

# pathologynews

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CAMBRIDGE FUND FOR THE  
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To find out more about the  
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our website  
[www.path.cam.ac.uk](http://www.path.cam.ac.uk)

 UNIVERSITY OF  
CAMBRIDGE  
Department of Pathology

**NICOLA GRAVES,  
DEVELOPMENT OFFICER**

Welcome to the 2011 issue of Pathology News. I'm a new addition to the Department of Pathology and have the pleasure of editing your annual newsletter. Since joining the Department I've been amazed at all of the incredible work going on to combat major diseases and plan to use Pathology News to share as much of that as possible with you.

I'd also like to learn more about you and your areas of interest. Do you have an interesting tale about your time at Cambridge? Are you currently working on something that you'd like to tell fellow readers of Pathology News all about? Are you organising an event or activity that might appeal to other readers perhaps a reunion? If so, please email me at campod@path.cam.ac.uk

I look forward to hearing from you and to hopefully meeting many of you at Department of Pathology events over the coming months.

All the best  
Nicola

*Note: If you would prefer not to be contacted by us in the future, please let us know and we will ensure that you are removed from our mailing list.*

NEWS IN BRIEF



**AWARD FOR PROFESSOR MARK FIELD**

Professor Mark Field, of the Department of Pathology, has been awarded the CA

Wright Memorial Medal by the British Society of Parasitology. Prof Field and his group study intracellular transport mechanisms in protozoan parasites, particularly trypanosomes, with a view to understanding how these mechanisms contribute to disease mechanisms, as well as for the identification of novel therapeutics.

The CA Wright medal has been given annually since 1985 to a member of the British Society of Parasitology to recognise their outstanding contribution to the discipline of parasitology. The medal was presented to Professor Field at a medallist lecture on 31 March 2010 at the BSP's annual meeting in Cardiff.

**DIGITAL MICROSCOPY SYSTEM INSTALLED**

A digital microscopy system has been installed in the Department's teaching lab, initially for teaching Part IB of the Natural Science Tripos and the Medical and Veterinary Sciences Tripos. The system is currently being used in conjunction with optical microscopes and has already been met with great enthusiasm by both teachers and students.

Glass slides are first scanned, resulting in high resolution digital images which can then be viewed on computer workstations installed in the teaching lab or over the network (including the Internet). The system will help preserve the Department's collection of fragile glass slides which includes samples that are now increasingly difficult to obtain.

# HONORARY DEGREE FOR PROFESSOR ANNE COOKE

Professor Anne Cooke has been awarded an honorary doctorate by the University of Copenhagen, Faculty of Life Sciences. The University of Copenhagen was founded in 1479 and ever since, it has celebrated its foundation with an annual commemoration.

The Commemoration, at which Professor Cooke was awarded her honorary doctorate, took place on 18 November 2010 at the University's Ceremonial Hall in Copenhagen in the presence of the Danish Royal Family. Professor Anne Cooke has a long and outstanding background as an internationally leading scientist in the area of animal models for autoimmune diseases and the interaction between the mammalian immune system and the microbial environment.

The Commemoration made the following reference to Professor Cooke's scientific career. Professor Cooke is amongst the leaders in the field of basic immunology and autoimmunity. Professor Cooke has made several seminal findings relating to the regulation of the immune response particularly the regulation of autoimmune diseases. A special focus has been on elucidating the pathogenesis of type 1 diabetes in animal models and in the interaction of microbes with the autoimmune disease process. Professor Cooke has published more than 185 publications in international journals and many of her studies are published in the very highest ranked journals including Nature, Lancet and Nature Immunology. As well as having a long experience in teaching as a Lecturer and Professor she has given a multitude of lectures at international meetings, workshops and summer schools. It is anticipated that the award of honorary doctorate at the University of Copenhagen will stimulate further collaboration between scientists at the University with Professor Cooke's laboratory in the Department of Pathology, Cambridge University.



## Partnership with Local Solicitors

Alun Butler is a Partner of Woodfines Solicitors responsible for Wills, Probate, Trust & Tax and became a member of the Campod Committee in 2007. Woodfines has decided to be proactive in supporting a number of local charities and, with offices in Cambridge, Bedford, Bletchley, Milton Keynes & Sandy, has selected several local charities, including Campod, to join the Charity Wills Scheme.

