Novo Nordisk–Oxford Fellowship Programme

Eleventh Annual Symposium

12 November 2025, St Anne's College, Oxford

novo nordisk®

UNIVERSITY OF OXFORD

RADCLIFFE DEPARTMENT OF MEDICINE

Novo Nordisk is a leading global healthcare company, founded in 1923 and headquartered in Denmark. Our purpose is to drive change to defeat serious chronic diseases, built upon our heritage in diabetes. We do so by pioneering scientific breakthroughs, expanding access to our medicines, and working to prevent and ultimately cure disease. Novo Nordisk employs about 69,000 people in 80 countries and markets its products in around 170 countries.

Contents

Symposium Programme

08.30-09.00	**Registration and refreshments**	
09.00-09.10	**Welcome from:** **Professor Keith Channon, RDM, University of Oxford** **Dr Martin Holst Lange, Novo Nordisk**	
09.10-10.30	**Session 1**	Chair: Professor David Paterson, DPAG, University of Oxford
	09.10-09.30	Professor Charalambos Antoniades, RDM, University of Oxford *Perivascular fat as a window to cardiovascular health*
	09.30-09.50	Dr Inhye Park, NDORMS and IDRM, University of Oxford (past Novo Nordisk Fellow) *Harnessing vascular macrophages in the fight against cardiovascular disease*
	09.50-10.10	Professor Angela Russell, Chemistry, University of Oxford *Applying medicinal chemistry and chemical biology approaches to tackle metabolic diseases*
	10.10-10.30	Dr James Liu, NDPH (Novo Nordisk Fellow) *Identifying molecular pathways and risk prediction of type 2 diabetes using proteomics, metabolic, and anthropometric profiles in UK and Chinese adults*
10.30-11.05	**Refreshment break**	
11.05-12.30	**Session 2**	Chair: Professor Jemma Hopewell, NDPH, University of Oxford
	11.05-11.25	Dr Martin Holst Lange, Novo Nordisk *Evolving with purpose: A stronger commitment to Diabetes & Obesity*
	11.25-12.10	**Keynote Lecture: Sir Martin Landray, NDPH, University of Oxford** *Smarter trials for better health*
	12.10-12.30	Dr Dragana Savic, INIA Biosciences (past Novo Nordisk Fellow) *From Metabolic Signatures to Bioelectronic Medicine*
12.30-14.00	**Lunch, posters and networking**	
14.00-15.20	**Session 3**	Chair: Dr Joanna Holbrook, Novo Nordisk
	14.00-14.20	Professor Nicola Smart, DPAG, University of Oxford, and Dr Nils Rorsman (Novo Nordisk) *Delineating mechanisms of human vascular disease*
	14.20-14.40	Dr Taiyu Zhu, King's College London (past Novo Nordisk Fellow) *Multimodal Deep Learning Improves Genomic Risk Prediction for Cardiometabolic Diseases in the UK Biobank*
	14.40-15.00	Dr Jun Liu, Huazhong University of Science and Technology (past Novo Nordisk Fellow) *Proteome profiles in the classification of fatty liver disease subtypes*
	15.00-15.20	Professor Jason Lerch, NDCN, University of Oxford *Diet, metabolism, and the brain*
15.20-15.30	**Concluding remarks** Professor Keith Channon, University of Oxford	
15.30	**Close**	

Poster Index

1. GC-globulin is a potent endogenous regulator of GLP1-R signalling in pancreatic beta cells
Ali Shilleh[1], Ramona Birke, Abigail Pearce, Cecilia Skoug, Natalie S. Figueredo Burgos, Greg Austin, Jason Tong, Claire Bristow, Kaja Rupar, Zainab Sheik, Charlotte Clinton, Elspeth Johnson, Leanne Hodson, Paul R.V. Johnson, Rebecca Spiers, George G. Holz, Oleg G. Chepurny, Malgorzata Cyranka, Alexey Epanchintsev, Carina Ämmälä[3], Ben Jones, Alejandra Tomas, Caroline Gorvin, Ildem Akerman, Martin Hewison, Graham Ladds, Alice E. Adriaenssens, Stefan Trapp, Johannes Broichhagen, Katrina Viloria, David J. Hodson[2]

2. Mexican Cavefish: A Model for Immune Differences in Metabolic Disease
Ryan Carter[1], Prof Robin Choudhury[2], Prof Mathilda Mommersteeg[2]

3. Changes in circadian behaviour with onset and reversal of hyperglycaemia
Matthew Lloyd[1], Simon Guillot, Aarti Jagannath[2], Russell Foster[2], Sridhar Vasudevan[2]

4. Discovery of novel atherosclerosis targets through delineating the arterial gene regulatory pathways that change in response to pathological cardiovascular stimuli
Elizabeth I. Figueroa-Juarez[1], Luke Payne[3], Gillian Douglas[2], Sarah De Val[2]

5. Longitudinal extracellular vesicle mircroarray analysis in patients with diabetes and myocardial infarction
Stephanie Anderson[1], Jason Chai, Tafadzwa Kufazvinei, Robin Choudhury[2], Luke Payne[3], OxAMI Study, Naveed Akbar[2]

6. Adipose-Vascular Crosstalk in Cardiovascular Disease: Ex Vivo and Multi-Omic Insights from Human Adipose Tissue
Olivia J. Conway[1], Elisa Duregotti, Honglin Chen, Daniel Foran, Charalampos Papastamos, Christos Kontanidis, Alexios Antonopulous, Bruna Brasil Brandão[3], Stella Xuechong Hong[3], Manuel Mayr, Ioannis Akoumianakis[2], Charalambos Antoniades[2]

7. Ligand-directed two-step labelling: a new technology to map the trafficking and interactome of GLUT4
Pol Hernández-Lladó[1], Babiga Vallalperumal, Felix Wojcik, Jorge Correia[3], Angela J. Russell[2]

8. LLMDistPert: Predicting post-perturbation distributional responses in cells with LLM-informed embeddings
Jonathan G. Hedley[1], Kalyan Ramakrishnan, Sisi Qu, Puneet K. Dokania, Philip H. S. Torr[2], Cesar A. Prada-Medina[3], Julien Fauqueur[3], Kaspar Märtens[3]

9. Targeting the lipid-associated macrophage inflammatory reprogramming in atherosclerosis progression
Aleksandra Boikova[1], Claudia Monaco[2], Lea Dib[2], Ashok Handa[2], Luke Payne[3], Giorgio Caratti[3], Charlotte Daly[3], Alexey Epanchintsev[3]

10. Engineering human cardiac organoids to accelerate cardiac fibrosis research
Zhengkun Chen[1], Dimitar Georgiev, Daniel Reumann, Filipa Simões, Christopher Toepfer, Paul Riley[2], Luke Haslett[3], Molly Stevens[2]

11. The influence of fat composition on hepatic fat metabolism: findingd from in vivo human and *in vitro* cellular models
Kaitlyn MJH Dennis[1], Kaja Rupar, Christopher Carlein, Dona Josh, Felix Westcott, Nikola Snirc and Leanne Hodson[2]

12. Small Molecule Modulators of Hepatic Glucose Production
Andrew Scott Hackett, Pol Hernández-Lladó, Eilidh Livingstone, Alexander Dahlqvist, Carole Bataille, Maria Chatzopoulou, Maxwell Ruby and Angela Russell

Underlined author is presenting: [1]Novo Nordisk Postdoctoral Fellow, [2]Oxford supervisor, [3]Novo Nordisk supervisor

Novo Nordisk–Oxford Fellowship Programme

In 2013, Novo Nordisk established a prestigious international fellowship programme in partnership with the University of Oxford. The Novo Nordisk – Oxford Fellowship Programme is focused on early-stage scientific research in diabetes, obesity, cardiovascular, rare blood and other cardiometabolic diseases. It aims to support the development of a new generation of exceptional early career researchers, who will become future leaders in the field, while further developing scientific excellence and ultimately improving the lives of patients.

