



The spin doctors



Dr Khai Lam, Specialist Registrar in Orthopaedics, has won the prestigious New Investigator Research Awards for his paper *Abnormal Signal Transduction in Degenerative Disc Disease: The Role of Tyrosine Phosphorylated Annexin I and II Proteins*. This was part of the research work performed, with a £25,000 grant award from the Wishbone Trust. Most of the work was conducted at the Institute of Infections and Immunity and the Centre for Spinal Studies and Surgery at the University Hospital. His co-authors include Dr Tom Baldwin, assistant Director of the Institute of Infections and Immunity, and Professor Robert Mulholland, Special Professor in Trauma and Orthopaedics.

A team of chefs from the University and the East Midlands Conference Centre has won a bronze medal in the 1998 TUCO challenge for campus-based chefs — their third win in what is widely recognised as the ultimate in a culinary university challenge. The University team of Sheran Beasley, Ian Litchfield, Robin Stokes and Gavin Brown cooked up a mouthwatering menu, which included poached fillet of lamb with a confit of marrow and saffron risotto cake and a medley of chocolate and orange with a lavender-scented sabayon.

A celebration of 50 years of the Universal Declaration of Human Rights has taken place in Nottingham organised by Amnesty International and Nottingham Oxfam. The document, which details 30 basic rights which belong to every person in the world, was the focus of a series of city-wide events which kicked off with a conference at the University. Organised in conjunction with the University's Human Rights Law Centre, speakers included Professor Patrick Twomey, filmmaker Martyn Gregory, Anne Callaghan of Amnesty International and Belinda Coote from Oxfam.

Professor David Nethercot has presented a Tempus seminar in Romania on the project to create a roof for the new Reebok Stadium — home to Bolton Wanderers FC. Professor Nethercot provided specialist advice to Watson Steel, the designers and constructors of the roof, which has already won the 1998 British Construction Industry's building section award and the 1998 special award from the Institution of Structural Engineers.

They were the 'spin doctors' of Nottingham long before the political mouthpieces and they made a major contribution towards the greatest scientific discovery of the 20th-century. But Simon Harvey wants to know, could they have done it all themselves?

It was back in the year the University received its Royal Charter that a team of scientists at Nottingham pioneered the spinning of biomolecules at high speed. Led by DO Jordan, known as 'DOJ' (pictured below) and JM Gulland, together with PhD student Michael Creeth, they made one of the most significant steps towards the discovery five years later by Watson and Crick of the DNA double helix.

The double helix demonstrated a special type of bonding called hydrogen bonding, between the building blocks (known as nucleotides) that make up a DNA molecule.

The Nottingham group worked in the physical chemistry laboratories, which were then in the Portland Building.

By using ultracentrifugation, together with other physical measurements, they showed

that DNA chains were known to be thin rods of precisely the right diameter for a double helix structure.

It was a special technique which involved spinning the biomolecules in a watery environment at high speed and analysing the progress of sedimentation as these molecules sediment under the enormous gravitational fields generated.

The technique, when used in conjunction with other hydrodynamic (water movement) methods, has told us remarkable information about the nature of biomolecules in their natural environment, their sizes and shapes and how they interact.

It was more than 30 years after Jordan's use of the technique that spinning returned to Nottingham with Professor Stephen Harding, who was one of the last to benefit from Creeth's approach by being his last post-doctoral research fellow from 1980-82.

Now with new developments at the National Centre for Macromolecular Hydrodynamics (NCMH) at Sutton Bonington, Professor Harding believes the University has over the last decade regained the international status in this field which it enjoyed 50 years ago.

largest world centre

The NCMH, supported as a national facility by the UK Scientific Research Councils, is arguably, the largest world centre for analytical ultracentrifugation and other hydrodynamic methods.

Two months ago the Leicester half of the NCMH joined their colleagues at Sutton Bonington and the extra capacity has allowed NCMH to form a direct interface with the needs of industry with the formation of the NCMH Business Centre to work alongside the NCMH unit.

But Professor Harding believes more credit is due to the original University pioneers who made such a significant contribution towards one of the greatest scientific discoveries of the 20th-century.

"Although full credit was given to the observations of the Jordan group by Watson and Crick in their prize-winning papers, it is interesting to speculate whether that crucial final step in the discovery of the double helix could actually have been made at Nottingham," said Professor Harding.

"The tragic loss of Gulland in 1949 from



Professor Stephen Harding

crash was a contributing factor to the disintegration of the Nottingham group by the time that Watson, Crick and Wilkins matched the Nottingham group's observations.

"Jordan then moved to Adelaide in 1953 and Creeth joined him as a senior lecturer.

"Although the analytical ultracentrifuge was not invented in Nottingham, Jordan's group was one of the pioneers in the UK, the others being Ogston's group at Oxford and Johnson's group at Cambridge."

The early success of the Nottingham pioneers was recognised at a joint meeting of the British Biophysical Society and the Biochemical Society on the Analytical Ultracentrifugation held recently at Sutton

Bonington and attended by Michael Creeth and his wife.

"It is in many ways a tribute to the early work carried out at the University that the latter day spin doctors have, in developing the methodology and providing a highly popular facility throughout Europe, played a leading role in the renaissance of this and other hydrodynamic methods in general," added Professor Harding.

"It now plays a leading role in training with the highly successful MSc course in Applied Biomolecular Technology run in conjunction with colleagues at Sutton Bonington, Life Sciences, Pharmacy and the QMC — training spin doctors for the future."

The University of Nottingham's Human Rights Law Centre is building on its previous work with countries in transition by looking at the Ukrainian criminal justice system. The project, initially for 18 months, is being funded by the Department for International Development (DFID) under its Know How Fund. The overall aim of the project is the protection of human rights through reform of the Ukrainian criminal justice system. Respect for human rights is intrinsic to a fair and effective legal system. The project partners will identify elements of the Ukrainian criminal justice system amenable to reform through training workshops and materials, and exchange visits. On the basis of lessons learned from these activities, proposals for longer term measures will be formulated. A key feature of the project is a pilot study reviewing existing probation services. Collaboration with those working in the Ukrainian criminal justice system and an increased awareness of criminal justice issues throughout civil society as a whole, are essential features of the project. The Human Rights Centre will work in close partnership with expert consultants in both the Ukraine and UK, including the Institute of Internal Affairs, Kyiv and the Inner London Probation Service.

Dr Ian Eames of the School of the Built Environment, has been awarded the Barker Silver Medal by the Chartered Institute of Building Services Engineers at their national conference dinner at Bournemouth. The medal was awarded for a paper entitled *Charging a thermal (ice) store: Results of a theoretical and experimental study*, which was published in the CIBSE Journal recently.

Nurse tutor Aru Narayanasamy has been highly commended in the Foundation of Nursing Studies 1998 Mallabar Awards for a project initiative entitled *Implementation of transcultural Nursing Practice*. The award was presented by Baroness Hayman.

The University of Nottingham Conference Centres brand has been launched to promote the dynamic diversity of the developing name and reflect its core values. The new gold logo features the familiar red University castle and will complement further new logos for East Midlands Conference Centre and Event Management Service.

