

TOPMed10 - Training the Next Generation of Leaders in Personalised Medicine

Walter Kolch



What is TOPMed10 about?



Genomics



Proteomics



Metabolomics



Imaging



Clinical data



Data integration



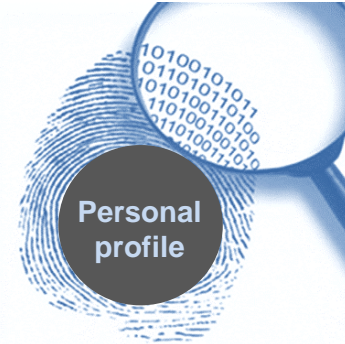
Computational modelling
Digital Twin



Better
Therapies



Finer
Diagnostics



Enabling
Prevention



Promoting
Wellbeing



Saving cost

THE TOPMed10 PARTNERS



Charles Institute of Dermatology

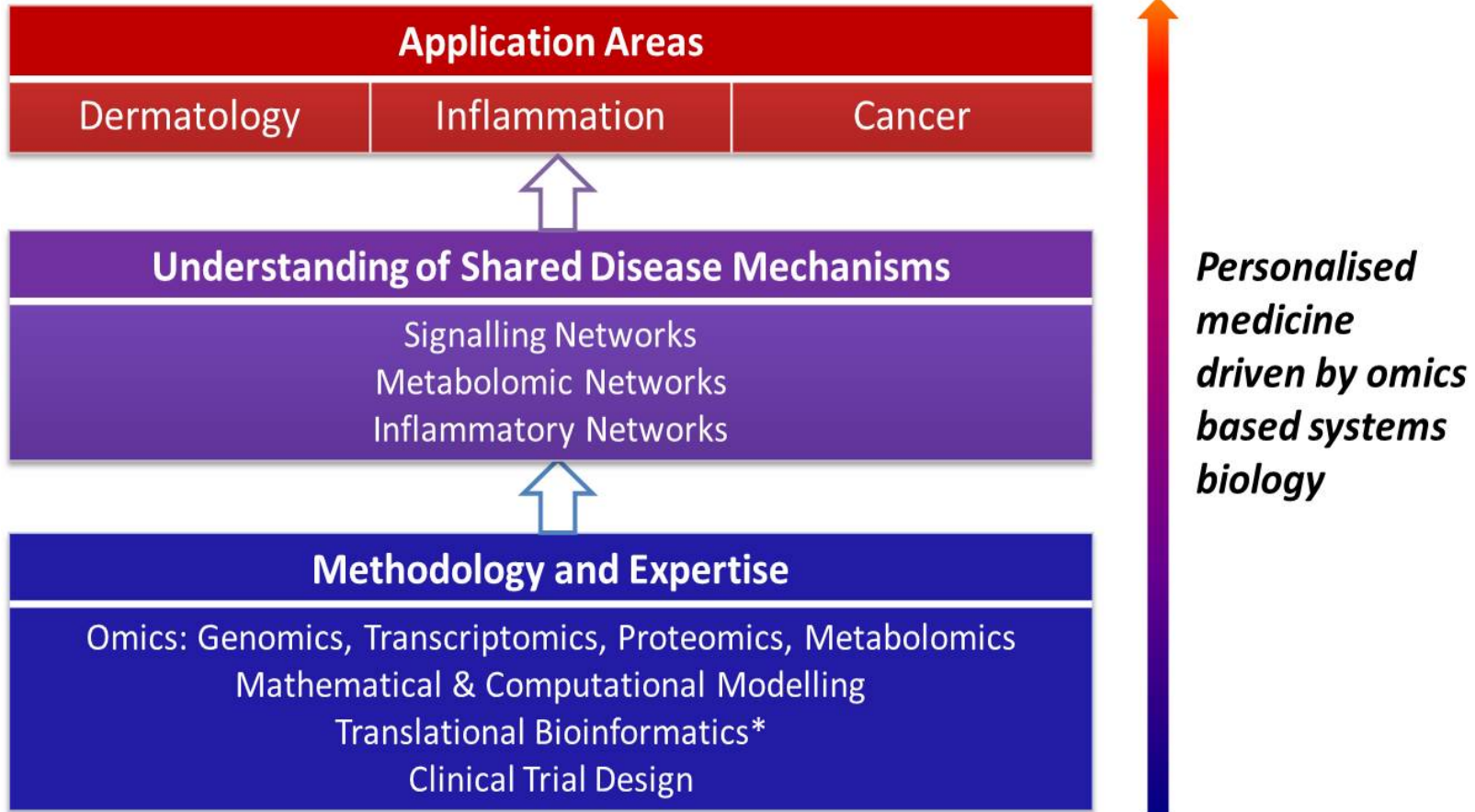


Conway Institute of Biomolecular and Biomedical Research



ST. VINCENT'S UNIVERSITY HOSPITAL
Elm Park

THE TOPMed10 RESEARCH THEMES



TOPMed10 FUNDING

Total Programme budget

€2,111,160 (100%)

Total EU Contribution

€885,000 (42%)

Total Match Funding

€1,226,160 (58%)

Co-Funders:

National funding agencies



Industry



Government Dept.



SFI Research Centre

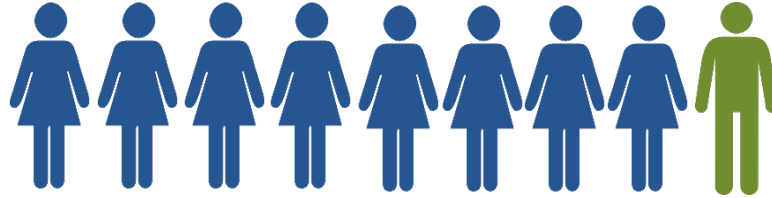


Charity

THE TOPMed10 FELLOWS

8 females

1 male



9 nationalities
(3 EU/6 non EU)
and
4 continents
represented



RIGOROUS SELECTION PROCESS

Phases	Description
Phase One	Application by electronic submission. Eligibility checks of applications including assessment of ethical concerns
Phase Two	External international peer review by 3 independent assessors. Peer review panel appointed by the TOPMed10 Management Committee. Applicants scoring $\geq 70\%$ (max of 3 per position) brought forward to Phase Three.
Phase Three	Interviews by Interview Selection Board (2 members of Peer Review Panel, representative from the UCD Research Institutes and representative from UCD HR). Applicants assigned individual score from 0-100 for the interview.