Since its launch in 2013, the programme has been renewed and expanded several times in 2015, 2021 and most recently in 2024, reflecting the strength of the partnership. The latest renewal provides £18.5 million to fund five new intakes of fellows from 2025 to 2029, extending the programme through to 2034 and introducing an innovative 'Springboard Fellowship'. This new element will offer one fellow per cohort an additional two years of funding to advance a particularly impactful aspect of their research and/or build collaborations to bolster their career development.

The success of the fellowship programme is evident from the calibre of the 48 fellows recruited to date (see pages 9-32), across 10 host departments, with project leads based in a further 8 departments and institutes within the University of Oxford. This reflects the highly interdisciplinary nature of the research. With close proximity to the Novo Nordisk Research Centre Oxford (NNRCO), all fellows also have the opportunity to build collaborations with the Centre.

Each fellow is given a mentor or supervisor at Novo Nordisk or NNRCO whose role is to act as a contact in Novo Nordisk for the fellow and their Oxford supervisors, and to review annual progress reports from the fellow. They also help to plan and facilitate the fellow spending a period of time in the labs of Novo Nordisk in Oxford and/or Denmark. Novo Nordisk supervisors also provide direct supervision to the fellowship projects. Thus, fellows get an insight into research in both academia and industry.

The fellowship programme is coordinated by the Radcliffe Department of Medicine, but encompasses all researchers at the University of Oxford who work within the fields of diabetes, obesity, cardiovascular, rare blood and other cardiometabolic diseases. The fellowship programme's success is underpinned by a Joint Steering Committee, headed by Professor Keith Channon, Head of the Radcliffe Department of Medicine, with representatives from both partners (see pages 33-37).

Further information on the fellowship programme can be found at: www.rdm.ox.ac.uk/novo-nordisk-fellowships

Fellowship Programme Intakes

Name	Intake Year	Status	Profile page no.
Michael Dodd	2014	Past fellow	16
Charlotte Green	2014	Past fellow	16
Maria Rohm	2014	Past fellow	17
Martijn van de Bunt	2014	Past fellow	17
Jakob Knudsen	2015	Past fellow	18
Ahmad Moolla	2015	Past fellow	18
Julia Parnis	2015	Past fellow	19
Niall Dempster	2016	Past fellow	19
Claudia Guida	2016	Past fellow	20
Nikita Ved	2016	Past fellow	20
Anna Veprik	2016	Past fellow	21
Manu Verma	2016	Past fellow	21
Didi He	2017	Past fellow	22
Jack Miller	2017	Past fellow	22
Andrea van Dam	2017	Past fellow	23
Samantha Laber	2017	Past fellow	23
Amy Pei-Ling Chiu	2017	Past fellow	24
Yue Ruan	2017	Past fellow	24
Thomas Hill	2018	Past fellow	25
Laura McKillop	2018	Past fellow	25
Dragana Savic	2018	Past fellow	26
Vincent van der Vinne	2018	Past fellow	26
Richard Yan-Do	2018	Past fellow	27
Lorna Daniels	2019	Past fellow	27
Shilpa Nagarajan	2019	Past fellow	28
Xuelu Wang	2019	Past fellow	28
Gitalee Sarker	2019	Past fellow	29

William Stockdale	2021	Past fellow	29
Thomas Agbaedeng	2021	Past fellow	30
Jun Liu	2021	Past fellow	30
Jessica Kepple	2021	Past fellow	31
Inhye Park	2021	Past fellow	31
Taiyu Zhu	2022	Past fellow	32
James Liu	2022	Current fellow	9
Ali Shilleh	2022	Current fellow	9
Stephanie Anderson	2023	Current fellow	10
Ryan Carter	2023	Current fellow	11
Matthew Lloyd	2023	Current fellow	11
Elizabeth Figueroa-Juarez	2023	Current fellow	12
Zhengkun Chen	2024	Current fellow	12
Jonathan Hedley	2024	Current fellow	13
Pol Hernández Lladó	2024	Current fellow	14
Aleksandra Boikova	2024	Current fellow	14
Olivia Conway	2024	Current fellow	15
Kaitlyn Dennis	2025	Incoming fellow	
Xhoela Bame	2025	Incoming fellow	
Quin Yuhui Xie	2025	Incoming fellow	
Fellow appointed (details to follow)	2025	Incoming fellow	

Current Fellows

Dr James Liu (2022 intake)

Postdoctoral Research Fellow

Project: Genomic approaches to improve understanding of T2D molecular phenotypes, mechanisms, and development of major complications in diverse populations

Supervisors: Professor Zhengming Chen (University of Oxford) and Dr Joanna Howson (NNRCO)

My Novo Nordisk Postdoctoral Research Fellowship will focus on type 2 diabetes molecular phenotype and mechanism applying genomic approaches across diverse populations (e.g., UK population and Chinese population). Last year, I worked closely with my line managers on detecting the proteins associated with diabetes and glycaemic traits in the China Kadoorie Biobank and UK Biobank. With the use of clustering methods, clusters (e.g., liver function, kidney function, lipids, adiposity) specific proteins were identified. I am planning to take steps further on triangulating the causal inference of these proteins with different genetic methods so as to explore the different biological pathways to diabetes.

Before I joined the Novo Nordisk Postdoctoral Research Fellowship, I worked as a senior research associate focusing on causal effects of sleep traits on diabetes risk with the use of Mendelian randomization methods in the MRC/IEU, University of Bristol

Email: **james.liu@ndph.ox.ac.uk**

Dr Ali Shilleh (2022 intake)

Postdoctoral Research Fellow

Project: Leveraging the cell cytoskeleton to produce GLP1R agonists with improved efficacy for beta cell preservation, non-alcoholic steatohepatitis resolution and gene therapy.

Supervisors: Professor David Hodson (University of Oxford) and Dr Carina Ämmälä (NNRCO)

My Novo Nordisk Postdoctoral Research Fellowship, aims to understand GLP1R signaling in beta cells and explore the potential use of GL1R agonists for gene therapy applications for T2D diabetic patients.

I was born in Serbia and grew up in Ramallah, Palestine. In 2014 I completed my BSc in Biochemistry at University of Massachusetts Boston (USA). I received my MSc in Nutrition and Biomedicine in 2016 from the Technical University of Munich in Munich, Germany. During my MSc, I conducted my master's thesis in Dr Henrietta Uhlenhaut's lab at the Institute of Diabetes and Obesity at Helmholtz Zentrum studying the role of TR2 and TR4 in glucose homeostasis and lipid metabolism. My PhD was in Dr Holger Russ's Lab at the Barbara Davis Center in Colorado, USA studying human pancreatic beta cell heterogeneity in vitro and upon transplantation.

Email: **ali.shilleh@ocdem.ox.ac.uk**

Dr Stephanie Anderson (2023 intake)

Postdoctoral Research Fellow

Project: Diagnostics of extracellular vesicles in acute myocardial infarction

Supervisors: Associate Professor Naveed Akbar and Professor Robin Choudhury (University of Oxford)

Mentor: Dr Luke Payne (NNRCO)

I was awarded a Novo Nordisk Postdoctoral Research Fellowship, starting in March 2023 to work within the Division of Cardiovascular Medicine in the Radcliffe Department of Medicine. My fellowship project aims to use an integrated multi-omics analysis approach to characterise early detection of VCAM-1 positive plasma extracellular vesicles (EVs) as a prognostic tool in the diagnosis of acute myocardial infarction in patients with diabetes. I am also interested in the immunomodulatory role of endothelial cell derived EVs and how they modulate pathophysiology in diabetes with acute MI and any potential therapeutic avenue this may open up.

