7th UK Conference on the Nuclear Envelope in Disease and Chromatin Organization.

June 22nd-23rd, 2015.

The Wolfson Centre for Inherited Neuromuscular Disease,
RJAH Orthopaedic Hospital, Oswestry, UK.

Organisers: Glenn Morris, Ian Holt (RJAH), Eric Schirmer (Edinburgh), Cathy Shanahan (Kings College, London) and Jo Bridger (Brunel University).

Outline Programme:

Monday June 22nd

11.00-13.00 Registration, Poster Set-up (LMARC Seminar Room: light refreshments)

13.00 Sessions 1 and 2 (Orthopaedic Institute Lecture Theatre)

15.30 Tea Break and Poster Viewing (LMARC Seminar Room)

16.30 Session 3 (Orthopaedic Institute Lecture Theatre)

17.45 Transport to Hotel Accomodation

19.00 Sweeney Hall Hotel (cash bar) for Conference Dinner at 20.00

Tuesday June 23rd

9.00 Session 4 (Orthopaedic Institute Lecture Theatre)

10.15 Coffee and Poster Viewing (LMARC Seminar Room)

10.45 Session 5 (Orthopaedic Institute Lecture Theatre)

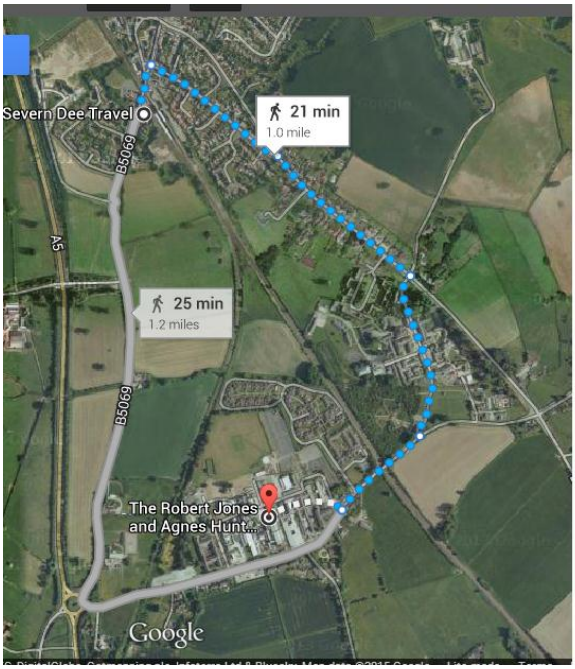
12.00 POSTER SESSION (Buffet Lunch) (LMARC Seminar Room)

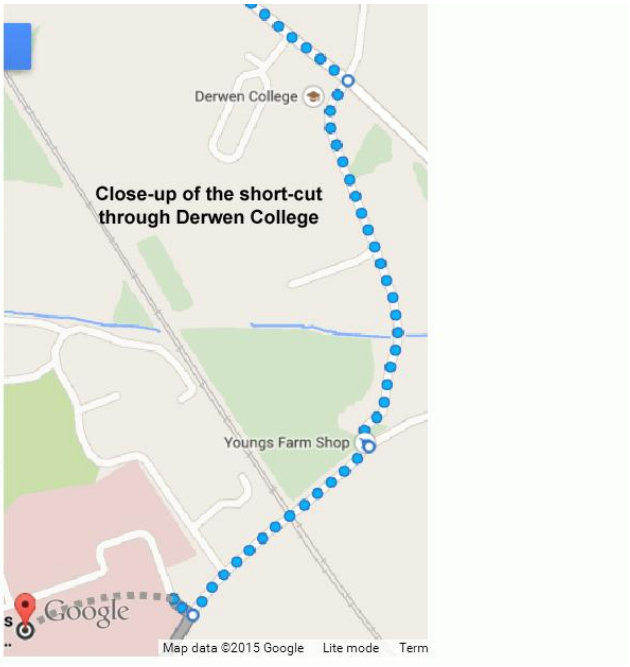
14.00 Session 6 (Orthopaedic Institute Lecture Theatre)