Alun explains: "I work with a

number of charities and was impressed by the range of diseases that Campod is helping to prevent, by directly supporting research. It is really interesting to meet the scientists who are usually hidden away in their laboratories. They really are hidden heroes as their research paves the way for treatments and vaccines that particularly in the developed world, we sometimes take for granted".

Woodfines is offering clients a 20% reduction in its fee when they make a new will. They can either choose to donate this to Campod or one of the other charities, or of course, have the option to keep the reduction for themselves.

● Visit [www.woodfines.co.uk](http://www.woodfines.co.uk) or telephone 01223 411421



# 'JABS FOR THE BOYS' COULD HELP BEAT HIDDEN CANCER

The UK's leading mouth cancer campaigners have backed experts' calls for a widened STD immunisation scheme which could curb cancers in boys as well as young women. Leading academics have pointed to the links between cancer causing human papilloma virus (HPV) in mouth cancer cases, particularly amongst young men contracting the virus via oral sex. Currently the gardasil vaccine preventing HPV is only given to girls to combat cervical cancer cases. Now calls for jabs for boys have been backed by the British Dental Health Foundation, the charity behind Mouth Cancer Action Month in November each year.

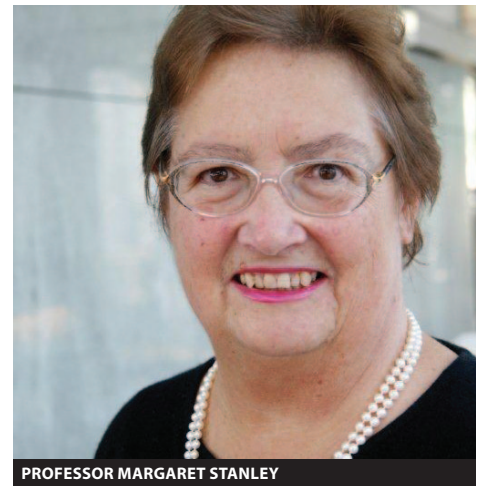
**“Mouth cancer hits some 5,000 people each year in the UK, killing one person every five hours.”**

Foundation Chief Executive Dr Nigel Carter said: “Mouth cancer hits some 5,000 people each year in the UK, killing one person every five hours. “It is time we took action to prevent this hidden killer, which is beginning to affect more and more young people. Expert studies suggest HPV is set to become the leading cause of mouth

cancer so let us be proactive and plan against this threat. “The Government sensibly rose above controversy to give anti-HPV jabs to young girls to curb cervical cancer. Mouth cancer affects far more people than cervical cancer, so surely it is time to widen the programme to boys.”

The gardasil vaccine debate has switched to boys after experts published findings of research into HPV-cancer links in February 2008.\* The US study saw researcher Maura Gillison, whose work has led to understanding the severity of HPV/mouth cancer links, suggest the virus could overtake tobacco and alcohol misuse as the main cause of mouth cancer within the decade.

Experts have urged governments to consider jabs for boys to expand the range of cancers targeted by the vaccine. The scheme would also help de-stigmatise HPV's status as a female issue. Speaking at a cancer conference in Melbourne, British expert Professor Margaret Stanley of the Department of Pathology, Cambridge University said: “These HPVs don't just cause cancer in women. They cause it in men as well. Cancer in the mouth, cancer in the anus and those cancers are very hard to treat. As an anti-cancer prevention strategy, I would have thought immunising boys was a sensible way to go.”



PROFESSOR MARGARET STANLEY

Mouth Cancer kills 1,700 people each year in the UK. Tobacco and alcohol abuse are linked to some 80% of cases, though a significant rise in the number of young men and women affected in recent years has been increasingly linked to HPV. Prevention and early detection are vital goals in reducing the impact of mouth cancer. Nine in ten patients survive the disease with early detection. In January we have seen further awareness raising of this issue with Professor Stanley appearing on the BBC discussing the impact of HPV on boys.

## Farewell Professor Wyllie

This year we bid farewell to our Head of Department, Professor Andrew H Wyllie who retires in September. He came to Cambridge from Edinburgh University in 1998, where he had been Professor of Experimental Pathology.

