Friends of

THACKRAY museum

Newsletter

No. 34, March 2010

Wednesday 21st April

7.00pm Friends' Annual General Meeting

7.30pm Dr Michael Waugh:

Join Genito-Urinary Medicine and See the World

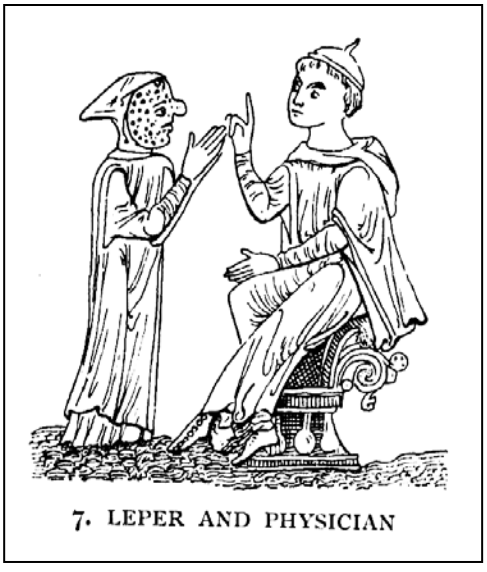
Dr Waugh's talk marks the 100th anniversary of the Discovery of Salvarsan, a landmark in the treatment of sexually transmitted diseases. Dr Waugh has travelled widely, seeing how different people view sexually transmitted disease.

Saturday May 29th 10am–12.30pm

Mediaeval Pestilence: evidence from the dead

Angela Boylston, MSc:
White Plague and Black Death in Hereford Cathedral

Dr Alan Ogden:
Leprosy in England: the Leprosarium in Chichester



7. LEPER AND PHYSICIAN

Friends News

The Friends of the Thackray Museum have continued their fund-raising efforts and as a result they have been able to contribute to several recent purchases of items for the Museum. In conjunction with Libraries and Archives Council's PRISM Fund on a '50:50' basis, the first acquisitions were acquired at auction on 30th September 2009, and Friends will have an opportunity to see some of the medals at the forthcoming AGM. (**PRISM** stands for the **P**reservation of **I**ndustrial and **S**cientific **M**aterial).

> **"Five prize medals awarded to W R Grossmith between 1851 and 1876, together with a company catalogue and a set of photographs, circa 1920 and two engraved silver prize medals awarded by the Manchester School of Medicine and Surgery in 1833 and 1834"**

Savigny Surgical Instruments

Another recent acquisition is the fine set of surgical instruments on the right, dated about 1800-1820, made by the Savigny Company, a manufacturer of whom the Museum possesses a beautifully illustrated catalogue. Friends have also contributed to the purchase of a splendid medicine chest with metal containers and sturdy case, which may have belonged to a naval surgeon.

Jim Garretts has kindly provided the information which made the purchases of the first group of items such an important complement to the Museum's collection.

The firm of WR Grossmith was one of the earliest of its kind, established around 1760 by one Mr. Sleathe, a relative of WR Grossmith. Grossmith took over the business around 1843, making artificial limbs and eyes. The connections not only with the Great Exhibition of 1851, but also 1862 (which was almost certainly for the London International Exhibition held at South Kensington), 1865 (which was almost certainly for the Dublin International Exhibition), 1873 (for the London Annual Exhibition of Fine Arts, Industries and Inventions) and 1876 (for the Glass Sellers Company Exhibition held at Alexandra Palace) are testimony to the company's national status. The Thackray Museum has a 1930 Grossmith catalogue in its collections, but hitherto no other relevant material culture from the company. To acquire an earlier catalogue, together with a collection of photographs relevant to the firm will be an invaluable asset to the collections.

The Medals

The Manchester School of Medicine and Surgery in Pine Street became known as the Manchester Royal School of Medicine and Surgery in 1836 and therefore these two medals date from the very early period of the school, following its establishment in 1824 as a *Preparatory School of Medicine and Surgery* by Thomas Turner. Moreover, James Lomax Bardsley (knighted in 1853) was also one of the founding lecturers.

