

**Imperial College Healthcare**  
 The UK's first Academic Health Science Centre  
 delivering breakthroughs in medical research  
 directly to its patients.

## News

### Retrieving the answers from bedside to bench and beyond - 01 December 2008

A new centre has opened to bring together clinicians, scientists and industry to improve the outcomes of common hip replacement surgery.



The London Implant Retrieval Centre (LIRC), opened last month at Charing Cross Hospital, is the first of its kind to systematically evaluate the failure of metal on metal partial hip replacements.

It does this by collecting failed implants and associated blood and tissue from hospitals across the country and performing a series of sophisticated tests to determine the underlying cause of inflammation and failure of the original procedure. The tests include MRI and CT scanning, specially adapted for use with metal hip implants, to look at positioning, and investigations on blood and tissue samples to determine metal levels. Examination of some prosthesis has shown wear at a rate that is 70 times greater than predicted.

Alister Hart, consultant orthopaedic surgeon at Imperial College Healthcare and senior lecturer at Imperial College London, is the principal investigator of the centre, which he co-founded with John Skinner, consultant orthopaedic surgeon at the Royal National Orthopaedic Hospital Trust.

He said: "Metal on metal hip replacements are becoming increasingly common especially for young people who want to stay active. While most are successful a substantial number needed to be revised after patients experience severe yet seemingly unexplained pain.

"What this centre aims to do is to bring clinicians, industry and basic scientists together to discover exactly why this is happening by taking research from the bedside back to the bench and beyond."

Professor Jagdeep Nanchahal, chief of service for musculoskeletal services, said: "This project is an excellent example of the academic health science centre in action. Our clinicians are working with colleagues in other centres to identify a problem and using the resources of the Trust and Imperial College to unravel the underlying mechanisms and improve patient care."

Professor Justin Cobb, an adviser to the centre, cut the ribbon to open the centre on November 14.

The LIRC is a research collaboration between Imperial College London, The Royal National Orthopaedic Hospital Trust, the British Orthopaedic Association, the Association of British Healthcare Industries and eight orthopaedic companies who are helping to fund the project.

So far the centre has collected almost 170 failed implants, one of which came from Trust patient Susan

Scott.

Susan was referred to Charing Cross Hospital for examination after experiencing excruciating pain following a metal on metal hip resurfacing at her local hospital in Doncaster.

After conducting a series of tests Mr Hart found a very severe inflammatory reaction and together with his colleague and fellow orthopaedic consultant Angus Lewis, removed the original prosthesis and carried out a total hip replacement.

Susan said: "I think it is fantastic that Mr Hart and his team are really trying to find out why hip replacements like mine failed. I would not want anyone to go through what I went through."

The centre's key clinical scientists, who are all based at Charing Cross Hospital, are Barry Sampson (consultant in clinical chemistry), Ann Sandison (consultant histopathologist), Johann Henckel (SpR and clinical fellow in orthopaedics) and Adam Mitchell (consultant radiologist).

The engineers that measure the wear of the implants are Richard Underwood and Philippa Cann, from the department of mechanical engineering at Imperial College.

**ENDS**

Notes to Editors

- The Imperial College Healthcare NHS Trust comprises Charing Cross, Hammersmith Hospital, Queen Charlotte's & Chelsea, St Mary's and Western Eye hospitals. It is the largest Trust in the country and, in partnership with Imperial College London, is the UK's first Academic Health Science Centre (AHSC).

For more information please contact :

Cymbeline Moore

The Imperial College Healthcare NHS Trust Press Office

Telephone: 020 8383 3005

Out of hours: call 020 8846 1234 and ask for the on-call press officer

Email: [cymbeline.moore@imperial.nhs.uk](mailto:cymbeline.moore@imperial.nhs.uk)

Imperial College  
London

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