I received my undergraduate BSc (Hons.) degree in Genetics and an MRes in Translational Medicine with distinction from the University of Glasgow. I completed my DPhil in Physiology, Anatomy and Genetics at the University of Oxford under the supervision of Professor Damian Tyler where my research focused on the application of magnetic resonance imaging and spectroscopy techniques to the study of cardiac structure, function, metabolism and energetics in cardiovascular disease and diabetes. During my DPhil I worked on collaborative projects with GSK, Astra Zeneca and Queen Mary University London to assess pharmacological modulation of cardiac metabolism and energetics in diabetes and heart failure. I have a particular interest in how inflammation in diabetes affects cardiac function and the associated increased morbidity observed in patients with cardiovascular disease and diabetes.

Email: **stephanie.anderson@cardiov.ox.ac.uk**

Dr Ryan Carter (2023 intake)

Postdoctoral Research Fellow

Project: A unique angle to discover novel mechanisms in cardiovascular protection

Supervisors: Associate Professor Mathilda Mommersteeg and Professor Robin Choudhury (University of Oxford)

Mentors: Dr Johnna Wesley, Dr Thomas Monfeuga (Novo Nordisk)

I was awarded the Novo Nordisk Postdoctoral Research Fellowship starting in January 2024. My fellowship project aims to leverage a unique fish model, the Mexican cavefish (Astyanax Mexicanus), to identify mechanisms conferring protection against diabetes mellitus-related cardiovascular disease. Bioinformatic approaches will investigate the critical regulatory genes underlying the protective properties observed exclusively within cavefish populations compared to their surface fish counterparts. My research interests include integrated 'omics approaches to probe metabolic dysfunction in human disease and with a specific interest in the intersection of diabetes and cardiovascular disease. I hope to work collaboratively with the industry to ensure a potential translation into tangible patient benefits despite the complexity of metabolic disorders. I completed my integrated master's in molecular biology at the University of York before undertaking a DPhil on the doctoral training programme (BBSRC-funded) at the University of Oxford. I undertook a collaborative research project which capitalised on the metabolism and computational biology expertise of Associate Professor Lisa Heather and Professor Francesca Buffa. During this time, I also undertook a six-month internship at the NNRCO within the molecular disease understanding team led by Dr Enrique Toledo M.

Email: **ryan.carter@dpag.ox.ac.uk**

Dr Matthew Lloyd (2023 intake)

Postdoctoral Research Fellow

Project: Mechanistic investigation of a circadian clock enhancer in treatment of obesity

Supervisors: Associate Professor Sridhar Vasudevan, Professor Russell Foster, Associate Professor Aarti Jagannath (University of Oxford)

Mentor: Dr Manu Verma (NNRCO)

In this project, I aim to elucidate the molecular mechanisms by which an epigenetic reader of histone acetylation, BRD4, confers circadian rhythmicity onto downstream metabolic pathways to drive weight loss. The Vasudevan group previously identified a small molecule inhibitor of BRD4, which enhances the amplitude of cell-autonomous circadian rhythms and completely prevents weight gain without altering food intake in a mouse model of diet-induced obesity. I will use a multi-omics approach to identify BRD4-regulated genes associated with decreased fat accumulation and characterise the effects of BRD4 loss-of-function in multiple tissues, including adipose, liver, and skeletal muscle. Target genes will be validated in vivo. I completed my DPhil in DPAG in 2023 under the supervision of Professor Dame Frances Ashcroft and Dr Carina Ämmälä (NNRCO). I investigated how chronic hyperglycaemia affects pancreatic beta-cell metabolism, with a focus on the mechanisms driving impairment of insulin biosynthesis. Previously, I received my Master of Biochemistry degree in 2018, also from the University of Oxford. My research project was in the Vasudevan group, examining circadian rhythms of glucose metabolism in hepatocytes.

Email: **matthew.lloyd@dpag.ox.ac.uk**

Dr Elizabeth Figueroa-Juarez (2023 intake)

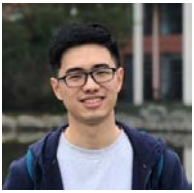
Postdoctoral Research Fellow

Project: Discovery of novel atherosclerosis targets through delineating the arterial group regulatory pathways that change in response to pathological cardiovascular stimuli

Supervisors: Professor Sarah De Val, Associate Professor Gillian Douglas (University of Oxford) and Dr Luke Payne (NNRCO)

Originally from Mexico, I completed my undergraduate studies at the faculty of Chemistry at the National Autonomous University of Mexico and an MSc in Biomedicine (High Distinction). Following my MSc, I undertook two fully funded research internships, one in Oxford funded by the Nuffield Department of Medicine, and another one in Germany funded by Bayer Science and Education Foundation. I also completed an MRes and a PhD in metabolic and cardiovascular disease at the University of Cambridge, funded by a Wellcome Cambridge Trust scholarship. Additionally, throughout my PhD I received an academic excellence Charter Award from Homerton College at the University of Cambridge, and a Carlos Fuentes award, to the most outstanding Mexican student in the UK in health sciences. In June 2024, I started my Novo Nordisk Postdoctoral Research Fellowship.My fellowship project focuses on identifying human arterial enhancers and explore key transcriptional regulators and pathways regulated by pathological stimuli inherent to atherosclerosis. My research interests include molecular biology, cardiovascular in vitro models, and exploring transcriptional and signalling pathways, all applied to understanding endothelial dysfunction in atherosclerosis.

Email: **elizabeth.figueroa@cardiov.ox.ac.uk**



Dr Zhengkun Chen (2024 Intake)

Postdoctoral Research Fellow

Project: Engineering human cardiac organoids at scale to accelerate in vitro cardiovascular research

Supervisors: Prof Molly Stevens, Prof Paul Riley, Prof Georg Holländer

Mentor: Dr Luke Haslett (NNRCO)

I was awarded the Novo Nordisk Postdoctoral Research Fellowship in 2024. My fellowship project focuses on developing an organoid–based model of cardiac fibrosis integrated with machine learning to accelerate the discovery of anti-fibrotic therapies. By combining artificial intelligence and experimental bioengineering, my work aims to advance cardiac organoid research, from materials design to drug screening, through a data-driven strategy.

I am a biomedical engineer by training, having earned a Bachelor of Science with First-Class Honours in Biomedical Engineering from The Hong Kong Polytechnic University in 2019. In September 2024, I completed my PhD in Polymers and Materials Chemistry at the University of Toronto. My doctoral research centered on the development of in vitro skin models, where I designed biomimetic hydrogels as tissue scaffolds, applied machine learning for hydrogel formulation optimization, and engineered microfluidic systems for the production of skin spheroids. My research interests lie at the intersection of biomaterials, tissue engineering, and artificial intelligence. I aim to combine in silico tools with in vitro models to reduce reliance on in vivo experiments and accelerate the translation of biomedical discoveries into therapeutic solutions.

Email: **zhengkun.chen@dpag.ox.ac.uk**

Dr Jonathan Hedley (2024 intake)

Postdoctoral Research Fellow

Project: Navigating the genetic perturbation landscape: Multi-modal, causal representation learning for target discovery.

Supervisors: Professor Philip Torr (University of Oxford), Dr Julien Fauqueur, Dr Cesar Medina (NNRCO), Dr Kaspar Märtens (NNRCO)

Jonathan Hedley is a Novo Nordisk Postdoctoral Research Fellow in the Torr Vision Group at the University of Oxford. His research focuses on developing deep multi-modal generative models for genomic data. The ultimate goal of his fellowship project is to develop foundational and causal cellular models for reliably predicting cellular responses to genetic perturbations. These advancements are crucial for identifying new drug targets and guiding the exploration of genetic perturbations to uncover new biological insights.