The Thackray Museum currently holds five such medals in its collections, one being from the Manchester Royal School of Medicine and Surgery, which was awarded in 1852 and therefore these medals are highly complementary. Furthermore, these Manchester School of Medicine and Surgery medals feature hand-engraving, whereas the museum's later Manchester Royal School of Medicine and Surgery medal is struck.

Medicine and History – 11th Series 2009-10

SUNRISE TO SUNSET FOR MELANOMA:

The history of yet another medical myth

PROFESSOR SAM SHUSTER Nov 7th

It takes courage to withstand the tide of doctored evidence on which claims of a melanoma epidemic are based. Professor Shuster challenges the assertion that it is due to exposure to UV light, subjecting the claims to simple logic and reappraisal of the evidence.

Professor Shuster quoted current statistics on the incidence of invasive melanoma but is adamant that the increase is spurious.

Melanomas are pigmented tumours arising in the skin from pigmented precursor cells. Many of them are harmless and may be present from an early age as pigmented naevi. Others can appear at later stages in life and a proportion of them develop the capacity to invade locally and spread other parts of the body- invasive or malignant melanoma. Some, which have appeared to be quiescent for many years, may suddenly change character.

The risk of developing invasive melanoma in 1935 was 1/1500. By 2000 it was said to be 1/74. Cancer UK has accepted that Ultra violet light is the cause of the malignancy and glibly relates the increase to foreign holidays. On the back of this has followed fear of the sun, the promotion of sun-screens and cover-up clothes, self-examination, alarm over sun-beds and the establishment of special clinics for 'early diagnosis'. Yet the distribution of the lesions is paradoxical in that it does not favour the most exposed areas of skin. 38% occur on the trunk, and in Negroes they may occur on the soles of the feet.

Statisticians convinced themselves that UV exposure equalled melanoma. Over the same period pathologists have moved the diagnostic goal-posts but there has been *no* increase in grades of tumour and not much increase in mortality in spite of 40% increase in early diagnoses since 1970s.

Professor Shuster had even more short shrift for meta-analysis (the examination and statistical analysis of available published works on a particular topic), which he described in this context as 'making chaos look normal'- and 'was a method by which errors amplified by screening create artificial disease'. He described it overall as one of several areas of medicine in which there has been a rise in myths and decrease in logic.

Fear of litigation has led to protective excision but there has been a 40% shift in the diagnosis of early lesions since the 1970s. In spite of a huge increase in the diagnosis of early melanomas there has been no great increase in mortality. There is a need for studies comparing diagnosis of lesions made twenty years ago with diagnosis of the same lesions today but this would be almost impossible to set up.

The message is that there is no real increase in the incidence of malignant melanoma, that ultra-violet light is *not* the cause of the lesions. On the contrary, there is plenty of real evidence that Ultra violet light is beneficial by enhancing mood, promoting the manufacture of Vitamin D, suppressing immune reactions, and that it helps a number of skin conditions and cancers (Finssen won the Nobel Prize in 1906 for demonstrating its effectiveness in the treatment of tuberculosis). However over-exposure to sunlight *is* linked to basal cell and squamous cell carcinomas, which have a predilection of areas of skin most exposed as you might expect as UV damages DNA and an excision-gene repairs the damage.

Professor Shuster called the 'bastard science' of descriptive epidemiology an artificial food for an artificial epidemic. Worse still, he showed how errors amplified by screening create artificial disease. He forecast the death of clinical science as, 'regrettably, it is impossible to have a rational debate any more'. However if there is to be debate Professor Shuster will surely be an effective catalyst.