Offering of Fellowship	Applications ranked in order of final score (scores for written proposal and interview with 50% weighting for each). Fellowships were offered to the highest ranking fellows above a 70% threshold.

Level & duration:

- Level I (PD1 Pt4 2011 Scale): Experienced researchers (per MSCA definition) with 0-3 years additional research experience → 3 year fellowship duration
- Level II (PD2 Pt4 2011 Scale): Experienced researchers (per MSCA definition) with 3+ years additional research experience → 2 year fellowship duration

All successful candidates were appointed at Level I -> 9 fellowships with 3 years duration

TRAINING

**Local training through
supervisor/
group/School/Centre**

**UCD Research Skills &
Career Development
resources for
experienced
researchers**

**Technical &
transferable skills**

**External training incl.
secondments**



Training, professional development and employability

Practical support for acquiring funding

Tailored courses/ competency gap analysis

Career coaching, mock interview panels, PhD recruiter events

UCD Training/ Development Competencies:

Research/ Research management

Teaching, Learning & Mentoring

Personal and Professional Excellence

Innovation and Transferable skills



Research & Research Management

- Report Writing for Researchers
- Lean Six Sigma
- Managing Research Projects
- Grant Writing
- Measuring Your Research Impact
- Building Research Leaders

Teaching Learning & Mentoring

- University Teaching & Learning Seminar Series
 - Design and Management of Classes
 - Design of Teaching Materials
 - Presentation, Communication and Facilitation
 - Student Assessment

Personal & Professional Excellence

- Presenting Your Research Effectively
- Communicating the Impact of Your Research
- Well-Balanced Working
- Time Management for the Busy Researcher

