

ILCaMS research awayday notes

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ILCaMS

ILCaMS is Institute of Life Course and Medical Sciences

The following are brief (and rather cryptic) notes from the recent ILCaMS research away day held in the Gflex on the 13/6/25. If you see something that interests you, you are welcome to talk to me and I will try and explain more about the below!

Welcome (Liz Laird)

Described agenda for the day,

Strategy and Resources

HLS & ILCaMS Research Strategy (Liz Laird)

Liverpool 2031.

Faculty of health and life science has recently published their strategy for the next decade or so. Themes.

Early life driving health

Later life diseases

Microbiome and infection

Therapeutics

Techniques:

Includes AI and multi-omics

Recommendations of scientific advisory board include broadening collaboration.

USP is breadth of basic and translational science underpinning clinical research.

Support and Resources available across Institute and UoL (Ian Craig)

There is an ILCaMS research support group.

<https://www.liverpool.ac.uk/intranet/health-and-life-sciences/ilcams/>

ILCaMS Departmental Research Presentations

Musculoskeletal & Ageing Science (Liz Laird)

Speaking for Vania Pekovic-Vaughn.

Focus on:

Pain research.

Musculo-skeletal biology.

Aging.

Small animal surgery...

Areas for development:

Include musculo-skeletal aging and AI.

Epigenetics in aging.

Want to strengthen links with clinicians.

Aiming to increase number of Strategic Longer and Larger Grants.

Cardiovascular & Metabolic Medicine (Parveen Sharma)

Areas of interest:

Atrial fibrillation.

Stroke

Vascular damage

Cardio-repitory

Translational

Diabetes obesity and metabolism

Capabilities:

In-silico modelling, AI and digital health.

Intracellular imaging

big data analysis

MRO, echocardiography.

Projects:

TARGET (stroke).

ARISTOTELES (AI applying to clinical trajectories).

AFFIRMO (atrial fibrillation).

Living well, dying well.

Cystic fibrosis.

RESTART (oral anticoagulants).

Huawei smart-ware for atrial fibrillation.

Ethnic differences in diabetes.

Eye screen for dementia.

Cell physiology workshop for students (electrophysiology) - CPW Liverpool.

Developing DTPs on heart-brain axis, stroke, end of life care.

Other interests:

Health of women.

NIHR inequalities challenge management of hypertension and raised cholesterol.

BRAINOXOME.

HRT-IMPACT.

GenAI.

Eye & Vision Sciences (Reinhold Medina)

Range from basic science to clinic.

Looking at all areas of eye.

Liverpool eye data platform.

Liverpool research eye biobank.

Liverpool ocular oncology biobank.

- Cell and molecular discovery (laminin beta 3 deposition - confocal microscopy). Interest in FTIR/SNOM here?
- Research in AI and imaging to enhance clinical decision making, prevent diabetic eye disease. (Patents.)
- Treating retinal detachment (Mike Day). (Patents.)
- Diagnosis of corneal infections - microbial keratitis. New method for obtaining corneal samples developed.

Women's & Children's Health (David Lissauer & Paul McNamara)

Women (David Lissauer)

C-Gull, children growing up in Liverpool, 10000 infants and parents will be tracked (1000 recruited so far).

cgullinfo@liverpool.ac.uk

<https://www.liverpool.ac.uk/children-growing-up-in-liverpool/>

Individual patient data meta-analysis and evidence synthesis, large pregnancy data-set [IPPIC](#).

Areas of interest:

Endometrial and uterine biology.

Data and tissue repositories.

Organoids.

Global Women's Health (Malawi and Uganda).

FemTech, development of devices.

Children (Paul McNamara)

Research:

Some data science.

Liverpool Institute of Child Health recently founded.

MRI device (with hyper-polarised Xe widget).

Experimental Arthritis Treatment Centre.

UK kidney ecosystem.

School of Dentistry (Sondos Albadri)

Mainly teaching school.

Interests:

Oral and dental health.

Prevention of oral cancer, diagnosis and management of oral dysplasia. (With Peter Weightman)

Some interest in using AI, simulation to improve teaching and processes.

Programme to identify dental problems early on. Supervised tooth brushing programme is being introduced in Liverpool.

School of Medicine (Sarah Hart)

Mainly teaching school.

Challenge is to train a lot more medics, following changes in government policy.

Up to 1500 seats per year in ~ 2030!

One problem is getting adequate placements.

Remote GP placements.

SimConverse - students engage with avatars to learn communication skills.

Medical education research.

Collaboration/Innovation Sprint (Alys Kay)

Inter-Departmental/Faculty Collaboration

Health & Life Sciences (Sophie Archard)

<https://www.liverpool.ac.uk/intranet/health-and-life-sciences/>

Show aims and objectives and listed research centres.

See slides when circulated!

IPH <https://www.liverpool.ac.uk/intranet/health-and-life-sciences/iph/> includes analysis of health data.

ISMIB <https://www.liverpool.ac.uk/intranet/health-and-life-sciences/ismib/> includes molecular and clinical cancer medicine.

Science & Engineering (Laura O'Keefe)

There is a faculty research network: Healthcare Technologies.

Liverpool Shared Research Facilities mentioned.

MIF <https://www.liverpool.ac.uk/intranet/materials-innovation-factory/>

Digital Innovation Facility <https://www.liverpool.ac.uk/institute-of-digital-engineering-autonomous-systems/digital-innovation-facility/>.

Liverpool Centre for Mathematics in Healthcare <https://www.liverpool.ac.uk/mathematical-sciences/research/centre-for-mathematics-in-healthcare/>

Centre for mathematical imaging techniques CMIT <https://www.liverpool.ac.uk/mathematical-sciences/research/mathematical-imaging-techniques/>

Humanities & Social Sciences (Chris Williams)

Lots of groups and institutes.

Vibrotactile technology - music for death people.

Have people working on Big Data.

The Heritage Institute <https://www.liverpool.ac.uk/heritage-institute>

Large Interdisciplinary Grant Applications and Networks

Experimental arthritis treatment for children (Michael Beresford)

Women's and Children's Health.

STAR-JIA, how are steroids best used?

ArCaDiA, drug-free remission in arthritis.

Uveitis complications (eye problems resulting for arthritis).

JSLE, childhood lupus.

EATC4C <https://www.liverpool.ac.uk/eatc-for-children/>

EpiSafe (Shakila Thangaratinam)

Optimising outcomes in pregnant women with epilepsy and their babies.

Why an NHIR programme grant?

Importance of PPIE (Patient involvement)

Information on application process. NIHR like to fund work that builds on previous investment.

Regenerative Medicine Network (Bettina Wilm)

bwillm@liverpool.ac.uk

Next meeting autumn 2025.

Themes:

- Exogenous cell-based therapies
- Developing biomaterials
- Endogenous stem or progenitor cells
- Pharmacological therapies
- 3D cell culture, organoid models, School of Dentistry

Developing Collaborative Research Opportunities (Alys Kay)

Themes

1. AI, technology, digitisation in health
2. Health inequalities
3. Healthy ageing
4. Cross departmental women's dental health
5. Imaging in health
6. Physical and mental well-being
7. Regenerative medicine and biomaterials
8. Varied.

Close (Liz Laird)

Request for feedback.