LMS

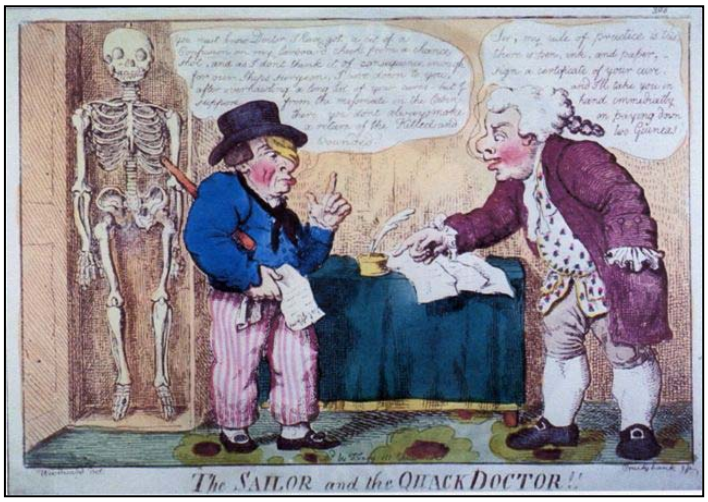
Levell NJ, Beattie CC, Shuster S, Greenberg DC Melanoma epidemic: a midsummer night's dream? ***British Journal of Dermatology*** 2009; 161 (3) 630-4.

DOCTORS RIGHT AND WRONG: The development of medical ethics

DR BRIAN SCOTT Dec 5th

I've just been re-reading Ruth Richardson's *Death, Dissection and the Destitute,* so I was particularly interested in hearing this lecture. Dr Richardson's book is a history of the period around the 1832 Anatomy Act, and a thorough analysis of a time when the ethics of the medical profession were highly suspect (as were those of the politicians and others involved in the passage of the Act through parliament). The book is in many ways an indictment of the leading figures in the medical profession, and especially of those involved in anatomy and dissection, who were the teachers of students entering

the profession. So, how have medical ethics improved since then? Dr Scott outlined the history of medical ethics, and its basic tenets, which stem from Hippocrates. His code of ethics can be summarised as: do your best, avoid harm, do not knowingly poison, do not procure abortion, use your medical skills and work within your competence, focus on the patient, don't have sexual relations with him or her, and preserve confidentiality - most of which have stood the test of time and are applicable today, with the exception of Hippocrates' ruling on abortion.



An early Code of Medical Ethics from 1803 was perhaps the first attempt to formulate a simple set of guidelines in this country. However, the way the code is enforced, and the complexity of the guidelines, has increased enormously - an American Medical Association code which was first published in 1847 has now grown to 504 pages. International guidelines are now more commonly applied to different aspects of medical ethics since the Nuremberg Code of 1947 codified rules on experimentation and was followed by the Declaration of Helsinki in 1964.

But Dr Scott described several examples of both good and bad conduct of medical experiments which demonstrated that rules will be ignored or creatively interpreted if the physician or surgeon so desires. Maurice Pappworth's 1967 book *Human Guinea Pigs* created great ill-feeling in the profession by naming names and specifying unethical experiments, and it is only comparatively lately that national standards have been adopted and independent committees introduced to enforce ethical experiments, with most recently the National Research Ethics Service of 2007.

Dr Scott also outlined the difficult ethical decisions that clinicians have to take. The first clinical ethics committees were formed in the 1960s, and there are now 85 in the UK. Their role is to consider the management of difficult cases, to educate and raise awareness of ethical issues, and to formulate policies and guidelines. But the cases Dr Scott described gave an indication of the complex problems faced by practitioners of modern medicine.

However he concluded that patients can be assured that today's medicine is practised within a strong ethical framework.

Is this the conclusion that Ruth Richardson reaches in the revised 'Afterword' in the 2001 edition of her book? She makes comparisons with earlier times when 'live' transplants of teeth were carried out, which had catastrophic long term effects on the donors, who were usually pauper children whose new adult teeth were 'harvested'. Nowadays there are cases of live kidney transplants from 'donors' who have, because of their poverty, sold their kidneys for a pittance. Is this ethical? Do such patients give truly informed

consent? Dr Richardson also writes at length on the subject of recent occurrences in the UK of unauthorised taking of specimens and organs from dead bodies, either for experimentation or re-use. Have ethical standards in these modern-day cases really changed so much since the period with which her book is concerned? Her cogent arguments suggest that we should be aware of the need for continuing vigilance in these matters, however many pages of guidelines, and however many committees claim to keep tight control.