Innovation & Entrepreneurship

- Innovation in Research – *how it can support your career progression in academia and industry*
- Commercialisation Bootcamp – *how to commercialise your technology*

Personal electronic training diary

Personal Details

Staff Profile

Staff Details


Current Contact

Career Development Meetings

Training Profile

Publications - Summary

Official training certificate



UCD
UNIVERSITY COLLEGE DUBLIN

UCD Research & Innovation

UCD Research Building
University College Dublin
Belfield, Dublin 4, Ireland
T: +353 1 716 4231
vrd@ucd.ie

Thaighde & Nuálaíocht UCD

Thaighde UCD
An Coláiste Oileáin, Baile Átha Cliath
Belfield, Baile Átha Cliath 4, Éire
www.ucd.ie/researchandinnovation

Professional & Career Development Certificate

Name: Mirjam Heinen

Staff Number: P01034262

Date: 22 Sep 2015

This is to certify that the above completed the following professional development activities as a postdoctoral research fellow in UCD.


Research Skills & Career Development

- 22 Jun 2015 Grant Writing In The Life Sciences (Postdoc I/II)
- 29 Jan 2015 Gender Equality Awareness Enhancing Your Research
- 24 Nov 2014 Creative Thinking, Design Thinking

Teaching & Learning

- 23 Jan 2015 Review Session(Part 1) Msc Food Nutrition & Health
- 04 Nov 2014 Curriculum Design: Session Planning
- 21 Oct 2014 Feedback In Practice

Signed



Professor Orla Feely
Vice-President for Research, Innovation and Impact

Academic partners



university of
 groningen



CANCER
RESEARCH
UK

BEATSON
INSTITUTE



MAX PLANCK INSTITUTE
FOR MOLECULAR BIOMEDICINE

Industry partners



MANAGEMENT

Management Committee

Chair: College Principal, Health &
Agricultural Sciences
Programme Coordinator
Internal and external expertise

TOPMed10 Programme Team

Programme Coordinator
Programme Manager

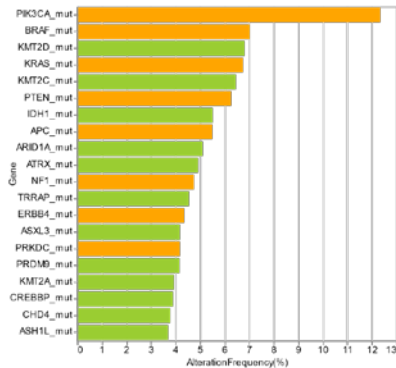


Identifying Genetic Interactions Between Epigenetic and Signalling Pathways in Cancer

Supervisors:

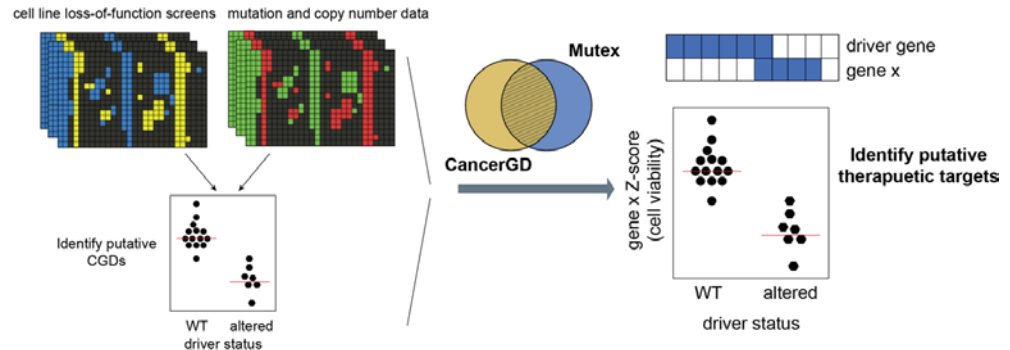
Prof Walter Kolch (Cancer biology)

Dr Colm Ryan (Bioinformatics)



Both **signalling genes** and the **epigenetic machinery** are frequently mutated in cancer

