

A Healthy Approach to Innovation

The Regional Medical Physics Department excels in the design and development of novel medical devices to meet a recognised clinical need. One of our key objectives is to ensure that these are commercially exploited for the benefit of patients, staff and the NHS.

The Department operates an active and successful technology transfer programme and are nationally recognised as a leader in the field.

A snapshot of some of our successes are shown below:

- The Sunderland Air Pressure Meter
- Pupilometer
- Laser Doppler Imager
- Paediatric Imaging Chair
- The Durham Erythema Tester
- UV Protection Mask (Medimask)
- Electronic Display Sphygmomanometer (Accoson 300)

The Sunderland Air Pressure Meter – *is an aid for voice restoration in patients who have undergone laryngectomy.*

Design and development team at Sunderland Royal Hospital:

- Bill Allan, Clinical Scientist, Clinical Instrumentation
- Caroline May, Senior Physicist, Clinical Instrumentation
- Ann Hurren, Senior Speech and Language Therapist
- Peter Samuel, Consultant ENT Surgeon

Licence to manufacture: Canford Audio plc, Washington, Tyne and Wear

Awards:

- 2004 NHS Innovations at Work
- 2005 Sternberg Award for Clinical Innovation
- 2005 National Innovations ‘Innovative Technology’ category
- 2006 IPEM Manufacturers Award

Pupilometer – *measures pupil reaction, speed and size in patients with suspected brain injury.*

Design and development team at Newcastle General Hospital:

- Andy Clark, Medical Technologist, Critical Care Physics
- Iain Chambers, Clinical Scientist, Critical Care Physics
- Tom Clark, Consultant Anaesthetist

Licence to manufacture: Medical Device Management Ltd., Devon.

Awards:

- 2003 Innovations at Work
- 2005 IPEM Manufacturers Award

Laser Doppler Imager – *displays changes in peripheral skin blood flow resulting from injury, disease or temperature. The imaging system is used in various areas of medicine including dermatology and burn management.*

Design and development team at Newcastle General Hospital:
Two former members of staff of the Department – Phillip Byrne
and Tim Essex.

Licence to manufacture: Moor Instruments, Devon.

Awarded Millennium Product Status by the Design Council in 1999.

Paediatric Imaging Chair – *specifically designed for the optimum positioning of children undergoing kidney scans.*

Design and development was carried out by Rob Beckwith, Medical Technologist at the RVI, Newcastle.

Licence to manufacture: Bright Technologies Ltd., Sheffield

Won first prize in the Amersham Health Awards 2003

The Durham Erythema Tester – *measures the sensitivity of a patient's skin to ultraviolet (UV) radiation before they embark on a course of UV treatment for their skin disease.*

Design and development team at University Hospital of North Durham.

- Phil Saunders, Clinical Scientist, Clinical Instrumentation
- Brian Diffey, Clinical Director of RMPD

Licence to manufacture: Hybek Ltd., Leicester

UV Protection Mask (Medimask) – *protects the face during ultraviolet phototherapy for skin diseases.*

Design and development by Brian Diffey, Clinical Director of RMPD

Licence to manufacture: Hybek Ltd., Leicester.

Electronic Display Sphygmomanometer – *blood pressure measuring device that does not contain mercury but instead uses a silicon chip sensor to take accurate BP readings.*

Design and development team at Freeman Hospital Unit:

- Alan Murray, Head of Freeman Unit
- Clive Griffiths, Clinical Scientist, Clinical Instrumentation
- Andrew Sims, Clinical Scientist, Computing
- Frank McArdle, Clinical Scientist, Clinical Instrumentation

Licence to manufacture: AC Cossor and Son (Surgical) Ltd., London

Successful Exploitation Award at the Innovations at Work Awards 2003.

Steve Johnson
Technology Transfer Manager

9th August 2006