

A legacy of unethical research

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Note: I have been working on this incomplete and inadequately detailed list for several years. It will never be finished and I will never catch up. Suggestions for improvement and additions are welcome. See the footer for terms of use. – KDP

Cases

WWII: Nazi medical experiments (Annas 1992)

1932-1972: United States Public Health Service Syphilis Study at Tuskegee (Jones 1993; Reverby 2000; Washington 2006)

During the 40-year study (1932 to 1972), the natural history of syphilis was followed in 399 poor black sharecroppers (all men) in Macon County, Alabama. The subjects did not know that they were involved in research, nor were they told the nature of their disease.

Researchers actively led the men to believe that they were being treated for their symptoms – described as “bad blood” – when in fact the research team took pains to ensure that their subjects received no therapy for syphilis, even when penicillin became the accepted treatment in 1945.

This study had never been secret – results were published openly on several occasions – but neither was it common knowledge. Widespread publicity in 1972 was met with outrage and instigated a great deal of soul-searching and a prolonged, intensive process to ensure the protection of human subjects in research in the United States. (KDP)

1940s-1974: Holmesburg Prison (Hornblum 1998)

“In the first expose of unjust medical experimentation since David Rothman's Willowbrook's Wars, Allen M. Hornblum releases devastating stories from within the walls of Philadelphia's Holmesburg Prison. For more than two decades, from the mid-1950s through the mid-1970s, inmates were used, in exchange for a few dollars, as guinea pigs in a host of medical experiments. An array of doctors, in conjunction with the University of Pennsylvania and prison officials, established Holmesburg as a laboratory testing ground. Hundreds of prisoners were used to test products from facial creams to far more hazardous, even potentially lethal, substances such as chemical warfare agents. Based on in-depth interviews with dozens of prisoners as well as the doctors and prison officials who performed or enforced these experimental tests, Hornblum paints a disturbing portrait of abuse, moral indifference, and greed. Central to this account are the millions of dollars many of America's leading drug and consumer goods companies made available for the all too eager doctors seeking fame and fortune through their medical experiments. Acres of Skin is rigorously researched and shocking in its depiction of men treated as laboratory animals.” (From BooksInPrint.com re Acres of Skin; accessed 08/27/2008)

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1950s: Willowbrook State School (Rothman 1984; Krugman 1986; Jonsen 1998)

Willowbrook State School in Staten Island, New York, was an institution for “mentally retarded” children. In the 1950s it was seriously overcrowded, and hepatitis was endemic in both residents and staff. Infectious disease specialists were asked to help contain and fight the disease. After an epidemiological study in 1955, the researchers began a study of the natural history and prevention of hepatitis in which new residents, with the consent of their parents, were fed live hepatitis virus derived from the feces of infected residents. (KDP)

1963: Jewish Chronic Disease Hospital (Jonsen 1998)

“Dr. Chester Southam of Sloan-Kettering Institute for Cancer Research had approached Dr. Emmanuel Mandel, Medical Director of the Jewish Chronic Disease Hospital [in Brooklyn, New York], with a proposal to study the immunological effects of injecting cancer cells under the skin of elderly, debilitated patients. Dr. Mandel was interested in collaborating on this project. No effort was made to obtain consent of the subjects. Several of the hospital’s doctors learned of the research and objected strongly.” (Jonsen 1998:143)

FILL IN THIS GAP

1977-1983: Stephen Breuning (Edsall 1995) – Breuning’s falsification and fabrication of data was reported by his colleague, Robert L. Sprague, for which Sprague was treated badly by many officials.

“Sprague is a psychopharmacologist whose research has dealt with the effects of drugs on hyperactive children and on persons with attention deficit disorder. He was aroused to suspicion of fraud in the work of Stephen Breuning who had worked with him for over three years and then had moved to the University of Pittsburgh. Breuning claimed in his publications to have done a very large number of experiments. Sprague realized that it was a physical impossibility for Breuning to have done them in the time he claimed. Sprague had other evidence also, and Breuning admitted in a letter early in 1984 that he had falsified the data in an abstract he had published. Yet, the University of Pittsburgh was uncooperative with Sprague; the authorities said they had no evidence of fraud in Breuning's work. Sprague had also contacted the National Institute of Mental Health (NIMH) in December 1983 concerning his charges against Breuning, but got no response [sic] from them for nine months. Then, NIMH began by investigating Sprague, not Breuning, for a few weeks. After that, the investigation dragged slowly on. In April 1987, three and a half years after Sprague's initial letter, NIMH released a final report with the conclusion that Breuning had ‘...knowingly, willfully, and repeatedly engaged in misleading and deceptive practices’ Breuning's false claims were not just a matter of academic interest; his papers had been read widely by psychopharmacologists and could well have influenced the treatment of many thousands of retarded children in unfortunate ways during those years before action was taken.” (Edsall 1995:335)

