>Moments of Truth in Genetic Medicine</i> . Baltimore: Johns Hopkins University Press, 2005, chap. 2.
Cancer			
	11/4	<b>No class HSS</b>	
	11/11	Clinical trials	Keating, Peter, and Alberto Cambrosio. "From Screening to Clinical Research: The Cure of Leukemia and the Early Development of the Cooperative Oncology Groups, 1955-1966." <i>Bulletin of the History of Medicine</i> 76 (2002): 229-334.  Loewy, Ilana. <i>Between Bench and Bedside: Science, Healing, and Interleukin-2 in a Cancer Ward</i> . Cambridge, Mass.: Harvard University Press, 1996, Introduction, chap. 4
	11/18	Patient activism	Lerner, <i>The Breast Cancer Wars</i>
	11/25	• <b>No class Thanksgiving</b>	
The science of human perfection			
	12/02	Plastic surgery	Haiken, <i>Venus Envy</i>
	12/09	Genome	• TBA