He graduated with a first-class MSci degree in Chemistry with Molecular Physics from Imperial College London in 2020, where he received awards for Overall Outstanding Achievement and excellence in Computational Chemistry. His master's research explored mechanisms for sequence recognition in chromatin, specifically how sequence-specific nucleosome positioning may facilitate homologous recombination. After being awarded the President's PhD Scholarship at Imperial, he defended his PhD in Theoretical Chemical Physics in 2024. His doctoral research studied how structured water influences the electrostatic environment surrounding dsDNA and enhances sequence recognition between homologous dsDNA molecules, a theory that was recently substantiated experimentally using synthetic DNA nano-constructs. This work also contributed to a novel understanding of the role of water within the electrochemical double layer. He has now been awarded the David Cockayne Junior Research Fellowship at Linacre College, Oxford.

Email: **jonathan.hedley@eng.ox.ac.uk**

Dr Pol Hernandez-Llado (2024 intake)

Postdoctoral Research Fellow

Project: Ligand-directed two-step labelling: a new technology to map the trafficking and interactome of GLUT4

Supervisors: Professor Angela Russell (University of Oxford), Dr Jorge Correia (NNRCO)

I was awarded the Novo Nordisk Postdoctoral Research Fellowship, beginning in October 2024. My fellowship project focuses on developing a molecular toolkit to label endogenous GLUT4, with the goal of uncovering elusive aspects of its trafficking, including its regulation and context-specific compartmentalisation. These findings will pave the way for the development of GLUT4-based therapeutics that alter its distribution, offering new treatments for metabolic diseases. My research interests include the development of small molecule tools to elucidate regulatory pathways and their use in the discovery of new therapeutic targets for metabolic disorders.

Before this fellowship, I was a postdoctoral research associate in medicinal chemistry working with Professor Angela Russell, collaborating with Novo Nordisk on the development of metabolic modulators. I earned my Chemistry degree from the University of Barcelona in 2017, and as an ERASMUS+ student, I completed my final year research project at Imperial College London. Afterward, I spent a placement year at GSK Stevenage before joining the Synthesis for Biology and Medicine CDT at the University of Oxford. I completed my DPhil in Synthetic Chemistry under the supervision of Professor Jonathan Burton, where I focused on photochemistry and natural product synthesis.

Email: **pol.hernandezllado@chem.ox.ac.uk**

Aleksandra Boikova (2024 intake)

Postdoctoral Research Fellow

Project: Targeting the transition to inflammatory lipid-associated macrophages in CVD

Supervisors: Prof Claudia Monaco, Dr Lea Dib, Prof Ashok Handa (University of Oxford), Dr Luke Payne, Dr Giorgio Caratti, Dr Charlotte Daly and Dr Alexey Epanchintsev (NNRCO)

As part of the Fellowship programme, I joined the Monaco lab in March 2025 to investigate molecular mechanisms that can be harnessed to therapeutically target lipid-associated macrophage transition to the inflammatory state in atherosclerosis, which is associated with severe adverse cardiovascular events. The project aims to utilise single-cell and spatial transcriptomic datasets of human and mouse atherosclerotic arteries for target discovery, coupled with further validation through screening in iPSC-derived macrophages and functional studies in murine conditional knockout models.

I completed my PhD at the University of Cambridge in January 2025 with a research focus on the evaluation of Myc-driven cardiomyocyte cell cycle re-entry as a therapeutic strategy for cardiac regeneration. In collaboration with AstraZeneca, we developed a novel mRNA modality for cardiac repair after myocardial infarction, efficacious in both acute and established pathological states.

My research interests lie at the intersection of cardiovascular disease and translational therapeutics, leveraging my expertise in a combination of transcriptomic approaches, stem cell models, and functional rodent studies to identify novel treatment modalities.

Email: **Aleksandra.boikova@kennedy.ox.ac.uk**

Olivia Conway (2024 intake)

Postdoctoral Research Fellow

Project: Reprogramming insulin signalling in the human cardiovascular system

Supervisors: Dr Ioannis Akoumianakis, Professor Charalambos Antoniades (University of Oxford), Dr Bruna Brasil Brandão (NNRCO) and Dr Stella Xuechong Hong (Novo Nordisk, Denmark)

I commenced my Novo Nordisk Postdoctoral Research Fellowship in April 2025, where my research focuses on investigating the interplay between adipose tissue and the cardiovascular system. Specifically, I investigate the divergence in insulin resistance between adipose tissue and the vasculature observed in patients with atherosclerosis. Using multiomics approaches and ex vivo experiments on adipose and vascular tissue from human cardiac surgery patients, I aim to understand how insulin resistance alters function and signalling across these tissues in a cell type–specific manner. This work seeks to identify novel cardiovascular insulin sensitisers with potential to improve outcomes in patients with diabetes and atherosclerosis.

I completed my PhD in Clinical Biochemistry at the Institute of Metabolic Science, University of Cambridge in October 2024, where I used subcellular proteomics to uncover novel mechanisms regulating the adipocyte response to insulin. Prior to my doctoral studies, I earned an MRes in Metabolic and Cardiovascular Disease at Cambridge, conducting research with Professors David Savage and Antonio Vidal-Puig and Dr Daniel Fazakerley. I hold a BSc (Hons) in Biomedical Sciences from the University of Manchester, which included a research placement in the Department of Neuroscience at the Mayo Clinic, USA.

As of October 2025, I also hold a Junior Research Fellowship in the Sciences at Worcester College, Oxford.

Email: **olivia.conway@cardiov.ox.ac.uk**

Past Fellows

Assistant Professor Michael Dodd (2014 intake)

Postdoctoral Research Fellow, 2014-2017

Project: Hypoxic signalling in the type 2 diabetic heart - mechanisms for therapeutic modulation.

Supervisors: Associate Professor Lisa Heather and Professor Damian Tyler

Michael was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2014. The focus of his fellowship involved understanding how metabolism is altered during both diabetes and hypoxia in cardiomyocytes. In particular, to investigate how fatty acids alter the hypoxia signalling pathway and cellular adaption to hypoxia. Michael also worked on a project with his mentor Dr Bidda Rolin from Novo Nordisk, to understand transcriptional changes in the diabetic heart following short-term global hypoxia.

Michael was appointed as a Lecturer in Biosciences in the Faculty of Health and Life Sciences at Coventry University, UK in 2018 and then an Assistant Professor (Research) in 2020. Michael currently supervises four PhD students researching the metabolic alterations that occur in pancreatic cancer, cardiovascular disease and skeletal muscle. In 2022 Michael was awarded a Diabetes UK Early Career Small Grant and an NC3Rs project grant in 2024. His work is in the development of self-assembly cardiac organoids and engineered heart tissue, to create better models of cardiovascular disease. Michael currently sits on the Biochemical Society's Research Area III - Energy and Metabolism.

Email: **ac8844@coventry.ac.uk**

Dr Charlotte Green (2014 intake)

Postdoctoral Research Fellow, 2014-2018

Project: The effect of metformin on hepatic fatty acid partitioning: an investigation using human in vivo and in vitro cellular models.

Supervisor: Professor Leanne Hodson

Charlotte was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2014. The focus of her fellowship involved understanding the impact metformin, an anti-diabetic drug, has on liver fat content in humans and understanding the mechanisms by which any changes may occur. This work used a combination of in vitro and whole body human in vivo studies.

Charlotte completed her fellowship in 2018 and moved back to Dundee, where her scientific career began, as Scientific Liaison for the University's Drug Discovery Unit (DDU). In August 2022 she was promoted to Head of Business Development and leads the development and implementation of the Business strategy for the DDU across all its portfolios. Charlotte works closely with the Commercialisation Team in the University of Dundee's Research and Innovation Services to help commercialise relevant opportunities through licencing deals, spin-out companies and industry collaborations.

Email: **c.j.z.green@dundee.ac.uk**

Dr Maria Rohm (2014 intake)

Postdoctoral Research Fellow, 2015-2017

Project: Molecular mechanisms regulating reversible changes in cell structure and function induced by diabetes.

