Examples of research misconduct in the biosciences

Date	Who	What	Categories of misconduct	More details (case-sensitive URLs)
1912	Uncertain: Charles Dawson (?), Martin Hinton (?)	Piltdown man – 1912, Dawson reported finding of hominid remains in Sussex. Reputedly "missing link" between apes and man. Later shown to be skull of modern man with jawbone of orang-utan. Teeth had been filed, and bones chemically aged.	Fabrication	http://tinyurl.com/piltdownNHM
1932-1972	Oliver Wenger , Eunice Rivers *et al*	Tuskegee syphilis study, Tuskegee (Alabama). Poor African Americans with advanced syphilis were recruited to study into their "bad blood". Deliberately untreated in order to study long-term effects of infection, even after penicillin became available. Over 400 men involved (plus their families).	Consent Exploitation (Racism)	http://tinyurl.com/tuskegeecase
1940s	Joseph Mengele, Eduard Wirths, Karl Brandt, Viktor Brack, Rudolf Brandt, Karl Gebhardt, Waldemar Hoven, Joachim Mrugowsky *et al*	Medical experiments conducted by Nazi doctors. Included sterilisations, expt on twins, tests of potential chemical weapons, deliberate infections, human response to extreme physical conditions, bizarre transplantation expts. Led to Nuremberg Trial and first Code of conduct (1947) for research involving human subjects.	Consent Exploitation	http://tinyurl.com/naziexpts
1940s-1960s	MOD and MI6	Series of experiments at Porton Down on volunteers. Some believed they were testing drugs for curing common cold. Actually LSD, sarin, mustard gas, etc. No individual scientists prosecuted but in 2008 MOD agreed to pay total of £3M to surviving veterans.	Consent Exploitation	http://tinyurl.com/portondownbbc
1943-1972	Cyril Burt	Evidence for genetics of intelligence involving MZ twins reared apart. Research was foundational to importance placed on IQ testing and 11+ exam in Britain. Data same to 3dp in 3 different papers. Believed to have invented pairs of twins (and possibly co-workers)	Fabrication (? – he has supporters who dispute guilt)	http://tinyurl.com/burtcase (esp ref #23)

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1950s-1970s	Saul Krugman *et al*	New arrivals at Willowbrook State School for mentally retarded (Staten Island, NY) intentionally infected with hepatitis so that disease could be studied.	Consent Exploitation	http://tinyurl.com/willowbrookcase
1974	William Summerlin	Researching ways to overcome tissue rejection. Expts inc 'transplant' of fur from black mouse to white, but transplanted patches actually drawn on with marker pen	Fabrication	http://tinyurl.com/summerlincase
1978	Vijay Soman and Philip Felig	NEJM sent Felig a paper for review. Felig passed paper to Soman, his junior colleague. They rejected paper. A few months later, Am J Medicine sent original author a manuscript for review, authored by Soman. Clearly copied from hers. Additional data had been made up by Soman. Felig resigned but stayed on at Yale.	Peer-review violation Plagiarism Fabrication	http://tinyurl.com/Soman-Feligcase ; http://tinyurl.com/Felig-SomanNYT
1981	John Darsee	Worked at Notre Dame, Indiana, Emory and Harvard. May 1981, caught by colleagues labelling fresh data "24 sec", "72 hr", "1 week" and "2 weeks". When challenged, confessed to fabrication. Investigation raised questions about several other studies and it was noted his results in multicentre study had implausible internal consistency whilst disagreeing with other centres. Lost research position, 10 yr ban from NIH funding. Mentor had to return $122K grant.	Fabrication	http://tinyurl.com/darseecase
1988-1995	Dick van Velzen	Senior pathologist at Alder Hey, with expertise in cot death. Retained organs from ~850 children without consent. Struck off by the GMC. Along with Bristol Royal Infirmary scandal led eventually to Human Tissue Act (2004)	Consent Falsification	http://tinyurl.com/vanveltzen
1992-2002	Eric Poehlman	Jailed for a year in 2006 when he admitted making up data in papers and in grant applications relating to ageing, menopause and HRT. Also had to pay back $200K (a small fraction of the $2.9M he received via questionable grant applications).	Fabrication Falsification	http://tinyurl.com/poehlmancase

