Oliver Bird Collaborative Centre at Newcastle

PRESS RELEASE

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Prevention and treatment of joint inflammation and damage

MAJOR NEWCASTLE TRAINING INVESTMENT IN TOMORROW'S EXPERTS IN BONE AND JOINT DISORDERS

Specialists in bone and joint disorders at the University of Newcastle have been awarded more than £500,000, creating an outstanding opportunity for five highly talented young students to receive advanced scientific training in rheumatic disease research.

Newcastle University is one of just five UK centres to receive this prestigious award from the Oliver Bird rheumatism programme, which supports research into the prevention and treatment of rheumatism. The money will enable Professor Tim Cawston, head of the department of rheumatology, to implement a comprehensive four-year training programme that will give his students experience in cutting edge research ranging from genetics and nanotechnology through to bone imaging and the development of new treatments.

"We have a lively and ambitious culture of research here in Newcastle," said Professor Cawston. "We want the students we recruit to help us generate new links between the different areas of expertise. Therefore, we are seeking students who are not only motivated by laboratory research, but who want to perform work that will help patients with joint diseases."

The research programme will aim to find out whether it is possible to prevent joint destruction, how other cells behave when the tissue is destroyed and whether the body's own immune system can be 'switched off' to avoid further damage. To achieve this, the students will work with Professor Cawston and his colleagues on the study of the cells and genes involved in joint destruction and try and uncover the mechanisms responsible for the loss of cartilage and bone. The programme will form strategic links with the Institutes of Ageing and Health, Human Genetics and Cell and Molecular Biosciences to bring together scientists with a unique range of different skills.

The drawback for patients who have had a knee or hip replacement is the limited lifespan of the materials used for artificial joints. Students will work with Dr Mark Birch and Professor Andrew McCaskie on the design of new and better biomaterials, part of which will allow the students to learn about the application of nanotechnology in the design of new and better joints.

Professor John Isaacs will, in the spring of 2004, set up the North of England Immunotherapy Centre at the Royal Victoria Hospital in Newcastle, the first of its kind in the UK. The students will help to discover if it is possible to re-educate the immune system so that the body does not attack itself, which is characteristic of rheumatic diseases. Volunteer patients will participate in the development of immunotherapy, a new form of treatment that is generating world-wide interest from doctors and scientists. "The stage is set for putting good ideas into practice," said Professor Isaacs.

In the UK today, rheumatic disorders, which cover over 200 different diseases, are extremely common and affect over eight million people of all ages and the numbers are rising each year. Over three million adults are physically disabled and one in every thousand children suffers from arthritis. Around 1500 patients in Newcastle are already involved in studies following the progress of rheumatic diseases and the information they provide is crucial to laboratory science and clinical care.

Professor Cawston said, "Our newly formed Oliver Bird Collaborative Centre will give students a real chance to make their own discoveries and to help make a difference to the lives of people with joint diseases. We believe they will 'get the bug' for doing research and be excited by their own unique knowledge."

LIVING WITH RHEUMATOID ARTHRITIS
Mark Brown, Newcastle

Being an electrician is not easy when you have rheumatoid arthritis, but 42 year old Mark Brown has learnt to adapt – and refuses to be beaten by his illness.

The first signs occurred 11 year ago when he woke up one morning with sharp pains in his wrist. He assumed he had been sleeping awkwardly and thought no more of it until a few days later when the same thing happened but in the other wrist. The doctor thought this was suspicious and blood tests revealed rheumatoid arthritis.

Mark rapidly became worse. It spread to his elbows, fingers and feet. When it affected his shoulders, the pain prevented him from sleeping. It was so bad that he had to take time off work. Eventually he had to give up football which he used to play two or three times a week.

Fortunately, he was able to return to work and is helped by power steering in his car and electrical power tools. Crawling around lofts and along joists is a challenge because of the weight his wrists and elbows have to bear. "But I have found a way of rolling over to get up without adding extra pressure," he says.

It is not just Mark who suffers. "I became short tempered. I get angry with myself," he admits, but his family are very supportive and his wife monitors his medication that keeps the disease under control, although he is usually in a lot of pain.

Mark has a positive attitude. "When you give in you just go down hill," he says. He has taken up golf, which is easier on his joints than football. Looking on the bright side is, he finds, essential as a way of coping.