Arthritis Research UK Centre for Sports, Exercise and Osteoarthritis Internships

Matthew Collison, Arthritis Research UK research intern - University of Leeds
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During the summer of 2014, we as newly graduated podiatrists joined a group of newly qualified allied health, medical and science graduates embarking on research internships at one of the eight institutions that make up the Arthritis Research UK Centre for Sports, Exercise and Osteoarthritis

INTERNSHIP SCHEMES

These internships are intended to act as a bridge between undergraduate studies and clinical research careers in the fields of musculoskeletal and sports medicine.

While a clear research career pathway has existed for medical graduates for some time, the progression from graduate to researcher has been less clear for allied health professionals.

The first research internships were developed for podiatrists in 2003 at the Universities of Leeds and Southampton by Dr Cathy Bowen and Professor Tony Redmond, to give podiatrists experience across the spectrum of translational research and clinical practice.

Interns in this first scheme spent time at both Leeds and Southampton and were exposed to each step of the research process in a number of different research projects at each centre.

Nine of the 12 interns have gone on to success in obtaining higher degrees or clinical academic posts; five have completed PhDs and gone onto Post-doctoral research fellowships/lectureships, one is currently doing a PhD and three have completed MRes/MSc degrees.

The Podiatry Scheme gained Arthritis Research UK funding in 2006 and the model was adopted by the Arthritis Research UK Centre for Sports, Exercise and Osteoarthritis in 2013, this time incorporating graduates from medicine, the allied health professions and basic sciences in a multi-disciplinary model. In this new scheme, interns carried out their own research project with supervision and mentorship at one of the eight institutions that form the centre over a two-month period.

From left to right: Naomi Algeo (Occupational Therapist, University of Southampton; Louis Mamode (Podiatrist, University of Southampton); Lauren Forsyth (Sports Scientist, University of Leeds); Matthew Collison (Podiatrist, University of Leeds); Jenny Anderson (Sports Scientist, University of Southampton); Holly Stock (Sports Scientist, University of Bath); Robin Layton (Sports Scientist, University of Nottingham)

ARTHRITIS RESEARCH UK CENTRE FOR SPORTS, EXERCISE AND OSTEOARTHRITIS

Internship Process

Site Visits

As part of the internship, one day per week was spent as a group at one of the other institutions gaining an insight into the work taking place there, as well as learning about aspects of the research process.

At Leeds, the visit included tours around the bioengineering department where joint implants were tested to destruction, the gait and physiology labs in the sport science department and a tour around the National Institute of Health Research (NIHR) Musculoskeletal

Biomedical Research Unit at Chapel Allerton Hospital.

At Loughborough, there was a visit to the site of the new National Centre for Sports and Exercise Medicine facility, the English Cricket Board training Centre and the Engineering and Physical Sciences Research Council (EPSRC) Centre for Innovative Manufacturing in Regenerative Medicine where, under Professor David Williams, they are perfecting the manufacturing processes of stem cell technologies.

The visit to UCL was to the Institute of Sport, Exercise and Health, where we were able to see the clinical application of sport and exercise research in a centre that combines NHS and private services with research.

At Nottingham there was a focus on research methods and statistics, with workshops and lectures in these subjects.

The Southampton visit started with a demonstration of the gait laboratory, followed by talks from a number of researchers within the centre about their research. There was also a practical demonstration of Musculoskeletal Ultrasound Imaging.

At Bath there was a talk about their research into rugby injuries and a hands on workshop in Functional Movement Screening, which is a method of assessing strength, balance, coordination and flexibility, currently used as an injury screening and risk assessment tool in American Football players in the NFL.

MY INTERNSHIP EXPERIENCE

Matt - University of Leeds

I spent my two-month internship at the University of Leeds with the Sports and Exercise science team in the Faculty of Biological Sciences under the supervision of Dr Daniella Strauss.

My project was centred on triathlon injury and took the form of an injury surveillance questionnaire and a series of qualitative interviews on athletes' experiences of injury and injury prevention. I had the opportunity to work with elite triathletes on the British team as well as amateur club athletes.

As well as injury rates, we also looked at the medical help and injury advice that triathletes seek, and attempted to gain an understanding of the factors that influence their decision making. We plan to build on this work over the next few years with further studies into triathlon injury, including biomechanical studies looking at the effects of the sequence of swimming, cycling and running and the transitions between.

I felt privileged to be able to work in a multidisciplinary research team and particularly enjoyed the contact time with elite athletes. I look forward to further involvement with the centre, although I am currently developing my clinical skills within the NHS.

LOUIS - UNIVERSITY OF SOUTHAMPTON

My internship experience at the University of Southampton involved exploring possibilities of Knowledge Transfer Partnership (KTP) projects between academic institutions and commercial industries. In 8 weeks, I was able to glimpse the ongoing foot and ankle MSc and PhD research studies carried out at the institute, as well as across the Arthritis Research UK centres, and gain experience in the world of clinical research.

To carry out my project I had the opportunity to visit Algeos UK in Liverpool and discuss potential KTP projects which we could develop as part of a government funded PhD project addressing current healthcare issues. Alongside this task, I was tasked to address marketing and copyrighting issues for a newly developed musculoskeletal assessment tool with the opportunity to be involved with the validation process. Through the internship, I have been able to further my research experience by working on a NIHR funded study looking at the role of indoor and outdoor footwear on falls prevention in Stroke and Parkinson's disease, whilst developing my clinical skills within the NHS and seeking PhD funding to take forward our KTP project.

Overall, the Arthritis Research UK Sports Centre Internship has provided me with the opportunities and career paths that I had not previously considered and look forward to exploring this further.

GET INVOLVED IN THIS YEAR'S SCHEME

The Arthritis Research UK Centre for Sports, Exercise and Osteoarthritis research internship scheme is running again this year. If you are interested in sports, MSK or research and are in your final year working towards a First or 2:1 it could be a great opportunity.

You will work on a project in a leading research team for two months over the summer and visit each of the other universities in the centre to get a real insight into MSK research.

For further details please see: http://www.sportsarthritisresearchuk.org/seoa/education/internships/index.aspx

For information about other schemes with Arthritis Research UK: http://www.arthritisresearchuk.org/health-professionals-and-students/educational-grants-fellowships-and-prizes.aspx