Oliver Bird Collaborative Centre at University College London

PRESS RELEASE

Coordinator: Professor David Isenberg
Centre for Rheumatology, University College London, 4th Floor Arthur Stanley House, 40-50 Tottenham St, London W1T 4NJ Tel: 020 7380 9230 d.isenberg@ucl.ac.uk
From Bones to B Cell Biology

LEADING-EDGE BONE RESEARCH OPPORTUNITY FOR STUDENTS AT UNIVERSITY COLLEGE LONDON

Specialists in bone and joint disorders at University College London 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.

University College 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 David Isenberg, academic director of rheumatology, to implement a comprehensive four-year training programme that will give his students wide-ranging experience from cell biology and genetics to the treatment children of with arthritis.

"Our approach to arthritis research seeks to improve our understanding of the various causes of arthritis in order that we may move more effectively from the laboratory bench to bedside," said Professor Isenberg. "The Oliver Bird rheumatism programme is a fantastic opportunity for young researchers guided by our talented established investigators to combine their ideas and for collaboration between several centres of excellence."

The research programme for the students draws on the strength of five institutions that encompass research into the interacting factors, such as hormones, infection, environment and genes that cause bone and joint diseases. "Therapy for these diseases has improved in the past decade but is still not as good as it should be. But until we understand the underlying causes, we will not be able to improve treatment," he said.

At the Royal Veterinary College lead by Dr Tim Skerry research is focused on how bones and cartilage adapt to muscle power. There are world-leading experts at the Royal Free Hospital, including Professor Mark Pepys and Dr Chris Denton specialising in inflammation and immunity while Professor Isenberg's own group is studying immune cells, known as B cells, that cause the body to attack itself, in a process that he describes as 'friendly fire.' New 'smart' materials for the surface of replacement joints are being developed at the bone and mineral centre at UCL under the direction of Professor Mike Horton where there is also an osteoporosis clinic. And at the Institute of Child Health, research into the genetic basis of juvenile arthritis lead by Professor Pat Woo is being carried out as well as the feasibility of gene therapy. The students Professor Isenberg recruits will spend time in each of these institutions.

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. At a personal level, arthritis is devastating, particularly for young people in their 20s and 30s. Around 50% of people of working age who are diagnosed with rheumatoid arthritis cannot work due to chronic pain and fatigue, depriving them of their independence and self-esteem.

Professor Isenberg said, "Our newly formed Oliver Bird Collaborative Centre will give students the chance to pursue a career in this fast-moving field. We will enthuse them with the excitement and challenges science has to offer. It is a very exciting time to be in rheumatology."

LIVING WITH RHEUMATOID ARTHRITIS
Kay Ford, London

It is hard to imagine how awful it must be not to be able to hold your new baby because your arms hurt too much. That is how it was for Kay Ford from London. She had had a very difficult pregnancy. Her limbs suddenly became painful and swollen: it was agonising even to put her feet on the floor. Many pregnant women suffer from cramps, she was told at the anti-natal clinic, and it would probably just go away in time.

But when she woke up one morning screaming in pain and unable to move, she was admitted to University College Hospital in London and the doctor diagnosed rheumatoid arthritis. Kay was just 31 years old. "I always thought arthritis was an old person's disease," she says. "I never thought it could happen to someone young like me."

Kay's family rallied around and helped her raise her son, Jake, but even with their unfailing support, trying to cope as a single mum and learning to live with arthritis meant that the first 18 months after Jake was born were, she admits, the worst time of her life. Kay often could not feed him or change him, or push him in his pram or play with him.

She did find ways to cope, however. She moved into a bungalow in Chingford and made adjustments such as a walk in shower and a special bath seat and taps. Life became easier as Jake, now 11 years old, learned to do things for himself and helped Kay with normal daily activities. "He is a very caring and mature boy," she says.

Kay's strength of character no doubt gave her the courage she needed for the years of surgery and treatment. She has had 15 operations in 11 years. The arthritis progressed so fast that by the time Jake was one and a half years old, her left hip had been eaten away by the disease and she needed a total hip replacement. "For a while, miraculously, all the pain and stiffness disappeared and for a few years I was able to do most things but gradually it crept back, first into my hands and elbows," she says. She has had to have both ankles, her fingers and thumb fused, her tendons repaired and numerous boney nodules removed. The drugs she is on, TNF alpha blocking drugs, have improved her life. "I wish they were available 10 years ago as they would have helped prevent some of the destruction of my joints," Kay says.

Despite all this, Kay has a good social life and with a bit of planning, enjoys holidays and shopping. She remains independent and drives a car adapted for her mobility. "Of course you get upset and frustrated when you can't do things," she says. "But either you learn to live with it or you end up miserable. I do what most people do but I just have to arrange things differently."