CancerGD: analysis of genetic dependencies in cancer²

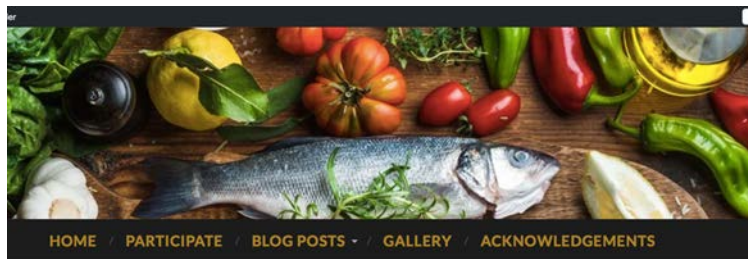


Finding which mutations in **signalling genes** and the **epigenetic machinery** are mutually exclusive identifies potential new therapeutic targets for cancer therapy



Personalised nutrition solutions in sarcopenic elderly: variable efficacy of LC n-3 PUFA and leucine combinations

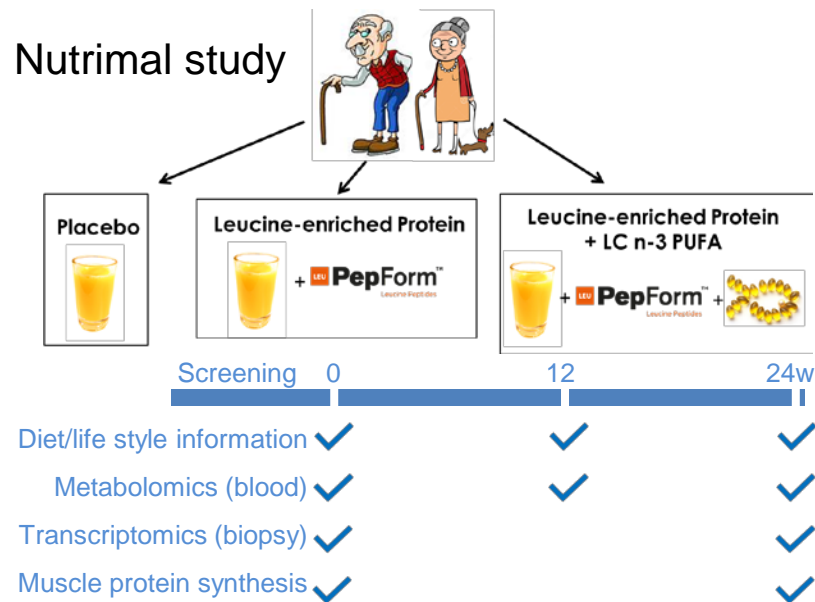
Supervisor: Prof Helen Roche



Welcome to the NUTRIMAL project blog!

The NUTRIMAL project is a nutrition and healthy aging research project that is currently ongoing in University College Dublin. It is investigating whether a food-based nutritional supplement can improve muscle mass and strength in men and women aged 65 and over who have low muscle mass and/or strength.

WELCOME TO THE BLOG, I'M CAOILEANN!



RESEARCH VIGNETTES – Dr Husvinee Sundaramurthi

Irish Association of
Pharmacologists
Annual Meeting
2017

Best Poster Prize



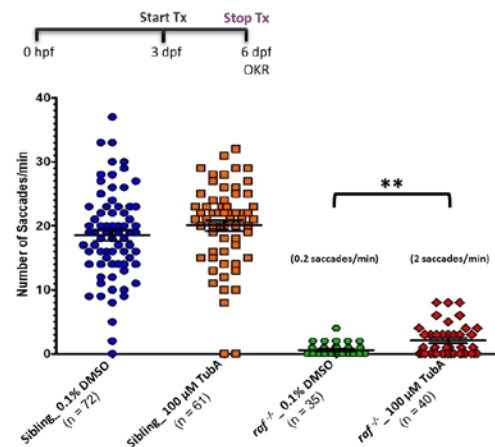
Identification of novel neuroprotective drugs and therapeutic targets for inherited retinal degenerative diseases