1993 - 2005	Jon Sudbø	Research into prevention of oral cancer carried out at the Norwegian Radium Hospital Oslo was found to be bogus. 2005 paper in Lancet involving patient information from database that didn't exist at time study took place was catalyst. Also found to have falsified image in 2001 NEJM paper. Eventually 15 papers (plus PhD dissertation) retracted.	Falsification Fabrication	http://tinyurl.com/sudbocase
1994-1995	Malcolm Pearce	Obstetrician at St George's London. Published 2 key papers (1) successful transplant of ectopic pregnancy to uterus healthy baby; (2) double-blind randomised trial on improving pregnancy success for women with polycystic ovary syndrome. Patients were made up. Attempted to hack computer to alter medical records. Struck off by the GMC	Fabrication	http://tinyurl.com/PearceIndy ; http://tinyurl.com/pearceBMJ (password needed)
1995	Geoffrey Chamberlain	Pearce's boss, accepted gift authorship on ectopic pregnancy paper. Reprimanded by GMC	Gift authorship	http://tinyurl.com/PearceIndy ; http://tinyurl.com/pearceBMJ (password needed)
1995-2006	Steven Leadon	U of North Carolina researcher found guilty of falsifying figure in DNA mismatch repair expts reported in 4 grant applications and 8 papers. Leadon claims systematic error not misconduct but no funding to contest claim.	Falsification	http://tinyurl.com/leadoncase
1996-2008	Scott Reuben	Formerly Head of Pain medicine at Baystate Medical Center, Springfield, Mass. Invented data, names of patients and co-authors. Suspicion first arose during routine audit in 2008. 21 papers retracted. Jan 2010, pleaded guilty. June 2010, sentenced to 6 months in prison, plus loss of personal assets of $50,000 and >$360K grant money.	Fabrication	http://tinyurl.com/ReubenWiki ; http://tinyurl.com/reubencase
1998	Andrew Wakefield	In 1998 Lancet published now infamous study linking MMR vaccine with autism. Data selectively reported. Paid children for blood samples at a party. Was receiving payments from lawyer to show link and had financial interest in companies producing test kit. May 2010 struck off by GMC, paper retracted.	Consent Conflict of Interest (financial) Conduct of clinical trial Exploitation	http://tinyurl.com/wakefieldcase

1999	James Wilson	Gene therapy trial at Uni of Pennsylvania in which Jesse Gelsinger died. Lead investigator Wilson was president and major stakeholder (30%) of Genova, company developing product under test, and U Penn itself had further stake. Issues during animal testing withheld from participants. As suffer, Jesse should not have been in Phase I trial.	Consent Conflict of Interest (financial) Conduct of clinical trial	http://tinyurl.com/gelsinger-case (inc comments)
2003 & 2005	Raj Persaud	Celebrity psychiatrist, found guilty of copying sections published in book and various articles. Admitted plagiarism but claimed accidental. Suspended for 3 months.	Plagiarism	http://tinyurl.com/persaudcase
2004-2005	Hwang Woo-Suk	2 landmark papers published in *Science* described production of human stem cell lines by SCNT. Turned out data fabricated or falsified. Also obtained human eggs for research by unethical means, inc requiring female researchers to superovulate.	Fabrication Falsification Exploitation	http://tinyurl.com/hwangcase
2005	Gerald Schatten	Senior corresponding author on 2nd fraudulent Hwang paper. "It is likely that the inclusion of Schatten as senior and corresponding author expedited publication of the fraudulent study and enhanced its credibility in academic circles" (Street *et al*, 2010). "Research misbehaviour"	Irresponsible authorship	http://tinyurl.com/schattenrole
2006	TeGenero (company), Parexcel (contract research)	First-in-man trial of antibody TGN1412, with 8 healthy volunteers at Northwick Park Hospital, London. 6 men receiving drug suffered multiple organ failure. All survived but some have permanent damage.	Consent Clinical trial design Clinical trial conduct (Animal research)	http://tinyurl.com/TGN1412case
2010	Joachim Boldt	Anaesthetist, leading expert on use of colloids to boost blood volume during surgery. Boldt had not obtained formal ethical approval for many studies (despite saying that he had). Some data statistically "too good". Suspended Nov 2010. Anticipation up to 90 papers may be retracted.	No ethical approval Fabrication (?)	http://tinyurl.com/boldtcase
2010	Vipul Bhrigu	Postdoc at U Michigan, caught on video sabotaging expts of colleague. 3 year ban (April 2011)	Fabrication (sabotage)	http://tinyurl.com/bhrigucase

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