15.30 Meeting Ends (Tea/Coffee in Wolfson Centre, if waiting for trains, etc.)

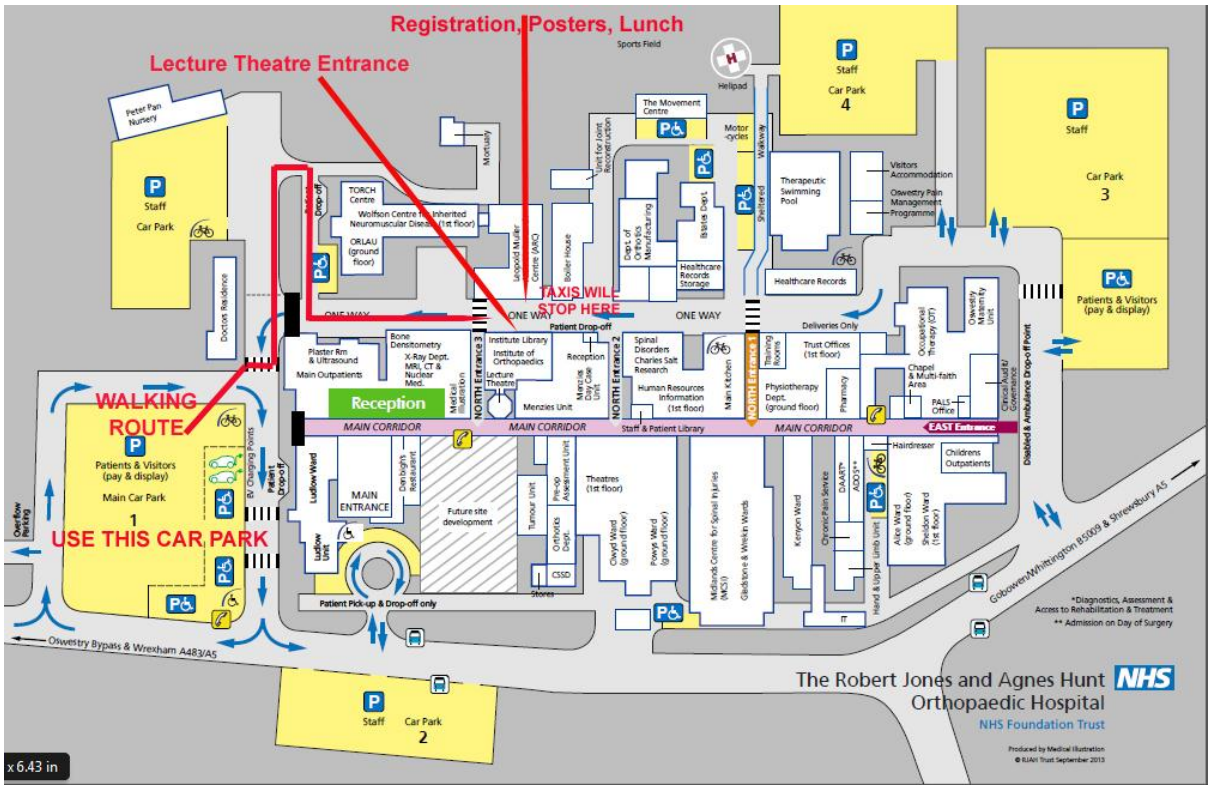
Walking Route from Gobowen Station.

Taxis: Gobowen 01691 652000; Oswestry 01691 670888





Hospital Site Plan (note essential walking detour in red)



NECO 2015 Programme

Monday June 22nd

Session 1 (Chair: Manfred Wehnert)

13.00 Identification and characterisation of new Emery-Dreifuss Muscular Dystrophy disease alleles. Peter Meinke, Edinburgh

13.25 The Popeye domain containing gene family encodes a novel class of nuclear envelope transmembrane proteins, Thomas Brand, Imperial

13.50 Expansion of the spectrum of nuclear envelopathies: mutation in TOR1AIP1 associated with muscular dystrophy, Gulsum Kayman Kurekçi, Ankara

Session 2 (Chair: Cathy Shanahan)

14.15 Nesprin-1/-2/-3 interchain associations and the cytoskeleton control nuclear size, Akis Karakesisoglou, Durham

14.40 The scaffold protein nesprin-2 is a novel binding partner for telethonin in cardiac myocytes, Qiuping Zhang, KCL

15.05 The muscle-specific short isoform of nesprin-1 is highly-expressed at the nuclear rim at early stages of muscle development, Ian Holt, RJAH