Dr Christine Alvin

From *Aesop's Fables* retold in verse by James Michie, 1989

The Old Woman and the Physician

An old woman with an eye condition
Called in a rascally physician
With whom she agreed
That should his therapy succeed
She'd pay him a stipulated sum,
Otherwise nothing. Each day the doctor would come
And apply ointments designed to blur her vision,
Then steal some valuable article from her place.
When he'd robbed her blind, he suddenly used his skill,
Restored her sight and asked her to pay the bill.
She refused.
He took her to court, and there the accused,
Though admitting the facts of the case,
Stoutly maintained she was in the right:
'Your Honour, he may have improved my sight,
But I'm worse off than I was. Before I fell sick
I could see all my furniture plain,
Yet now my eyes are well again
I can't see a stick.'

DEATH IN 24 HOURS: Anthrax in Victorian Bradford

Jamie Stark, PhD student, University of Leeds and Thackray Museum, Jan 9th

A dramatic title: one that draws our attention to the word 'Anthrax', and reminds us of very modern fears: of terrorism, biological weapons, and of little-known substances that cause death in ways we find mysterious and therefore particularly threatening. Some of us will remember Gruinard Island, which, as Jamie Stark mentioned, was used as an experimental base for biological weapons in the Second World War, and only declared free from anthrax contamination in 1990. And very recently anthrax has been in the news for causing deaths after being mixed in a batch of heroin, and occasional cases arise from untreated animal hides used, for example, in drums.

But Jamie Stark's story was of earlier times, when anthrax caused sudden inexplicable deaths in 19th century Bradford, amongst woolsorters in Bradford's principal industry, manufacturing wool textiles. Workers became terrified of contracting this disease which killed so suddenly and frighteningly. It seemed to be restricted to those who sorted the newly opened bales of wool, which arrived from remote places - exotic fleeces such as alpaca, which gave the exclusive quality to the fabrics for which Bradford was renowned. The disease thus became known as Woolsorters' Disease, or the *Maladie de Bradford*.

A picture by John Sowden of Dr. J. H. Bell and reproduced by permission of the Bradford Corporation.

The perseverance of two key doctors in Bradford make this story one which exemplifies the development of medical research, and highlights the difference between 19th and 20th century approaches.

Dr John Bell was a campaigning general practitioner in Bradford, a man who realised the seriousness of the loss of the breadwinner to a family with no other means of support. He had spoken out about the lack of adequate sanitation and drains in the town, and berated the Corporation for its inadequacies. Now he began investigating the deaths among woolsorters, and questioning the mill owners over what he thought were *their* inadequate practices. Bell thought that the problem lay in the filthy condition of the fleeces as the sorters opened them up - 'Fragments of skin, possibly blood, scabs, maggots, moths, goat lice, bits of dung etc' were reported by the workers he interviewed, and the 'stench like a grave' of the mohair which was the chief suspect amongst the imported fleeces.

Eventually Bell came to the conclusion that the mysterious disease resulted from infection from the anthrax bacillus, and that some 'fallen' fleeces from sick or dead animals were the source. Working with other local doctors, members of the local Medical-Chirurgical Society, a Commission was set up to investigate the problem. This led to a set of rules intended to prevent the infection spreading to the sorters. But some deaths continued to occur despite the increased cleansing and other treatments the bales were subjected to.

It wasn't until the Anthrax Investigation Board was set up in the early 20th century, and Dr Eurich of Bradford was appointed as research bacteriologist, that the problem began to be tackled effectively. Eurich's work demonstrates the difference between the investigative methods of the two periods: Bell was working 'in the field', producing case studies of patients and deaths, and observing the conditions and procedures in mills.