Professor Wyllie, DSc, PhD, FRCPath, MRCP trained in medicine in the University of Aberdeen. It was in 1972 whilst at Aberdeen as a PhD student that he, with his colleagues John Kerr and Alastair Currie, realised the significance of natural cell death in wide-ranging contexts in health and disease, a process they named Apoptosis. Since then he has continued to study the relationship of apoptosis to the genetic changes that are acquired in human cancer, in particular colorectal cancer. His work has been supported by grants from the Cancer Research Campaign (now CRUK), the MRC, and the BBSRC, and his publications have been cited more than 25,000 times.

Professor Wyllie has been the recipient of many accolades throughout his eminent career, amongst them the Murray Medal for the most distinguished graduate in medicine from the University of Aberdeen in 1967, the Bertner Award at the MD Anderson Cancer Centre, University of Texas in 1994, the Gairdner Foundation International Award in Toronto in 1999, and Nature Biotechnology's Special Achievement Award in 2001. He is a Fellow of the Royal Society, a Founder Fellow of the Academy of Medical Science and a Fellow of the Royal Society of Edinburgh. He is currently President of the Pathological Society of Great Britain and Ireland.

He has a considerable teaching commitment and is an honorary consultant histopathologist at Addenbrooke's Hospital in Cambridge.

We are honoured to have had the benefit of his wisdom and support and wish him the very best for a happy and enjoyable retirement. The search for the new Head of Department is currently underway. Before his departure we hope to do an interview with Professor Wyllie which will feature in next year's edition of Pathology News.



## Facts and Figures\*

- In the UK around 4,900 people are diagnosed with mouth cancer each year.
- In 2007 1,851 people died of mouth cancer.
- Mouth cancer is more common in men than women, but the gap is closing
- Mouth cancer is more likely to affect people over 40 years of age, though an increasing number of young people are developing the condition.
- Tobacco and alcohol are thought to contribute to at least three-quarters of mouth cancer cases.
- Smoking is the number one cause for mouth cancer. Cigarette smoke converts saliva into a deadly cell-damaging cocktail.
- Switching to low-tar cigarettes will not help, as smokers of 'lights' tend to inhale more smoke than smokers of 'regular' cigarettes.
- Poor diet is linked to a third of all cancer cases. Evidence shows an increase in fruit and vegetables lowers the risk, as can fish and eggs.

\*Provided by the British Dental Health Foundation.



\* Incidence Trends for Human Papillomavirus “Related and Unrelated Oral Squamous Cell Carcinomas in the United States”; Chaturvedi, A., Engels, E., William F. Anderson, W., Maura L. Gillison, M.; *Journal of Oncology*; February 1 2008

# The Legacy of Campod

Campod (Cambridge Fund for the Prevention of Disease) was founded in 1983 by a group of individuals keen to support the research work of the Department of Pathology. These early supporters recognised that the aim of the Department “to understand - and so ultimately arrest and reverse - disease processes of medical and social significance” had a charitable objective of benefit to wider society.

The group created a formal committee consisting of the Head of Department and other academic members of the Department with the sole charitable objective “To provide money for the support of research into the understanding and prevention of disease processes”. This committee structure and objective remain the same today. In 2009 the committee invited external members for the first time.

In the early days, committee members looked to their local communities for fundraising. Staff from the Department played a big role by taking part in social activities such as bowling, go-karting and barbecues. In 1993 the charity received a very generous bequest from a Miss Elizabeth Mann. We know little about our benefactor other than that she was an Alumna of Girton College, who studied Classics and Education and matriculated in 1977. After studying for an MA she went on to become the Librarian of Trinity College but sadly died at an early age. We will never know why Elizabeth chose to support Campod but can surmise that she possibly endured a disease and felt that this was her opportunity to help prevent such diseases in the future.

Her gift made a huge difference to Campod. It was invested in a fund that honours her name: The Elizabeth Mann Fund and it means that each year the Committee has funds available to award to researchers for vital equipment. Additionally, Campod continues to run a programme of fundraising activities that includes an annual Golf Challenge, Indulgence Evenings and films with discussions and lectures. In 27 years Campod has helped to purchase over sixty items of major research equipment for the Department of Pathology to a value of over £700k. Campod is such a unique charity in that donations are channelled directly to the research laboratory so that every penny makes a difference in the fight against disease. We are grateful for every donation we receive, however small.