1981: John Darsee – (DeMets n.d.; Stewart and Feder 1987; Wright et al. 2008)

“In May 1981, the colleagues of a respected young scientist were shocked to discover that he was a forger of data. Initially, Dr John Darsee confessed to a single forgery, but it was subsequently found by his colleagues and by three investigating committees that he had fabricated much of the data that formed the basis of his more than 100 publications over a period of about three years.” (Steward and Fader 1987:207)

1982: Mark Spector (Wiley 2008)

1986-1996: Thereza Imanishi-Kari – formerly a researcher at MIT who was accused of falsifying data in a paper on immunity in transgenic mice published in Cell in 1986, but was finally cleared of all charges in 1996. (Odling-Smee et al. 2007)

1989: Cold fusion – Stanley Pons and Martin Fleischmann announced to the press that their table-top apparatus produced nuclear fusion; the process had not yet been peer reviewed. Many physicists tried to reproduce the experiment with no convincing evidence of the reported phenomenon. It is generally thought that it was not a case of intentional deceit, but self-deception or sloppy science on Pons and Fleischmann's part. (Nova 1991)

2002: Jan Hendrik Schön – a physicist at Bell Labs, where, in 2002, he was found “guilty of falsifying data in at least 16 [physics] papers.” (Odling-Smee et al. 2007)

2003-2004: Anders Pape Møller – a Danish behavioral ecologist who was found guilty of “scientific dishonesty” in 2003 but found innocent by a second committee in 2004. (Odling-Smee et al. 2007)

2004: Shinichi Fujimura – a Japanese archeologist who was accused of burying stone tools that he later dug up; the Japanese Archeological Association found in 2004 that “all of the 168 sites dug by Fujimura had been faked.” (Odling-Smee et al. 2007)

2004-2006: Woo Suk Hwang – the infamous South Korean researcher who “claimed to have derived stem cells from cloned human embryos” in two publications in Science in 2004 and 2005. Seoul National University found that “all of his claims were fabricated” in 2006. (Odling-Smee et al. 2007)

2005: Luk Van Parijs – who had done research on immunology and RNA interference at MIT and was fired in 2005 “after admitting that he had altered data in a published paper, unpublished manuscripts and grant applications.” (Odling-Smee et al. 2007)

2006: Eric Poehlman – a former professor at the University of Vermont, who was sentenced in June of 2006 to Federal prison for a variety of charges stemming from his falsification of research data. He's reportedly the first biomedical researcher to be imprisoned. (ORI 2006)

2006: Gerald Schatten – co-authored one of the papers Woo Suk Hwang fabricated. His part in the fabrication was investigated and he was cleared of misconduct but found guilty of “scientific misbehavior,” whatever that might mean. (Marris and Check 2006)

2006: Jon Sudbø – “a doctor and researcher at the Norwegian Radium Hospital in Oslo, [who] confessed in January 2006 to fraud on an extraordinary scale.” (Odling-Smee et al. 2007)

2008: Bengü Sezen – a former graduate student in chemistry at Columbia University. Two papers and part of a third that she worked on were withdrawn by her lab director when her work couldn't be reproduced; she is currently under investigation. (Odling-Smee et al. 2007)

2008: Rusi Taleyarkhan – a nuclear engineer at Purdue University who has failed to replicate his research into “bubble fusion.” His colleagues have claimed that he had “obstructed ... [their work] by removing shared equipment, declining to share raw data, and trying to stop them from publishing results that counters his own published work.” (Service 2006)

2011: Diederik Stapel – well-known Dutch social psychologist known for his splashy and counter-intuitive findings admitted fabricating data for many of his studies, said to extend to

“several dozens of publications” by a Tilburg University committee investigating him. “The report says he would discuss experimental designs in detail with collaborators and would claim to conduct the surveys at high schools and universities with which he had special arrangements. The experiments, however, never took place, and Stapel gave collaborators made-up data sets, investigators allege. In other instances, the report says, he told colleagues that he had an old data set lying around that he hadn’t had a chance to analyze. When Stapel did conduct actual experiments, the committee found evidence that he manipulated results.” (Vogel 2011)