Supervisor: Professor Dame Frances Ashcroft

Maria was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2014. This allowed Maria to pursue her research interests on the molecular basis of metabolic changes occurring in metabolic diseases. Using a multi-omics approach, Maria investigated the underlying metabolic changes of islet function during development and in the treatment of diabetes. Maria also studied the influence of hyperglycaemia/ hypoinsulinaemia on peripheral tissues like the kidney and heart.

Following her Novo Nordisk fellowship, Maria joined the Institute for Diabetes and Cancer (IDC) at Helmholtz Munich. She is now Research Group Leader and head of the research division Tissue Crosstalk in Cancer Metabolism. Having received the prestigious ERC Starting Grant, Maria investigates the intersection of lipid and glucose metabolism in cancer-associated metabolic dysfunction, with the aim to identify targetable disease mechanisms to counteract cachexia. She was awarded the Vincenz-Czerny prize for Oncology for the discovery of ceramides as contributors to cachexia, and most recently the EFSD/ Novo Nordisk Foundation Future Leaders award for her work on transcriptional regulation of metabolism. She also continues to investigate novel drivers of islet malfunction in diabetes.

Email: **maria.rohm@helmholtz-munich.de**

Dr Martijn van de Bunt (2014 intake)

Postdoctoral Research Fellow, 2015-2017

Project: Insights into type 2 diabetes pathogenesis through transcriptomic and functional analysis of the developing human islet.

Supervisors: Professor Mark McCarthy and Professor Anna Gloyn (now Visiting Professors)

Martijn was awarded a Novo Nordisk Postdoctoral Research Fellowship, working with Professor Mark McCarthy and Professor Anna Gloyn at OCDEM and the Wellcome Centre for Human Genetics (WHG). His research aimed to improve understanding of islet biology and pathophysiology through the integrative analysis of large genomic datasets on key type 2 diabetes tissues with findings from human genetics. Martijn's work led to significant advances in the understanding of type 2 diabetes and glycaemic trait genome-wide association loci – for example identifying a novel regulator of insulin secretion, ZMIZ1. Martijn was awarded a prestigious American Society for Human Genetics (ASHG) Charles J Epstein Trainee Award for Excellence in Human Genetics Research.

Following his Novo Nordisk fellowship at the University of Oxford, Martijn moved to Novo Nordisk, Copenhagen, in May 2017. Martijn is currently Chief Scientific Officer at Cytoki Pharma. Cytoki is leveraging the potential of IL-22 as a new treatment paradigm for diseases impacted by changes to the gut-brain-liver axis, including obesity and type 2 diabetes, as well as conditions characterized by epithelial injury, such as inflammatory bowel disease.

Email: **mvdb@cytokipharma.com**

Assistant Professor Jakob Knudsen (2015 intake)

Postdoctoral Research Fellow, 2015-2017

Project: Fumarate - the elusive link between diabetes and cancer?

Supervisor: Professor Patrik Rorsman

Jakob was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2015. The focus of Jakob's fellowship was investigating the role of TCA cycle regulation in Pancreatic alpha cells and the development of diabetes.

Following his Novo Nordisk fellowship, Jakob joined the Department of Biology, University of Copenhagen as an Assistant Professor, in June 2019, being awarded a Novo Nordisk Foundation Emerging investigator in Endocrinology and Metabolism grant. His research, in line with his interest in basic cellular metabolism, continues to explore molecular mechanisms underlying pancreatic islet function and their role in physiology and diabetes. Jakob has won several prestigious awards including an ERC-STG and most recently an EFDS/Novo Nordisk Foundation Future Leaders award. In Jan 2025, Jakob was appointed Associate Professor in Physiology and Metabolism, at the Department of Biology, University of Copenhagen.

Email: **jgknudsen@bio.ku.dk**

Associate Professor Ahmad Moolla (2015 intake)

Clinical Research Training Fellow, 2015-2019

Project: Using Multi-Parametric Magnetic Resonance techniques to determine the severity and response to treatment of liver fibrosis, inflammation, steatosis and iron in patients with type 2 diabetes and non-alcoholic fatty liver disease.

Supervisors: Professor Jeremy Tomlinson and Professor Stefan Neubauer

Ahmad was awarded a Novo Nordisk Clinical Research Training Fellowship to conduct research on metabolic dysfunction-associated steatotic liver disease (MASLD). He established a clinical trial to investigate the utility and mechanisms of action of GLP-1 agonists as novel therapeutic agents for patients with MASLD. Through this and related clinical studies, he also investigated the use of steroid biomarkers as novel non-invasive diagnostic tools with which to diagnose, stage and monitor MASLD progression.

Ahmad was awarded a DPhil from the University for his Fellowship research and returned to clinical practice in February 2019. In 2020, he was appointed as a Consultant Physician in Diabetes, Endocrinology and General Internal Medicine within the UK NHS at the Royal Free Hospital,

London, a position which he retains to date. In 2022, Ahmad was appointed as Associate Professor of Medicine and Training Programme Director and in 2025 as Visiting Professor at Newcastle University UK. He is currently based at the medical school campus in Malaysia where he is responsible for the delivery of postgraduate training for doctors practicing across Malaysia to facilitate dual accreditation to both GMC UK and MMC Malaysia standards. He is also leading work, including with governmental partners in Malaysia, to design and establish clinical services in diabetes and obesity that assist with prevention, earlier diagnosis and comprehensive treatment to improve outcomes for people living with these conditions.

Email: **ahmad.moolla@ocdem.ox.ac.uk**

Dr Julia Parnis (2015 intake)

Postdoctoral Research Fellow, 2015-2018

Project: The role of γ2 AMPK in islet secretory physiology.

Supervisors: Professor Houman Ashrafian (now Visiting Professor), Dr Arash Yavari and Professor Patrik Rorsman

Julia was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2015 to study γ2 AMPK in islet secretory physiology, elucidating a crucial link between bioenergetics and diabetes.

Following her fellowship, she joined Evotec as a Research Scientist. At Evotec she led the in vivo component of a stem cell–based β-cell therapy for type 1 diabetes, contributed to kidney-disease target identification in collaborations with CSL Vifor and Eli Lilly, and supported several internal data-science development projects.

She is currently completing advanced training in data science and machine learning to support translational discovery. She is open to new opportunities in translational science that combine rigorous experimental insight with modern analytics.

Email: **juliaparnis@gmail.com**

Dr Niall Dempster (2016 intake)

Clinical Research Training Fellow, 2016-2020

Project: Understanding improvements in non-alcoholic fatty liver disease. Defining the impact of very low calorie diet and bariatric surgery on lipid flux.

Supervisors: Professor Jeremy Tomlinson, Professor Leanne Hodson and Dr Garry Tan

Niall was awarded a Novo Nordisk Clinical Research Training Fellowship in 2016. His research study assessed the effects of a low calorie diet and bariatric (weight loss) surgery on liver fat and metabolism. This translational project fostered new collaborations between the region's scientists, physicians and surgeons with a view to improving lifestyle, pharmacological and surgical interventions for NAFLD.

Niall returned to his clinical career full time in 2020 and has since been awarded his DPhil. He is currently a Specialist Registrar in General Surgery.

LinkedIn: **www.linkedin.com/in/niall-dempster-a04a1b84/**

Dr Claudia Guida (2016 intake)

Postdoctoral Research Fellow, 2016-2020

Project: Role of peptide tyrosine tyrosine (PYY) on pancreatic islet secretion and in Roux-en-Y gastric bypass surgery.

Supervisors: Dr Reshma Ramracheya (now Visiting Scientist) and Professor Patrik Rorsman

In 2016, Claudia was awarded a Novo Nordisk Postdoctoral Research. Her research focused on type 2 diabetes and the role of gut hormones in its remission following bariatric surgery. She investigated the role of PYY in diabetes and islet function including insulin, glucagon and somatostatin release. Targeting PYY or its action may provide a novel, non-surgical therapy for diabetes.