Supervisor: Prof Breandán Kennedy

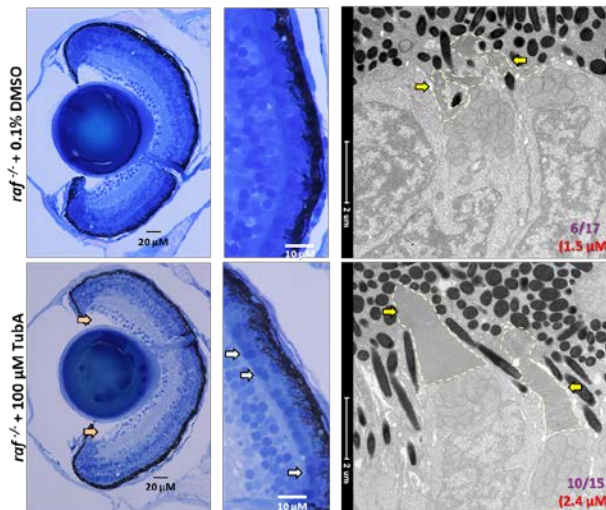
Zebrafish *Raifteirí* (*raf*)
mutant is a new model
for inherited blindness



Tubastatin A, a selective HDAC6 inhibitor, restores photoreceptor layer



- ♣ Significant improvement in visual capacity observed
- ♣ Prominent photoreceptor layer

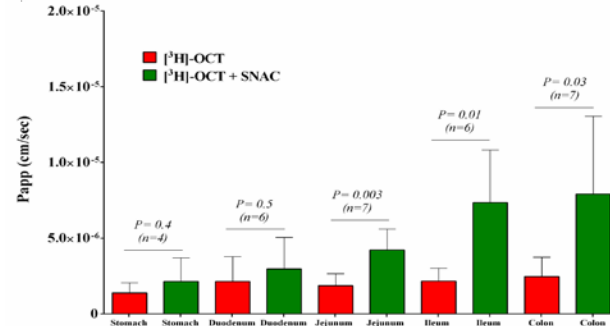
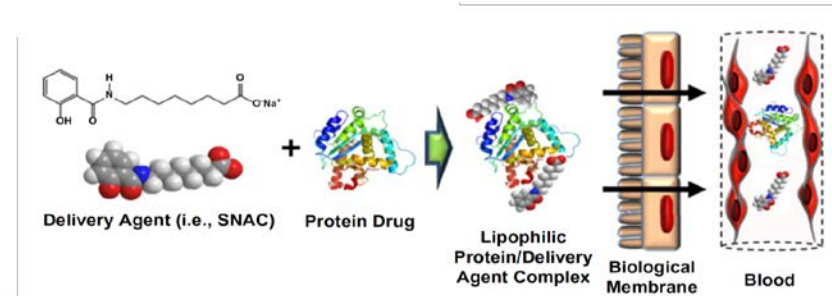
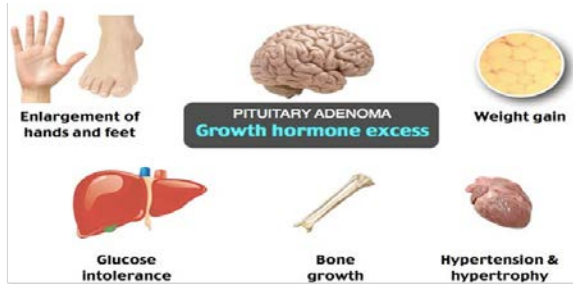




Synthesis of a permeation-enhancer based oral formulation of octreotide: intestinal permeability and hepatic disposition studies