Furthermore, he was unpaid, and fitted in his research with his work in Bradford's hospitals and as a family doctor. Eurich's approach was far more technical, as befitted his more modern medical education. He had a laboratory (albeit a small one hidden away in the Technical College), and spent much of his time studying and manipulating samples under his microscope; and he was paid, in addition to his salaried post as Bradford's City Bacteriologist. But this is not to belittle his dedication and hard work. Eurich was indefatigable in his attempts to discover an effective method of disinfecting fleeces. It was only after many years that formaldehyde was found to be the answer.

How many people were killed by anthrax in Bradford? The answer isn't known, because some deaths were undoubtedly attributed to other causes. But the fatalities were minimal compared with deaths from other common problems of the time - the great killers such as tuberculosis, cholera, or smallpox. And the woollen industry itself caused a multitude of deaths and health problems because of the conditions in which workers toiled, and the accidents that happened.

But the investigation and elimination of anthrax is a story of a local success, and a fascinating example of how local doctors without any special skills or equipment (or spare time) could make a difference to the lives of their fellow citizens, and could set in motion a process which led to the virtual elimination of a disease.

Christine Alvin

FIFTY YEARS OF MEDICINE - How it has changed

9th January 2010

Prof. Monty Losowsky qualified in Medicine in Leeds in 1955, since then the world has changed and concurrently medicine has evolved dramatically, due in part to the introduction of computers and the World Wide Web, the development of molecular biology and a massive increase in air travel. Now, because of DNA technology murderers can be brought to justice decades after their original crimes, air travel has brought 'medical tourism' and people with infectious diseases can arrive in the UK well within the incubation period of their disease. A Leeds man, Professor Astbury is regarded as the founder of molecular biology and Dr Thomas Nettleton from Halifax was among the first to use the statistical approach to evidence based medicine in his report on the results of smallpox inoculation in 1722. This was followed by Jenner's use of cowpox vaccination in 1796 as a safer alternative and leading to modern vaccination techniques. In 1966 the World Health Organisation introduced its programme of clinical smallpox eradication, and in 1974 was able to declare that this had been achieved World-wide, the first time that a disease had been completely eradicated.

Another Leeds man, Lord Berkeley Moynihan (1865-1936) one of the pioneers of modern surgery and President of the Royal College of Surgeons, declared that in his opinion surgery had reached its zenith and was unlikely to progress further, beautifully illustrating the danger of pontificating about the future, and failing to anticipate joint replacement, open heart surgery, organ transplantation, keyhole and robotic surgery and bionic limb replacements, all of which have developed in the last fifty years. Developments in molecular biology have led to gene injections treating certain types of blindness. Cracking the code for cancer mutations may lead to the development of individualised smart drugs being specific to individual cancers and with much reduced side effects.

Trastuzumab (Herceptin) is a monoclonal antibody used in the treatment of breast cancer, but only for those patients with tumours carrying the HER-2 receptors on the cancer cells (about 20% of patients).

Infleximab, another monoclonal antibody derived from TNF (Tumour Necrosis Factor) may be used to treat a wide range of inflammatory conditions such as rheumatoid arthritis and Crohn's disease. It is likely that in future many conditions hitherto regarded as incurable will become chronic conditions controlled by medication allowing patients to live a normal, or near normal life span.

The boundaries of health care may change from the emphasis being on the treatment of disease to the preservation and promotion of good health (as advocated by Avicenna in the 10th century, and more recently by Sir William Arbuthnot Lane in his book New Health for Everyone). This would involve adoption of healthy lifestyles, paying attention to factors such as obesity, exercise, smoking and nutrients. Supplements could include omega 3, pre-biotics and pro-biotics.