2011: Marc Hauser – well-known psychologist who studied primate behavior and evolutionary psychology resigned from Harvard after he was “found responsible for eight counts of scientific misconduct by the university” (Bartlett 2011; see also Wade 2011)

2011: Poul Thorsen – a Danish scientist who allegedly “stole more than US\$1 million in research funding” following his term as a visiting scientist at the CDC. (Nature 2011)

2011: Vipul Bhrigu – a former postdoc at the University of Michigan was found guilty of misconduct for “sabotaging the experiments of a graduate student in his lab” in 2010. (Maher 2011)

Sources

Annas, George J. 1992. The Nazi Doctors and the Nuremberg Code: Human Rights in Human Experimentation. New York: Oxford University Press.

Bartlett, Tom. 2011. “Marc Hauser resigns from Harvard.” *The Chronicle of Higher Education* (July 19) <http://chronicle.com/article/Marc-Hauser-Resigns-From/128296/>

DeMets, David L. n.d. “Statistics and ethics in research.” Slide presentation. SlideServe. <http://www.slideserve.com/noelle/statistics-and-ethics-in-research-david-l-demets-ph-d-department-of-biostatistics-and-medical-informatics> (verified March 13, 2013)

Edsall, John T. 1995. “On the hazards of whistleblowers and on some problems of young biomedical scientists in our time.” *Science and Engineering Ethics* 1:329-340.

Hornblum, Allen M. 1998. Acres of skin: Human experiments at Holmesburg Prison. New York: Routledge.

Jones, James H. 1993. Bad blood: The Tuskegee syphilis experiment. New and expanded edition. New York: Free Press.

Jonsen, Albert R. 1998. The birth of bioethics. New York: Oxford University Press.

Krugman, S. 1986. “The Willowbrook hepatitis studies revisited: Ethical aspects.” Reviews of infectious diseases 8(1):157-162 (Jan-Feb).

Maher, Brendan. 2011. “Lab sabotage deemed research misconduct (with exclusive surveillance video).” *Nature News Blog* (April 27) http://blogs.nature.com/news/2011/04/lab_sabotage_deemed_research_m_1.html

Marris, Emma, and Erika Check. 2006. “Disgraced cloner’s ally is cleared of misconduct.” Nature 439:768-769 (Feb 16).

Nature. 2011. “Seven days: 15-21 April 2011.” *Nature* 472:264-265 (April 20) <http://www.nature.com/news/2011/110420/full/472264a.html>

- Nova. 1991. "Confusion in a jar." Coronet Films.
- Odling-Smee, Lucy, et al. 2007. "Where are they now?" Nature 445:244-245 (Jan 18).
- ORI. 2006. "Biomedical research sentenced to prison." ORI newsletter 14(4):1, 5, 11 (Sept).
- Reverby, Susan M., ed. 2000. Tuskegee's Truth: Rethinking the Tuskegee Syphilis Study. New and expanded edition. Chapel Hill: University of North Carolina Press.
- Rothman, David J. 1984. The Willowbrook wars. New York: Harper & Row.
- Service, Robert F. 2006. "Researchers raise new doubts about 'bubble fusion' reports." Science 311:1532-1533 (Mar 17).
- Stewart, Walter W., and Ned Feder. 1987. "The integrity of the scientific literature." Nature 325:207-214 (Jan 15).
- Vogel, Gretchen. 2011. "Psychologist accused of fraud on 'astonishing scale.'" Science 334:579 (November 4).
- Wade, Nicholas. 2011. "Scientist under inquiry resigns from Harvard." The New York Times (July 20) <http://www.nytimes.com/2011/07/21/science/21hauser.html>
- Washington, Harriet A. 2006. Medical apartheid: The dark history of medical experimentation on Black Americans from colonial times to the present day. New York: Doubleday.
- Wiley, Steven. 2008. "My favorite fraud." The Scientist 22(9):29. <http://www.the-scientist.com/article/display/54959/>
- Wright, David E., Sandra L. Titus, and Jered B. Cornelison. 2008. "Mentoring and research misconduct: An analysis of research mentoring in closed ORI cases." Science and Engineering Ethics 14:323-336.