- For the latest details on Campod events, please see [www.campod@path.cam.ac.uk](http://www.campod@path.cam.ac.uk)



## NEWS IN BRIEF

### CENTRE OF EXCELLENCE FOR LEUKAEMIA & LYMPHOMA

Dr Suzanne Turner and Professor Ming Du of the Department of Pathology are delighted to have been accredited as members of the Leukaemia and Lymphoma Research Cambridge centre of excellence. More than £9 million is currently being invested by Leukaemia and Lymphoma Research into vital blood cancer research in Cambridge, one of the top research centres in the world.

Research at the centre is focussed on understanding how blood cancers develop as well as research into new treatments and improvements in diagnosis for lymphoma and some of the rarer blood cancers.

### NATIONAL PATHOLOGY WEEK NOVEMBER 2010

The theme for National Pathology Week for 2010 was Mothers and Babies: the Building Blocks of Life. Building on events in previous years, the Department organised an Indulgence Evening to increase awareness of the work being done in the area of women's health, while at the same time raising funds for the Departmental charity CAMPOD. The event attracted over 200 guests and raised over £2,350. Thanks are extended to the University Arms Hotel for the generous donation of its ballroom for the evening and to Coast Ladies Wear, Boots and a number of other companies and individuals who offered their services free of charge.



# Cambridge scientists help African science to THRiVE

More than 80 Cambridge researchers have signed up to take their expertise to Africa to strengthen health research on the continent.



The new programme, which involves researchers from both Cambridge and the London School of Hygiene and Tropical Medicine (LSHTM), will seek to build up the skills and knowledge of African academics in seven institutions - in Uganda, Tanzania, Kenya and Rwanda - generating a “critical mass” of future research leaders in the field.

Africa has 11% of the world's population and a disproportionate amount of the world's diseases, but accounts for just 0.3% of the world's research output. The aim of the programme is to create a self-sustaining research infrastructure in Africa itself.

By matching the scientific interests of African scientists to relevant experts at Cambridge and the LSHTM, the “Training Health Researchers into Vocational Excellence in East Africa” (THRiVE) programme will initially support five postdoctoral fellows and 14 PhD students.

Professor David Dunne of the Department of Pathology and the Director of the THRiVE programme in Cambridge, said: “Even in the best African universities, shortages of PhD-level staff and internationally competitive research groups deny young research scientists sufficient mentorship and

advanced training, causing a serious block to African scientific progress.”

The programme has been funded with £5.2 million from the Wellcome Trust and is directed by Professor Nelson Sewankambo at Uganda's Makerere University.

The UK researchers will provide scientific mentorship and co-supervision plus access to individually tailored research training in the UK. They will also have the opportunity to travel to Africa, to interact with the students and their African supervisors in their home institutions.

More than 80 Cambridge academics (including researchers from the Wellcome Trust Sanger Institute) have offered their research experience in areas ranging from clinical medicine, biological sciences and veterinary medicine, to social sciences, mathematics and engineering.

“It has been astonishing,” Professor Dunne added. “I found myself pushing against an open door. I'm delighted about the breadth of expertise we are offering and the willingness of people to get involved.”

The programme has been modelled with a view to scalability. “In some ways, we've over-engineered the Cambridge organisation because we wanted to create a structure that can easily be built on,” said Professor Dunne. “The goal is to be capable of expanding the model into teaching, extending it elsewhere in Africa, and covering fields outside of health research. Essentially, the aspiration is to create a new way to build research capacity where needed - a new way for the University to interact globally.”

Image: Vincent A. Owino is a Kenyan PhD student working in the Department of Pathology and is supported by the Cambridge Commonwealth Trust. Through the THRiVE Programme, many more African researchers like Vincent will have the opportunity to receive research training in Cambridge labs from next year. Credit: Mark Mniszko.



# Featured Academic: Professor Tony Minson

Interview by Jane Rich

**T**ony Minson graduated in Microbiology from the University of Birmingham and was a post graduate at the Australian National University. He joined Cambridge University as a Research Associate in the Department of Pathology in 1976 and was appointed Professor of Virology in 1991. He was Chairman of the School of Biological Sciences from 2001-2003 and Pro Vice Chancellor for Planning and Resources from 2003-2009. He is a Fellow of the Academy of Medical Sciences, Chairman of the University Press Syndicate, Director of the Amgen Programme and a Trustee of the Animal Health Trust and the Lister Institute. Jane Rich went to meet Professor Minson to find out about his time in the Department.