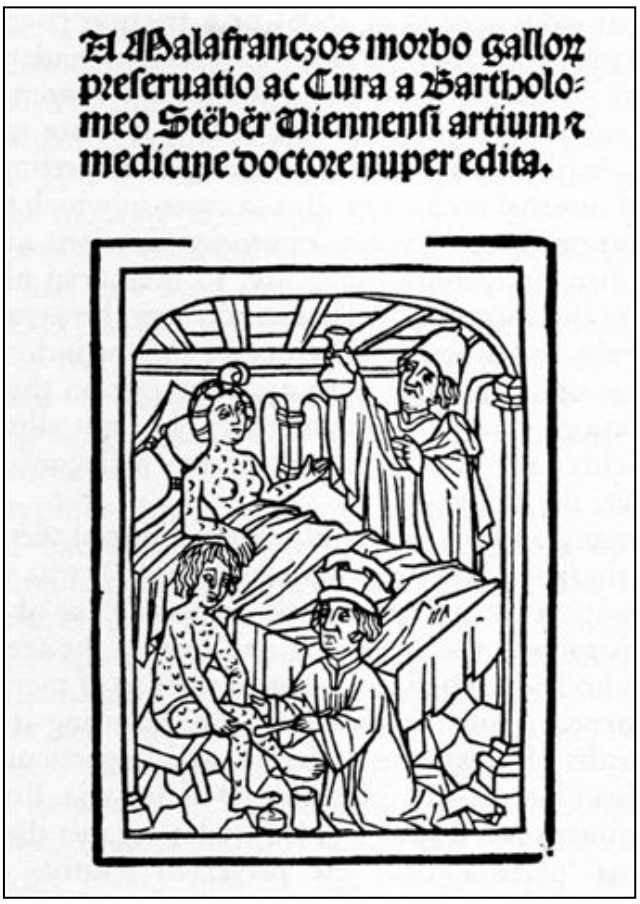
The importance of exercise was demonstrated by Prof J N Morris's study in the days when double-decker buses had a conductor who rushed around the bus, up and down the stairs collecting fares all day long, while the driver sat in his cab taking very little exercise. Drivers were at a much greater risk of a heart attack than conductors. Reference was made to the talk on Healthy Ageing by Prof. Judith Buttriss in October. Sir Clifford Albutt was the first to recognise the importance of hypertension and need for treatment, despite much controversy at the time.

It has recently been suggested that a 'Polypill' containing several low dose components which would be additive in their effect but have few side effects because of their low dose could be offered routinely to all aged 55 or over to reduce the risk of developing thromboses, hypertension, high cholesterol and osteoporosis. Initial trials are said to be encouraging and have halved the heart attack rate.

He emphasised the importance of accurate diagnosis by reference to the cereal sensitivity condition known as coeliac disease. People often complain of symptoms for many years before an accurate diagnosis is made and he used this to highlight the sources of error in diagnosis, especially when 'opinion' was the main tool in deciding on significance of observed changes as in breast cancer screening. Computer diagnosis is increasingly used by patients as self diagnosis, it can be useful in producing a differential diagnosis (a list of conditions that could be responsible for the symptoms), but this is not a definitive diagnosis and can be misleading and may not separate possibilities from probabilities, but may suggest rarities that need to be excluded.

There have been dramatic changes in some of our treatments as a result of clinical trials, for example our attitude to bed rest after heart attacks and major surgery in that early mobilisation has been shown to reduce complications, but we still do not have trial evidence for much of our work and what seemed to be a good idea at the time may be shown to be wrong by subsequent investigation! He concluded by highlighting the medical problems of developing countries where diseases such as measles may still cause enormous mortality, and where even basic hygiene may be completely lacking. Even we are faced with the possibility that over-prescription of antibiotics and the inevitable emergence of drug resistant strains may result in our return to the pre-antibiotic era, or face the possibility of having to use increasingly toxic drugs.
Ian Rothwell

In the light of Brian Scott's lecture on medical ethics (December 5th) Barry Travena's paper highlights the enormous changes in attitude which have occurred in the last 80 years.



TUSKEGEE SYPHILIS STUDY
In 1932, investigators recruited some 400 African-American sharecroppers with syphilis [referred to euphemistically as bad blood] for research related to the natural progression of the **untreated** disease in hopes of justifying treatment programs for blacks.

When the study began in 1932, standard medical treatments for syphilis were toxic, dangerous and of questionable effectiveness. Part of the study goal was to determine if patients were better off **not** being treated with such toxic remedies.