In her fellowship work Claudia regularly employed secretion studies, islet isolation, light microscopy, cell culture and biochemical assays. She also collaborated with scientists for electrophysiology measurements and calcium imaging.

Following her fellowship, Claudia continued her work at OCDEM extending her research to the pathophysiology of type-1 diabetes and its complications. In August 2021, Claudia joined Kinesys Consulting, a Clinigen company, to become a regulatory affairs professional, and is now a senior regulatory scientist.

Email: **claudia.guida@clinigengroup.com**

Dr Nikita Ved (2016 intake)

Postdoctoral Research Fellow, 2016-2020

Project: How does maternal pre-gestational diabetes increase the risk of having children with heart defects?

Supervisors: Associate Professor Duncan Sparrow and Professor Dame Frances Ashcroft

In 2016, Nikita was awarded a Novo Nordisk Postdoctoral Research Fellowship to investigate how pre-existing maternal diabetes induces embryonic heart defects. In parallel to this project, she also continued research into how hyperglycaemia affects the retinal microvasculature through the supervision of a master's student from the Department of Pharmacology.

Following her fellowship, Nikita joined the lab of Professor Paul Riley (IDRM) to investigate how functional manipulation of the cardiac lymphatic vasculature impacts upon the immune response to improve heart function and remodelling after a heart attack. Nikita then joined Sanofi as the General Medicine's Data Analytics and Publication Lead. In 2020, she co-founded the 1928 Institute, a think tank that researches and represents the British Indian community and in 2023 she was awarded an MBE for her work with the British Indian community and increasing vaccine awareness and uptake during the COVID-19 pandemic. She has also been elected as a Fellow of the Royal Society of Arts.

Email: **nikita.ved@dpag.ox.ac.uk**

Dr Anna Veprik (2016 intake)

Postdoctoral Research Fellow, 2016-2019

Project: Investigating lipid metabolism in islet α-cells and gut L-cells, as a nutrient sensing mechanism controlling hormone secretion.

Supervisors: Dr James Cantley (now Visiting Scientist) and Associate Professor Heidi de Wet

Anna was awarded the Novo Nordisk Postdoctoral Fellowship in 2016. During her fellowship, she broadened the understanding of the connection between nutritional status of the pancreatic α and gut enteroendocrine L-cells and their ability to respond to metabolic stimuli via Acetyl-CoA-Carboxylase-1 (ACC1).

During her fellowship, Anna developed a keen interest in drug discovery, thus, after the fellowship, she joined the Novo Nordisk Research Centre in Oxford. At NNRCO she led the development of high-throughput screening platforms for unbiased target identification in liver and muscle which resulted in several promising targets and supervised a DPhil project with the University of Oxford.

In 2024, Anna joined Perspectum, an Oxford based biotech focusing on developing novel, non-invasive, biomarkers for diagnosis and management of metabolic diseases. At Perspectum, Anna leads a team that operates in the later stages of the drug discovery cycle, working with major pharma companies in large scale clinical trials, using the company's cutting edge technologies to improve patient outcomes.

Email: **anya.veprik@gmail.com**

Dr Manu Verma (2016 intake)

Postdoctoral Research Fellow, 2016-2020

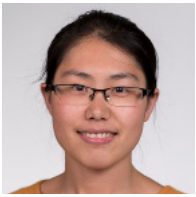
Project: Investigations into the role of TCF7L2 in human obesity and metabolic dysfunction.

Supervisors: Professor Fredrik Karpe and Dr Constantinos Christodoulides

Dr. Verma leads several human centric, functional genomics-based, early drug discovery programs focused on cardiometabolic diseases at the Novo Nordisk Research Centre Oxford. He has over 5+ years of cross-functional team leadership experience and 14+ years of experience in functional genomics, AI/ML and human genetics-based target discovery.

Manu's training includes a prestigious Oxford-Novo Nordisk Fellowship at the University of Oxford, concentrating on the impact of genetic variants on obesity, diabetes, and fat distribution. He holds a Ph.D. and M.Res. in Cardiovascular Science from the University of Edinburgh, an M.Sc. with Distinction in Medical Genetics from the University of Glasgow, and a bachelor's degree in engineering from India. His work has been published in numerous prestigious journals, and he has delivered multiple oral presentations at several national and international conferences.

Email: **MVRM@novonordisk.com**



Dr Didi He (2017 intake)

Postdoctoral Research Fellow, 2017-2020

Project: X-ray and Cryo-EM structures for novel human membrane protein targets in diabetes and obesity.

Supervisor: Professor Liz Carpenter

Didi was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2017. During her fellowship, she gained more insights into the structures and functions of human integral membrane proteins involved in diabetes/obesity and cancer. She mainly investigated the solute carrier transporters using X-ray crystallography and single particle cryo-electron microscopy. She also generated and screened antibodies against these disease related protein targets in Novo Nordisk (Måløv).

Following her fellowship, Didi joined Confo Therapeutic (Belgium), as a research scientist in the Structural Biology group, working on the structural and functional characterisation of GPCR and nanobody development. She closely interacted with the biology discovery, assay development and hit discovery teams.

She joined the Technology platform at Structure Therapeutics since Feb. 2022, as a principal scientist based in Shanghai, working on GPCR structural characterization to support advanced drug discovery projects. For this role, she is closely working with biologists, medchem and CADD scientists to enable structure-based drug design. She is also leading the effort of establishing a hit identification technology platform by interacting with CROs and academic collaborators.

LinkedIn: **www.linkedin.com/in/didi-h-54187480/**

Associate Professor Jack Miller (2017 intake)

Postdoctoral Research Fellow, 2017-2021

Project: Assessing the cardiovascular impact of novel diabetic treatments using hyperpolarized magnetic resonance.

Supervisor: Professor Damian Tyler

Jack J Miller is an interdisciplinary medical physicist who is interested in developing methods to quantify metabolic reactions and dynamic processes in living systems. After completing an EPSRC Postdoctoral Fellowship, he became a Novo Nordisk Fellow with Professor Damian Tyler in the Departments of Physics, CVM and DPAG in the University of Oxford, aiming to quantify the effects of modern medical therapies on the T2DM heart. He was subsequently head-hunted to an Associate Professorship in Medical Physics and Metabolic Imaging at Aarhus University in Denmark, was elected to a renewable Fellowship in Physics at St Hugh's College in Oxford, and elected to the Medical Physics Group at the Institute of Physics after winning a number of national and international prizes from other learned bodies, such as the New York Academy of Sciences. Jack was elected a Fellow of the Institute of Physics in April 2024 and has recently been awarded an 'Academic Gold Medal' by the Institute of Physics and Engineering in Medicine. Through his research he hopes to demonstrate both the value and broad applicability of trying to understand and visualise metabolism.

Email: **jack.miller@clin.au.dk**

Dr Andrea van Dam (2017 intake)

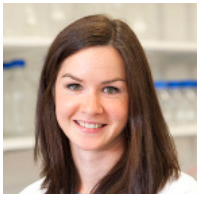
Postdoctoral Research Fellow, 2017-2021

Project: Unravelling the role of Hedgehog signalling in human obesity and body fat distribution.

Supervisors: Dr Constantinos Christodoulides and Professor Fredrik Karpe

Andrea was awarded a Novo Nordisk Postdoctoral Fellowship starting in 2017. During her fellowship, she used human genetic and physiological approaches, accompanied by studies in cellular models to better understand the mechanisms by which genetic variants in developmental pathway genes modulate fat distribution. Her main project focused on a variant in the HHIP locus associated with fat distribution in GWAS. Paired abdominal and gluteal fat biopsies were obtained from human individuals that were recruited by genotype, and single-cell RNA-sequencing of the stromal vascular fraction was performed to identify cell type-specific mechanisms driving the phenotype.