### What are the major changes you have witnessed in the Department over the last thirty-four years?

Scale has been a major change – there are many more staff and students. When I first joined the Department we had approximately forty Part II students, we now have one hundred and thirty. The total research grant funding was a few hundred thousand pounds per year compared to the current nine million. I can remember when research grant funds were managed by an accounts clerk using a notebook! The levels of regulation and accountability have also increased dramatically. There was no Health and Safety Executive, Environment Agency, Human Tissue Authority, Higher Education Funding Council or Quality Assurance Agency back then. The need for accountability has hugely increased the administrative burden on the Department. The Head of Department and Departmental Secretary used to have the time to visit the entire Department once a week and talk to everybody; this would be impossible today as the Department has grown physically, as have their responsibilities. Back then it was a more relaxed world.

### Can you tell me about your role as Pro Vice Chancellor 2003 -09?

I was invited by Professor Alison Richards, the former Vice Chancellor, to join a team of Pro Vice Chancellors with a senior role responsible for planning and resources. The biggest job was setting the University's budget each year and the biggest change during this time was the devolution of financial responsibility to the six Schools

of the University. The responsibility for making priority and spending decisions had previously been micro-managed by the General Board. I was also involved in capital planning, particularly involving the expansion of the North West Cambridge, the Addenbrooke's and West Cambridge sites. In Cambridge nobody has power – I spent most of my time getting groups of people to come to an agreement. It was an interesting change of role from research and teaching at that point in my career.

### What are your research interests?

I've been studying herpes viruses since joining the Department. My major interest is how they get into cells, assemble and then get out of cells after their replication. I've collaborations on other topics, such as with Professor Margaret Stanley on the human papillomaviruses.

### What do you consider the biggest challenges to the Department in the future?

Obviously these are worrying times for everyone in relation to public funding. We face a probable future of cuts in Higher Education and science funding, yet we need to be competitive in our research, the life-blood of our academic endeavour. In the longer term our challenge will be to develop and maintain our niche as a Department, focussing on the teaching and studying of disease that straddles the clinical / non-clinical interface. With a pressure on translational research it is likely that the priority will move towards human

disease. We have a significant number of our staff dispersed over the Addenbrooke's site and we need to maintain and develop links with an expanding Clinical School whilst similarly maintaining a serious teaching and research operation in central Cambridge.

### In your opinion, what makes the Department of Pathology unique?

Each year we introduce four hundred and fifty bright young students to the study of disease in all its aspects; immunology and the response to damage, infectious disease, cancer. One hundred and thirty of these students choose to stay for Part II and nearly all of these will go on to become vets, medics and post-graduate researchers in biomedical science. No other Department in the University has that role. We are a key Department straddling clinical medicine and the biological sciences.

### I believe you are due to retire shortly?

I think it's time. I'm 66 and after serving as Pro Vice Chancellor it would be very difficult to get back into full time research and make a serious contribution. I have been giving the Part I lectures on viruses for over twenty-five years and a senior lecturer in the Department, Paul Digard, mentioned recently that he had attended my lectures as an undergraduate. That certainly focuses the mind! Also, I've recently become a granddad. Despite my retirement I hope to be actively involved in the University in a variety of different roles, which will, of course, include teaching in the Department.

## IN CELEBRATION OF SAM

**S**am Foye was 16 when he lost his battle with non-Hodgkin's Lymphoma. Since then his parents, Patrick and Valerie, have worked relentlessly to raise money to fund research into the disease. The Sam Foye Charitable Trust has generously donated £10,500 from the money raised so far to Dr Suzanne Turner's laboratory at the Department of Pathology, Cambridge, where they are working to find a cure. Dr Turner



recently attended a very moving ceremony in celebration of Sam's life and was presented with the cheque, which she says will be put to very good use. Sam's parents continue to find new ways to commemorate Sam's life and to raise funds to help others in their fight. If you would like to help, or would like more information about the trust, please email [patrickfoye@orange.net](mailto:patrickfoye@orange.net)



L-R DR SUZANNE TURNER, VALERIE FOYE, PATRICK FOYE, DR KAREN PULFORD

# Research Matters Pigs, Chickens and ... Tasmanian Devils!

Disease processes in animals are important not only for understanding disease in those particular species, but also for the insight they provide into human conditions. Three different animals that are currently being studied in the Department are pigs, chickens and ... Tasmanian devils!