Supervisor: Prof David J. Brayden

Aim: an oral treatment for acromegaly



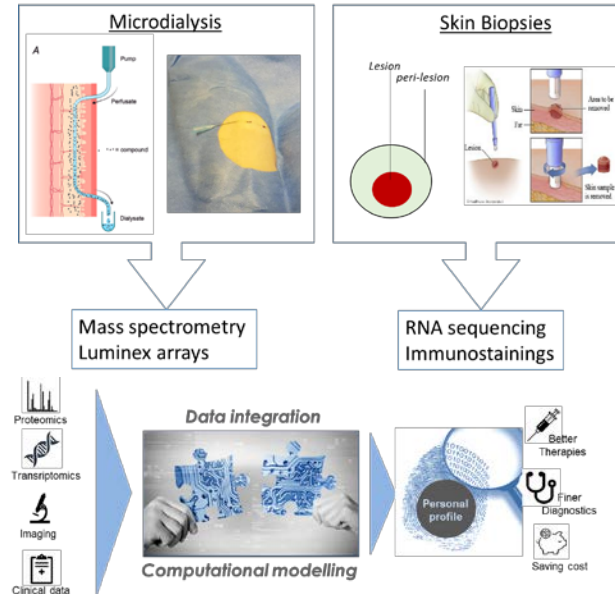
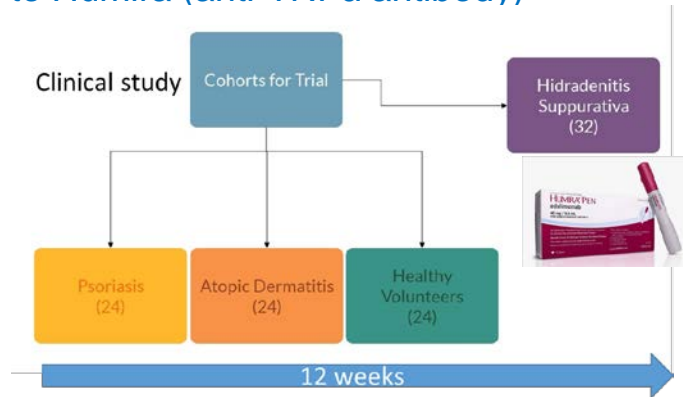
SNAC enables Octreotide to pass mucosa of the rat GI tract



Usage of Omics Technology for Identification of critical Mediators and Pathways in Patients with Recalcitrant Atopic Dermatitis, Psoriasis and Hidradenitis Suppurativa

Supervisors: Prof Brian Kirby (Dermatology)
Prof Walter Kolch (Proteomics)

Aim: Identify patients who respond to Humira (anti-TNF α antibody)



TOPMed10 Outputs

Publications & presentations

7 publications

9 presentations

14 Poster sessions



Fellows have won

3 awards

1 grant (€40k grant from the European Crohn's and Colitis Organisation)

Training attended

15 Research training activities

14 Transferable skills courses

11 Career guidance sessions

1 Media Training day

1 Publishing Strategy Workshop

Participation in public engagement

13 public engagement events

What the TOPMed10 Fellows think

“The TOPMED10 programme has given me the opportunity to continue to grow as a researcher by providing me with the resources, time and environment to develop new skills. Importantly, it has **enabled me to move from a purely wet-lab scientist into an exciting new role as a 'semi-dry' researcher, harnessing both computational and laboratory expertise.** It is a rare thing to be able to continue developing so greatly after one's PhD, and to gain the skills of a bioinformatician will be of great benefit to my career in this data-driven era of science.” - ***Ariane Watson***

“I have really enjoyed the TOPMED 10 programme which has allowed me to adopt a personalised perspective in my research for the first time and to combine my background in clinical nutrition and skeletal muscle biology with the state-of-the-art “omics” technologies in UCD. The TOPMED 10 programme is very well organised and structured. The nine postdocs are from a diverse range of research backgrounds and we meet regularly to share our research projects and attend other career development events in UCD. This has **provided me with a supportive network and multidisciplinary insights in my new research field.** The TOPMED 10 programme has also been invaluable in helping me to leverage further research funding and I believe has helped me to progress closer toward from long-term goal to become a key opinion former in the field of personalised nutrition and sarcopenia.” - ***Caoileann Murphy***

“This programme gives me the opportunity to obtain an international prestigious fellowship and to improve my research and technical skills by a wide range of trainings. **I received strong support from the management team and the other fellows for my career development**” – ***Solene Gatault***

Acknowledgements

Coordination & Management

Eadaoin McKiernan
(William Fitzmaurice)
Susan Yeates

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 666010.