Following her fellowship, Andrea started specialist training for clinical biochemistry at the ETZ, JBZ and Radboud UMC hospitals in the Netherlands.



Dr Samantha Laber (2017 intake)

Postdoctoral Research Fellow, 2017-2020

Project: Determining potential causal mechanisms by genetic fine mapping, genomic annotation and functional characterization at obesity and fat distribution loci.

Supervisor: Professor Cecilia Lindgren

Samantha was awarded a Novo Nordisk Postdoctoral Fellowship in 2017. During her Novo Nordisk fellowship, Samantha developed a high content imaging approach for lipid-accumulating cell types (LipocyteProfiler) with the aim to decipher underlying mechanisms of genetic and polygenic risk of common complex diseases such as type 2 diabetes and obesity-related traits. During her fellowship she combined experimental and computational analyses to systematically dissect human genetic risk variants in metabolic diseases by transcriptionally and morphologically profiling human-derived primary pre-adipocytes.

Samantha has since joined Flagship Pioneering in Cambridge, Boston, where she is leading the Metabolic Diseases Research Program at ProFound Therapeutics. She oversees the strategic development and analysis of novel protein discoveries in metabolism and leads efforts to understand their biological functions and implications for human health. She also guides the translation of these insights into the development of innovative therapeutic solutions for metabolic diseases.

Email: **slaber9002@gmail.com**

Dr Amy Pei-Ling Chiu (2017 intake)

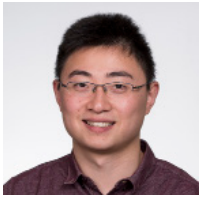
Postdoctoral Research Fellow, 2018

Project: Exploring a novel signalling in “dysfunctional” adipose tissue, mediating the cardiovascular complications of diabetes.

Supervisors: Professor Charalambos Antoniades and Professor Keith Channon

Amy joined the Novo Nordisk–Oxford Fellowship Programme in 2018. Using a combination of in vitro and in vivo approaches, her fellowship focused on understanding how dysfunctional adipose tissue mediates cardiovascular complications in diabetes. Following her fellowship, she contributed to the development of health screening technologies for consumer smartwatches during the pandemic. Her current work applies AI and data analytics to translate biomedical data into insights that drive healthcare innovation.

Email: **amyplchiu@alumni.ubc.ca**



Professor Yue Ruan (2017)

Postdoctoral Research Fellow, 2017-2021

Project: Personalisation of glycaemic regimes to reduce in-hospital hypoglycaemia.

Supervisors: Dr Rustam Rea, Dr Alistair Lumb, Dr Garry Tan, Professor Jim Davies and Professor Mihaela van der Schaar

Yue earned his PhD in Biomedical Engineering from the University of Cambridge. In 2017, he was awarded the prestigious Novo Nordisk Postdoctoral Research Fellowship, where he led a project focused on personalizing glycaemic management to reduce in-hospital hypoglycaemia. This interdisciplinary project involved developing a personalized algorithm for hypoglycaemia risk prediction, enabling the implementation of tailored blood glucose optimization strategies for hospitalised patients.

Following his fellowship, Yue continued his research at the Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM) as a Postdoctoral Research Associate. There, he specialized in analyzing and interpreting diabetes and COVID-19 data collected from a national UK audit. From 2022 to 2023, Yue worked in Research and Development at Abbott Diabetes Care. He has since returned to China, where he now serves as a Research Professor at the Shenzhen Institute of Advanced Technology (SIAT), a leading institute affiliated with the Chinese Academy of Sciences.

Email: **ruanyue1114@hotmail.com**

Dr Thomas Hill (2018 intake)

Postdoctoral Research Fellow, 2018-2022

Project: Regulation of δ-cell pancreatic secretion in health and disease.

Supervisors: Professor Patrik Rorsman and Professor Dame Frances Ashcroft

Thomas was awarded a Novo Nordisk Fellowship in 2018. His fellowship project focused on assessing the regulation of islet δ-cell secretion in health and disease. The project built on his past experience of working with transgenic animal models with respect to investigating paracrine changes within the islets of Langerhans through measurements of integrated islet function both in vitro and in vivo.

Following his fellowship, Thomas is working with Professor Patrik Rorsman (OCDEM) and Professor Ben Davies (WHG) investigating the dysregulation of δ-cell somatostatin and α-cell glucagon secretion in type 1 diabetes, and identifying potential novel strategies to improve the glucagon response that is abnormally lost in type 1 diabetic hypoglycaemia.

Email: **thomas.hill2@well.ox.ac.uk**

Dr Laura McKillop (2018 intake)

Postdoctoral Research Fellow, 2018-2021

Project: Investigating the relationship between glucose homeostasis and torpor in mice.

Supervisors: Professor Vladyslav Vyazovskiy, Professor Stuart Peirson and Dr James Cantley

Laura was awarded a Novo Nordisk Fellowship in 2018. Her fellowship aimed to investigate the role of glucose homeostasis in daily torpor, a fascinating physiological state during which metabolic rates and body temperature can dramatically decrease. Laura set up various complex surgical techniques in mice including continuous glucose monitoring, temperature telemetry and in vivo electrophysiological recordings in freely moving mice. By combining these techniques with indirect calorimetry, thermal imaging and activity monitoring, in wild type mice as well as transgenic models (e.g. torpor prone ObOb mice), a complex relationship between the dynamics of daily torpor and association with blood glucose levels has been revealed.

Following her fellowship, Laura joined the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) first as the Regional Programme Manager for the Francis Crick Institute and King's College London, and now as part of the Training and Engagement team at the NC3Rs. In this role Laura facilitates the uptake of the 3Rs into research practice, providing training, advice and support to institutions across the UK.

Email: **l.e.mckillop@gmail.com**

Dr Dragana Savic (2018 intake)

Postdoctoral Research Fellow, 2018-2022

Project: Investigating the role of oxidative stress and insulin resistance in NAFLD progression with advanced MR techniques and stable-isotope tracers.

Supervisors: Dr Michael Pavlides, Professor Stefan Neubauer and Professor Leanne Hodson

In 2018 Dragana was awarded a Novo Nordisk Fellowship. Her project focused on investigating metabolic changes in patients with different stages of non-alcoholic fatty liver disease (NAFLD) using MRI/MRS and stable isotope labelling. She holds an MBA and consults in innovation for Merck KGaA yearly. In 2020 she innovated a novel product in the field of bioelectronic medicine that was taken up by the innovation pipeline of Merck KGaA, and as a result of her work she founded another company in the field of bioelectronic medicine: INIA Biosciences, a company focused on harnessing the inflammatory reflex through a non-invasive, wearable ultrasound device to treat inflammatory diseases.

After completing her Novo Nordisk Fellowship, Dragana transitioned full-time to growing her start-up. She has since filed three patents, advancing the integration of wearable ultrasound technology into home-based healthcare. INIA Biosciences has collaborated with MIT on pilot studies, received an NSF SBIR grant, and established offices in Boston. The company is currently preparing for its first-in-human clinical trials, focusing on optimizing ultrasound dosage for treating psoriasis patients.

Email: **dr.dragana.savich@gmail.com / dragana@iniabio.com**

Assistant Professor Vincent van der Vinne (2018 intake)

Postdoctoral Research Fellow, 2018-2020

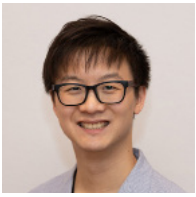
Project: Investigating metabolic control and sleep during photoperiod-induced torpor in Djungarian hamsters (Phodopus sungorus).

Supervisors: Professor Vladyslav Vyazovskiy, Professor Stuart Peirson and Dr James Cantley (now Visiting Scientist)

Vincent was awarded a Novo Nordisk Fellowship in 2018. During his fellowship, Vincent described the seasonal changes in physiology as well as characteristics of daily torpor in Djungarian hamsters. This was done with the goal of establishing daily torpor in a Djungarian model as a new model to study mechanisms involved in energy and sleep homeostasis. Beyond his work with Djungarian hamsters, he also optimised and validated the use of thermal imagery to assess changes in core body temperature in laboratory mice.