## PIGS

One of the areas of research of Professor Nabeel Affara's group is an investigation into the genetic basis of sow aggression towards newborn offspring.

In the UK the breeding herd is 470,000 sows and about 7% (33,000) turn aggressive towards their newly born piglets resulting in the death of, on average, 12 piglets / litter. The cost of replacing breeding sows is estimated at about £100 million and added to this is the lost value of the litters.



Some pigs do display natural aggression and reasons cited for additional aggressive behaviour include external factors such as husbandry methods and social stress. However, Professor Affara recognises that the aggressive behaviour of a particular group of sows is different and is caused by changes during gestation and birth.

By conducting genome scan studies on tissue from the brains of aggressive and non-aggressive sows, his research group has highlighted a number of promising candidate genes and genetic pathways.



"In addition to the importance that this research holds for the pig industry, we are interested in this particular aspect as it offers a close model for the human condition puerperal psychosis. Puerperal or post-partum

psychosis is demonstrated by the sudden onset of psychotic symptoms following childbirth. Whilst this is a relatively rare condition it does occur in 1 in 1,000 mothers\*. It can lead to injury and in extreme cases maternal suicide and/or infanticide. Our long-term aim is to be able to identify those mothers, human and pig, who may have a genetic tendency towards these conditions. This will save the pig industry substantial costs but most importantly enable early and effective treatment for new mothers."



## CHICKENS

For over 30 years, Professor Jim Kaufman has been trying to understand the evolution of immunity, and has worked with animals from sponges

to humans. However, it is the chicken that has provided the basis of his most penetrating insights into the evolution of the adaptive immune system of jawed vertebrates. This is because of a rich literature on the responses of chickens to pathogens, which in turn is due to the enormous global poultry industry, whose interest in animal health has made the chicken the best studied non-mammalian vertebrate for the genetics of disease resistance and vaccine response.

As a basis for understanding the evolution of the immune system, Professor Kaufman has used the major histocompatibility complex (MHC), which is the genetic region responsible for tissue graft rejection. The class I and class II molecules of the MHC are extremely diverse between individuals, which is why tissue typing of recipients for heart and kidney transplants is so important. However, the real function of MHC molecules is to recognise non-self molecules, such as those from pathogens like viruses, bacteria, parasites and tumour cells, and the enormous diversity is due to a "molecular arms race" between host and pathogen, each trying to outdo the other.

Professor Kaufman's research has made substantial contributions to unravelling the evolutionary history of the MHC, as well as to potential vaccine strategies for poultry. In essence, the work has shown that the genomic organisation of the MHC differs between well-studied mammals and many, if not most, non-mammalian vertebrates. This difference in genomic organisation leads to a difference in the way in which the MHC works, which may be responsible for the mystery of why the MHCs of human and other mammals are strongly associated with autoimmune disease while MHC of chickens and fish are so strongly associated with resistance to infectious pathogens. The mechanistic reason for this difference is gene co-evolution, which together with the discovery of natural killer (NK) cell receptors in the chicken MHC suggests that the primordial MHC was the birthplace of the adaptive immune system of jawed vertebrates.



## TROUBLED TIMES FOR THE TASMANIAN DEVIL

Most of us are familiar with the Tasmanian Devil through the whirling dervish cartoon character in Warner Brothers' Looney Tunes. The real devil, *Sarcophilus harrisi* is a marsupial carnivore native only to Tasmania. Over time it has suffered population rises and falls relating to popularity. It was initially regarded as a pest but is now appreciated as an indigenous icon. Having a population restricted in size and contained within an island has led to a severely low genetic diversity that now presents a real threat to the species.

In 1996 it was first noticed that a number of animals were presenting facial growths that were verified to be malignant tumours. These spread through the population and by the early 2000s numbers had been reduced in some areas by as much as 89%. The location around the face (where devils commonly suffer bite wounds) and similarity of the tumours at cellular level seemed to suggest that this was a contagious cancer.



While in Sydney, Dr. Hannah Siddle showed that the low genetic diversity of the devils may have created a situation where the immune system was unable to distinguish between self and non-self. In particular, there is a lower



diversity of MHC class I genes in devils than in many other species, which may have allowed the tumour to leap from one devil to another without provoking an immune response.