15.30-16.30 TEA BREAK

Session 3: (Chair: Eric Schirmer)

16.30 Mechanical and regulatory roles of the nuclear lamina, Joe Swift, Manchester

16.55 What is dystroglycan doing in the nucleus? Steve Winder, Sheffield

17.20 The challenges of antisense oligonucleotide therapy in various disease models with nuclear retained RNA targets, Rebecca Moore, Nottingham

17.45 END Transport to Hotels BAR at Sweeney Hall open Dinner at 8PM

Tuesday June 23rd

Session 4: (Chair: Jo Bridger)

9.00 Transport routes through the nuclear pore complex, Martin Goldberg, Durham

9.25 Chromosome Dynamics and Molecular Motor Activity in Interphase Nuclei, Kumars Rihayi, Brunel

9.50 Prelamin A accumulation disrupts NUP153 mediated 53BP1 trafficking to induce genome instability, Andrew Cobb, KCL

10.15 COFFEE

Session 5 (Chair: David Vaux)

10.45 Cyclic strain-induced nuclear remodelling is dependent on stem cell differentiation state, Stephen Thorpe, QMC

11.10 Dynamic reorganisation of lamin A during smooth muscle cell phenotypic modulation, Derek Warren, KCL

11.35 Deciphering LINC complex roles in nuclear stiffness and 3D cellular migration, James Carthew, Durham

12.00-14.00 LUNCH and POSTER SESSION (Moderators: Eric Schirmer and Glenn Morris).

Session 6: (Chair: David Brook)

14.00 Viral interactions with the Nuclear Envelope and Host response against infections, Natalia Ros, Edinburgh

14.15 Human iPS cell-based platforms for disease modelling and therapy screening for laminopathies. Heather Steele-Stallard, UC London

14.30 Probing the structure of Lamins using Chemical X-linking coupled with Mass Spectrometry, Alex Makarov, Edinburgh

14.45 Nuclear Envelope Transmembrane Proteins TMEM120A and B Are Important for Adipocyte Differentiation , Rafal Czapiewski, Edinburgh

15.00 Investigation of nucleoplasmic reticulum formation by super resolution light microscopy and nanoSIMS, Marek Drozdz, Oxford

15.30 END OF MEETING

POSTER SESSION

1) **Potential roles of NETs in tissue specific dystrophies, Le Thanh Phu, Edinburgh**
2) **Novel nesprin-1 mutations in human dilated cardiomyopathy, Can Zhou, KCL**
3) **Nuclear targeting of beta-dystroglycan, Laura Jacobs, Sheffield**
4) **Structural insights into Nesprin Spectrin Repeats, Flavia Autore, KCL**
5) **Exploring the Nanomechanics of Nesprin Proteins at the Single Molecule Level, Aisling Williams, KCL**
6) **Repositioning of the HLXB9 gene in the nucleus of leukaemia cells depends on chromosomal rearrangements. Temi Owoka, Brunel**
7) **Genome Organisation is affected in immortalised control and Hutchinson-Gilford Progeria Cells. Mehmet Bikkul, Brunel**
8) **Characterisation of VSMC-specific FACE1 knockout mice, Alexandra Santu, KCL**
9) **Prelamin A drives up-regulation of senescence marker p16 via epigenetic mechanisms, Chin Yee Ho, KCL**
10) **Genomic instability of human pluripotent stem cells: development of a high-sensitivity screen utilising droplet digital PCR and FISH-based chromosome-positioning, Marianne Henry, Brunel**
11) **The nuclear envelope transmembrane protein NET23/STING is required for the nuclear/cytoplasmic shuttling of innate immune response factors, Jose de las Heras, Edinburgh**
12) **Two novel epsilon isoforms of nesprin-2, a protein linked to Emery-Dreifuss muscular dystrophy. Ian Holt, RJAH, Oswestry.**
13) **Investigation of nucleoplasmic reticulum formation by super resolution light microscopy and nanoSIMS, Marek Drozdz, Oxford**