Additionally, researchers wanted to understand each stage of the disease in the hope of developing suitable treatments for each. Ethical considerations were limited from the start of this study and they remained that way throughout.

For example, the so-called volunteers were given a letter which started:
"Dear Sir, Some time ago you were given a thorough examination and since that time we hope you have gotten a great deal of treatment for bad blood".
Essentially, the letter was making an appointment with the nurse for a possibly dangerous, painful, diagnostic and non-therapeutic spinal tap. But it was couched in language which implied that the "volunteers" are being given treatment!

The letter concluded: *"Remember - this is your last chance for special free treatment. Be sure to meet the Nurse".* By 1947 penicillin was the standard treatment for syphilis, but rather than treat all these syphilitic subjects and close the study, or split off a control group for testing penicillin, the Tuskegee scientists continued the study, withholding penicillin and information about it. Participants were prevented from accessing syphilis treatment programs available to others in the area. Patients were lied to and given placebo treatments, so that researchers could observe the progression of the fatal disease.

The study continued for 40 years until 1972, when a leak to the press resulted in its termination. Eventually, in 1996, it prompted an apology by President Clinton to all affected by the study.

UNIT 731

No such apology has been forthcoming for this example - UNIT 731. It is not well known in the West.

The site of Unit 731 was at Pingfang - today a district in the outskirts of Harbin in China. In 1925, Japan refused to accept the Geneva Convention ban on biological weapons. Some years later they invaded Manchuria and established Unit 731 as a biological-warfare unit, disguised as a water-purification unit.

It is estimated that some 9,000 test subjects eventually died at this compound. Field tests of germ warfare on Chinese soldiers and civilians were also conducted including bubonic plague, cholera, and anthrax.

At the end of the Pacific War, Japanese troops blew up the headquarters of Unit 731 and killed the 150 remaining subjects. Some of the Unit 731 personnel ended up in the Japanese pharmaceutical industry.

Despite being warned that future generations would view his actions as questionable to say the least, United States General MacArthur agreed to grant immunity to members of Unit 731 in exchange for research data on biological warfare.

In his words: "The value to the U.S. of Japanese Biological Warfare data is of such importance to national security as to far outweigh the value accruing from war crimes' prosecution." His actions reflect badly on him today.
Barry Travena
Illustrations of historic treatment of Syphilis in the past from Christine Alvin.

BAFM: British Association of Friends of Museums

The Annual Conference and AGM was organised by the Friends of York City Gallery. Alan Swerdlow, co-ordinator for BAFM's Eastern region, gave a full report of the conference in his newsletter from which these excerpts are taken.

The conference was well-attended and he found it stimulating and enjoyable. Jo Rooks from the Museum of East Anglian Life won the Robert Logan Award. Jo spoke on 'Sustainability, social, economic viability, and environmental' and described the ways in which the Museum has engaged a wide cross section of local people. Their volunteers involve an age-range from 70 to 80+ and work includes rehabilitation of prisoners and people with disabilities offering skill training.

Tony Barnes, Chief Executive of Bradford Council, where they have 67 languages spoken and 6000 listed buildings spoke about the broader picture in Bradford and opportunities for tourism. Dea Birkett spoke about Kids in Museums and Alan recommends her website **www.kidsinmuseums.org.uk** where you can find 20 ways in which museums can be family friendly.

The 2010 conference will be held in the Isle of Man in October.

For your diary:

Yorkshire Medical & Dental History Society

Thursday April 22nd
Rod Amos: Chacun a son gout: 2500 years of gout.

Tuesday May 18th
Vivian Wyatt: The 1916 New York Polio Epidemic

Thursday June 17th
Liakat Parapia: Therapeutic Venesection – Killer or Saviour?

Wednesday August 18th
Mike Popplewell: Football and Dementia – Is there a connection?

Tuesday Sept 21st
Dr A.R. Ogden (Dept Archaeology, Bradford University):
Gristhorpe Man – bringing Britain's best preserved 4000 year-old to life.

Further details from Hon Secretary John Turney johnturney35@googlemail.com

Booking forms for all Friends' events are available from:
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