Dr. Siddle is now working in Professor Jim Kaufman's lab in Cambridge, and continues her research into the major histocompatibility complex (MHC) of marsupials. In the long run, she hopes to contribute information to design of a vaccine to protect the devils from extinction by the tumour. Moreover, the analysis of this unusual kind of pathogen, a contagious tumour, may lead to results with implications for treating tumours in humans.

\*Terp IM, Mortenson PB (1998) British Journal of Psychiatry.

# Our History

**R**onald Ivan Norreys Greaves was born in Leicester in 1908 and educated at Uppingham School followed by Clare College, Cambridge and St Mary's Hospital, London. He became a demonstrator in Pathology at Cambridge in 1935 and held the Chair of Pathology from 1963 to 1975.

During his time at Cambridge Professor Greaves developed the ability to freeze dry plasma. When World War II struck in 1939, the need for human plasma on the battlefield was great and Greaves' procedure enabled thousands of litres of blood to be processed to remove the plasma, which was then freeze dried and transported to the areas of need, where it could be reconstituted and used. The process, known as lyophilization, saved many lives.

Professor Greaves died on 29th August 1975. The following is an extract from Professor Greaves' obituary, celebrating the life and work of a remarkable man.

## RIN GREAVES, MD, FRCP

Ronald Greaves was truly a Cambridge man and devoted himself to the Department of Pathology, Gonville and Caius College, and the University. From his early days in a pathology class created by HR Dean he was surrounded by distinguished people. He stood out among them as a worker determined to bring basic science into the then empirical subjects of medicine and pathology. As demonstrator in pathology he was given the job of preparing antiserum for teaching purposes; this was the start of remarkable discoveries on preserving serum by freezing and drying. Greaves' skills in electronics and physics enabled him to design equipment for simultaneously freezing and drying proteins. This work had wide ramifications for preserving plasma and micro-organisms. During the second world war he was fully occupied in developing techniques for preserving plasma; this work saved the lives of countless casualties of battle but never received the acclaim it deserved. He still managed to teach in the Department and in College, both of which were depleted of staff.

He became Reader in Bacteriology after the war and was a stalwart supporter of HR Dean, the Professor of Pathology for many years. A small group, the coffee club, used to meet daily. It included RM Fry and AN Drury. It was exciting to join them and listen to the cut and thrust of arguments on many subjects. Greaves sustained and spread this spirit of inquiry throughout the Department. He continued his own research but was always ready to listen and to comment on other people's proposals. Clarity of mind and generosity of spirit were his notable characteristics. He was always ready to help but never seemed concerned to advance his own interests above those of others.



Rex Features

His loyal support of HR Dean over the years made his appointment as Professor of Pathology a natural transition. As Professor he reorganized many aspects of the Department but still maintained the courses for Part I and Part II Pathology, which he believed was a fundamental part of preclinical education in Cambridge. He was a superb teacher both in formal lectures and in informal discussions, providing knowledge and wisdom and inspiring confidence. He had the happy knack of making any research problem appear to be the most important matter at the time.

He always seemed calm and collected and to some perhaps a little austere. Deep down there was fun and a delightful sense of humour. He tended to conceal his other interests. One day he announced that he had been made a Chevalier du Vin at Lyons: he was an excellent judge of wines, particularly those of Burgundy. In his spare time he was a fine gardener.

To many of us Ronald Greaves and the Department of Pathology are inseparable. He maintained an interest in it after his retirement, and we often talked about its growth. - GAG

## NEWS IN BRIEF

### CAMPATH CLINICAL TRIALS SUCCESS

Genzyme Corporation have reported five-year patient data from its completed Phase 2 multiple sclerosis (MS) trial. This sub-group analysis found that nearly 90 percent of alemtuzumab-treated patients were free of sustained accumulation of disability, and that patients receiving alemtuzumab also maintained improved mean disability scores and a low risk of relapse over the 60-month follow-up period. The majority of alemtuzumab patients received their last course of treatment at month 12 in the study. The CAMMS223 Phase 2 trial, first reported in the New England Journal of Medicine in 2008, compared alemtuzumab to the approved MS therapy Rebif® (high dose interferon beta-1a) in early, active, relapsing-remitting multiple sclerosis (RRMS) patients who had received no prior therapy. In the trial, alemtuzumab was given to patients in two or three annual cycles of not more than five days per cycle, while Rebif was given to patients three times per week, every week for three years.

