Drugs and modern society

This option is concerned with the development of medicinal therapies from the end of the nineteenth century to the beginning of the twenty-first. Throughout, I want us to keep asking ‘What is a drug?’ The course is structured around a flexible framework of case studies of particular remedies, and we will discuss the development of the pharmaceutical industry, and explore questions such as, Who makes drug discoveries? What are the institutional settings for drug discovery? With particular regard to industry we will consider the impact of markets/demand/advertising (and the effect of distribution networks and the rise of the ‘branded’ good). We will also make some assessments of the changing patterns of human diseases, the inter-relationships of health policy and health care systems with pharmaceutical advances, including technological developments in formulation; manufacturing; marketing; drug packaging; storage; and drug delivery. What role do drugs play in the doctor-patient relationship? The geographical focus will be Western Europe and North America. There will not be a set reading for each week – rather a list of recommended readings that each student is encouraged to explore.

Assessment will be in the form of two essays each of c3500 words (excluding footnotes and bibliography). One will be chosen from a precirculated list, the other will be on a relevant topic of the student’s own choosing, with the agreement of the lecturer.

* available from given web-site
** available as E-journal from UCL library web-site – MAY NEED OFF-SITE AUTHENTICATION
*** available on Moodle

General and background reading

*The American Chemical Society’s website has several pages devoted to chemical history, which include:
  - Chronicles of Chemistry: http://pubs.acs.org/supplements/chemchronicles2/
  - The Pharmaceutical Century: http://pubs.acs.org/journals/pharmcent/index.html
Le Fanu, J (1999) The rise and fall of modern medicine Little Brown & Company


Moynihan, R & Cassels, A (2005) Selling sickness: how drug companies are turning us all into patients Allen & Unwin


*Rivett, G (1998) From cradle to grave: fifty years of the NHS Kings Fund. Some of these chapters are available at http://www.nhshistory.net/


Weatherall, M. (1990) In search of a cure: a history of pharmaceutical discovery OUP.

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**Week One: Pills, potions and the pharmaceutical industry: 1890-1918**

This session will examine the state of pharmacy, the beginnings of the pharmaceutical industry, particularly in Germany and Switzerland, and their impact on the USA and Britain at the turn of the twentieth century. The development of new biological therapies, sera and hormones will be highlighted, as will the impact of the first world war on the development of pharmaceutical research, production and marketing.

Readings:


Weatherall Chap 3

For light reading you might like to look at H G Wells’ Tono-bungay
Week Two: Interwar growth and specialisation, 1920-1939

The major therapeutic advances during this period will be discussed, focusing on insulin, vitamins and hormones. The role of organisations such as the League of Nations in supporting international agreements on Biological Standards, and the Medical Research Council in promoting national legislation on therapeutics will be included. This session will end with the discovery of sulphanilimide and the beginning of large scale introduction of sulphonamides.

**Advisory Committee on the Definition of Drugs (1930) Definition of Drugs for the purposes of medical benefit Lancet (March 1st) 467-468
There are a number of versions of this book, including a ‘25th anniversary’ edition, in which the author reflects on the process of researching & writing the book.

Week Three: Antibiotics:1939-1950, and beyond

Starting from the sulphonamides, this session will focus on antibiotic drugs and the discovery and usage of penicillin, its production and related legislation, including issues of industrial collaboration and liaison, and the increasing recognition of bacterial resistance.

Le Fanu chapter 1
   At http://www.ucl.ac.uk/histmed/publications/wellcome_witnesses_c20th_med/vol_32
   At http://www.ucl.ac.uk/histmed/publications/wellcome_witnesses_c20th_med/vol_6

There are numerous accounts of the discovery of penicillin, and biographies of those involved. You may like to look at the several books in the Wellcome Library and make an assessment of their contributions to the history of penicillin. Of the many biographies, those of Alexander Fleming and Howard Florey, both by Gwyn Macfarlane, are well worth longer perusal, and Eric Lax’s ‘The mold in Dr Florey’s coat’.
Week Four: Post war public health 1950s

This session will consider the growth of health care provision, especially the British National Health Service, and the concomitant expansion of therapeutic expectations, and public health initiatives. There will be a particular focus on vaccination programmes, especially the cases of polio and smallpox.


Week Five: Drugs for the mind 1950s - present

The impact of the discovery and therapeutic utilisation of Chlorpromazine will be considered, as will the development of drugs for a variety of psychiatric disorders, and the recreational use of drugs.

Readings


Healy has also edited a number of books of interviews with psychopharmacologists and the development of this specialised field.

Le Fanu (1999) Chapter 4


**Week Six: Thalidomide and Problems 1950s-1960s**

Using the thalidomide tragedy as a case study this session will examine, *inter alia*, issues of drug safety and relevant legislation, and the development of clinical trial methodology.

Readings


*FDA History at www.fda.gov/oc/history.


* The *James Lind Library* ‘has been created to introduce people to the characteristics of fair tests of treatments in health care’, and includes examples over many centuries, including some modern drug trials. It can be found at: [http://www.jameslindlibrary.org/index2.html](http://www.jameslindlibrary.org/index2.html)


***Weatherall, M. Chapter 14.

**Week Seven: ‘The Pill’ and pills – 1960s-1970s**

The development of the contraceptive pills will be considered, in the context of debates about the use of pharmaceuticals for 'non-medical reasons', conflicts between pharmaceutical companies and the medical profession, and consumer demand.

Readings


Week Eight: Maintenance; and new diseases and new therapeutic challenges

Case studies of drugs for long-term maintenance of chronic conditions including beta-blockers and cortisone (but also remember insulin).
An examination of how new health problems, especially the emergence of AIDS, and returning diseases like tuberculosis have provided new challenges to the pharmaceutical industry and policy makers, nationally and internationally.

Beta-blockers

Cortisone

AIDS

For light reading try John Le Carre’s *The constant gardener*.

Week nine: Genes, cancer and the biotech industry 1980 - present

This session will examine modern advances in genetic engineering, cancer research and the rise of biotechnology companies, including discussion of rational drug design and the impact of combinatorial chemistry.

Readings


**Week ten: Review and overview**

We will review the course as a whole. Each participant (depending on numbers) to take a subject or theme relating to one or more of the previous sessions, and to discuss it (for 5-10 minutes) in the context of the whole course.

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