## £3.2m grant from UKCRC

The UK Clinical Research Collaboration (UKCRC) has awarded a Translational Infection Research Initiative Phase 2 Consortium Grant of £3.2 million for a project to develop next generation tools to track MRSA infection, led by Professor Sharon Peacock, a clinical microbiologist at the Department of Pathology and Department of Medicine, University of Cambridge.

Having previously discovered that no two strains of MRSA are genetically identical, high-throughput DNA sequencing will be used to identify points in time and place

where MRSA has spread between patients, wards and hospitals. This will enable strategies to be implemented to track the spread of the superbug MRSA in hospitals and reduce the spread of infection.

The sequencing procedure can be used to identify the points at which MRSA transmission is occurring. Enhancing infection control at these points should drive down MRSA transmission and reduce the risk of MRSA infection for hospital patients. The scope of the project includes the development of a user-friendly application of the technology that can be rolled-out to a

wider audience of public health institutions and hospital laboratories.

If the technology can successfully be implemented as a way of tracking MRSA infection, it could be applied to combat other infections. As Professor Peacock explains "The implications for public health are clear. This technology represents the potential to trace transmission pathways of MRSA more definitively, so that infection control interventions can be targeted with precision and above all where there is the greatest need. This will also provide proof of principle for a technology that could be applied to many other pathogens that pose a threat to public health in hospital and community settings."

# Help us conquer disease and create a healthy future



## Campod

CAMBRIDGE FUND FOR THE PREVENTION OF DISEASE

**A charity supporting research in the Department of Pathology**

### HOW YOU CAN HELP:

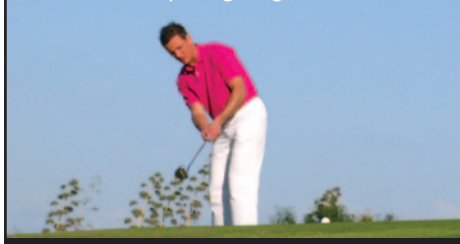
- **Donate.** Complete and return the slip below. Send a cheque, made payable to 'University of Cambridge' to: Campod, Department of Pathology, Tennis Court Road, Cambridge, CB2 1QP. Donate online at [www.path.cam.ac.uk/campod/support](http://www.path.cam.ac.uk/campod/support). We are grateful for gifts of all sizes.
- **Volunteer.** There are a number of ways in which you can help Campod, regardless of how much time you have to spare. Whether you'd like to help out at events, contribute to publications or organise fundraising activities of your own, please contact Nicola Graves at [campod@path.cam.ac.uk](mailto:campod@path.cam.ac.uk) or on 01223 330291.
- **Remember us in your will.** A legacy is an easy way to give, costing nothing in your lifetime. So, if you don't have a Will or intend to update an existing one, please consider including Campod.
- Your gift will directly help our researchers in their vital work to combat major diseases including cancer of the breast, ovary, cervix, bowel, brain, lymphoma, degenerative brain diseases, influenza, diabetes, arthritis, pre-eclampsia, bilharzia and sleeping sickness.

## 11th Annual Campod Golf Challenge

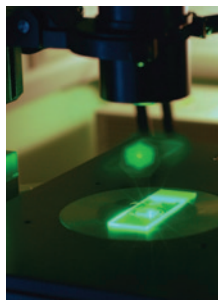
28th June 2011 | Ely City Golf Club  
Stableford fours competition  
£160 per team/£40 per player

### Price includes:

Coffee and bacon baguette on arrival  
18 holes  
Midway refreshments  
Barbecue and prize giving



For more details and to book call 01223 330291 or email [campod@path.cam.ac.uk](mailto:campod@path.cam.ac.uk)



**For more information about Campod visit [www.campod.path.cam.ac.uk](http://www.campod.path.cam.ac.uk)**

## I WOULD LIKE TO SUPPORT CAMPOD

I would like to donate  £25  other £ \_\_\_\_\_ *We are grateful for gifts of all sizes.*  
to Campod (Cambridge Fund for the Prevention of Disease) *Please make cheques payable to 'University of Cambridge'*

- I would like further information about supporting the Department of Pathology  
 I am a UK tax payer and would like Gift Aid to be collected on this and any future gifts to Campod.

*Return to: Campod,  
Department of  
Pathology,  
Tennis Court Road,  
Cambridge  
CB2 1QP, UK*

Title: \_\_\_\_\_ Forename: \_\_\_\_\_ Surname: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_