Following his fellowship, Vincent became a Visiting Assistant Professor of Biology for 2 years at Williams College in Massachusetts, USA. His research focuses on identifying the mechanisms underlying the adverse consequences of circadian disruption. Vincent has recently started a tenure-track position in the Psychology & Neuroscience department of Drake University in Des Moines, Iowa, United States.

Email: **vincent.vandervinne@drake.edu**



Dr Richard Yan-Do (2018 intake)

Postdoctoral Research Fellow, 2018-2021

Project: Dissection of the functional effects of genetic variants on obesity related traits.

Supervisor: Professor Cecilia Lindgren

Richard was awarded a Novo Nordisk Postdoctoral Fellowship in 2018. His work bridged computational biology with wet lab genetics, and he initiated a high throughput genome wide CRISPR knock out screen for investigated obesity genes. His work elucidated the mechanism of novel genes that are involved in adipocyte lipogenesis and lipolysis.

Following his fellowship, Richard joined the Hong Kong Centre for Cerebro-cardiovascular Health Engineering (COCHE) in Hong Kong Science Park as a Post-Doctoral Research Fellow in the Department of Biomedical Engineering. Here he is developing microscopy technologies for simultaneous spatiotemporal stimulation and imaging of neurons.

Dr Lorna Daniels (2019 intake)

Postdoctoral Research Fellow, 2020-2023

Project: Circadian regulation of liver energy metabolism: translational studies in diabetes.

Supervisors: Professor David Ray (University of Oxford) and Dr Maxwell Ruby (NNRCO)

Lorna was awarded a Novo Nordisk Postdoctoral Research Fellowship starting in January 2020, the focus of which was to investigate circadian regulation of liver energy metabolism in diabetes. The project capitalised on the use of small molecule compounds targeting circadian pathways to determine how they interact with liver glucose and lipid signaling. Lorna utilised a combination of genetic and cell based assays to allow entirely novel biology to be revealed and provide potential therapeutic advances.

After finishing her fellowship Lorna transitioned into a Senior Policy Advisor role in the Government Office for Science advising government departments on R&D strategy and capabilities with a focus on business development and venture capital approaches to innovation. In 2025 Lorna moved into the Department for Science, Innovation and Technology as Tech Finance Policy Lead, overseeing policy sponsorship for British Technology Investments, HMG's direct equity investment vehicle in National Security.

Email: **ljdaniels90@gmail.com**

Dr Shilpa Nagarajan (2019 intake)

Postdoctoral Research Fellow, 2019-2023

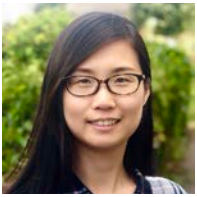
Project: Defining human hepatic insulin resistance.

Supervisors: Professor Leanne Hodson, Professor Fredrik Karpe, Dr Katherine Pinnick (University of Oxford) and Dr Maxwell Ruby (NNRCO)

Shilpa was awarded a Novo Nordisk Postdoctoral Fellowship in October 2019. Her project explored the mechanisms that define hepatic insulin resistance in humans, particularly in the setting of lipid excess such as in non-alcoholic fatty liver disease (NAFLD). The project utilised stable isotope tracer methodologies in primary human hepatocytes and human liver cell lines to investigate the direct relationship between intracellular triglyceride pools (particularly lipid droplet morphology, composition and localisation) and hepatic glucose output. The cellular work was also complemented by stable isotope studies performed in participants of the Oxford Biobank at OCDEM to investigate pathways that underlie common markers of hepatic insulin resistance in humans (such as gluconeogenesis and de novo lipogenesis).

Following her fellowship, Shilpa joined Vertex Pharmaceuticals in 2023 as a Senior Research Scientist in the Human Disease Modelling team.

Email: **shil.nagarajan@gmail.com**



Dr Xuelu Wang (2019 intake)

Postdoctoral Research Fellow, 2019-2021

Project: The role of ACVR1C signalling in human fat distribution.

Supervisors: Professor Fredrik Karpe and Dr Constantinos Christodoulides

Xuelu was awarded a Novo Nordisk Postdoctoral Research Fellowship in 2019. During her fellowship, Xuelu characterised the functional effects of ACVR1C deficiency on human depot-specific adipocytes, using both constitutive and acute knockdown cell models. She also used cell-based assays to analyse the activity of ACVR1C mutants related to healthy metabolic profiles and revealed detailed phenotypes of mutant carriers in the Oxford BioBank.

Following her fellowship, Xuelu has taken up a position as a Senior Scientist at AstraZeneca where she will apply her cell biology and protein science skills for the design and development of therapeutic macromolecules.

Email: **wxuelu@hotmail.com**

Dr Gitalee Sarker (2019 intake)

Postdoctoral Research Fellow, 2019-2023

Project: Neuroimmunity in obesity and cardiac function.

Supervisors: Professor Ana Domingos, Professor Irina Udalova, Professor David Paterson (University of Oxford) and Dr Enrique Toledo Maldonado (NNRCO)

I am a Novo Nordisk Postdoctoral Fellow and a Fulford Junior Research Fellow in Somerville College, University of Oxford. My project aims to characterize novel cellular and molecular markers in the sympathetic neuro-adipose junction. Identification of such novel targets with subsequent follow-up for human validation may lead to developing tissue-specific therapeutics to combat obesity and associated comorbidities. Apart from my research work, I am also actively involved in teaching as a Tutor in Medicine at Somerville College.

I completed my PhD in Neuroscience at ETH Zurich under the supervision of Professor Christian Wolfrum. My PhD work reveals that perinatal maternal junk food intake induces obesogenic and addictive phenotypes in successive three generations via the paternal lineage and identifies sperm tsRNA as a potential epigenetic mark that partly mediates such abnormal traits to the progeny. Prior to my PhD, I attained an MSc in Neuroscience from the University of Bonn, Germany. I also hold a Bachelor in Medicine and Surgery (MBBS) from Dhaka Medical College, Bangladesh and I worked as a general practitioner back in Bangladesh.

Email: **gitalee.sarker@dpag.ox.ac.uk**

Dr William Stockdale (2021 intake)

Postdoctoral Research Fellow, 2021 - 2024

Project: Patient-specific bioinformatics linking coronary microvascular structure, function and gene expression.

Supervisors: Professor Kim Dora (University of Oxford) and Professor Bill Haynes (NNRCO)

William's Novo Nordisk Postdoctoral Research Fellowship was based in the Dora group in the Department of Pharmacology. His fellowship focused on investigating microvascular contractile dysfunction in human coronary micro arteries. The project utilized donor atrial and ventricular biopsies to link structure and function of micro arteries with the transcriptome and patient history in order to identify genetic targets associated with microvascular contractile dysfunction.

William obtained a BSc in Biochemistry from the University of Sussex and an MRes in Biomedical Science (masters of research) from St George's University of London. Following his MRes, he took up a position as a research assistant in the group of Associate Professor Mathilda Mommersteeg (IDRM) at the University of Oxford, during which, he completed his DPhil under the supervision of both Associate Professor Mathilda Mommersteeg and Professor Paul Riley (IDRM). While at Oxford, he investigated heart regeneration in the Mexican cavefish (Astyanax Mexicanus), introducing it as a new and unique model for heart regeneration. Following its introduction, he used the Mexican cavefish to investigate the metabolic fingerprint underlying cardiomyocyte proliferation during heart regeneration.

Email: **william.stockdale@pharm.ox.ac.uk**

Dr Thomas Agbaedeng (2021 intake)

Postdoctoral Research Fellow, 2021-2025

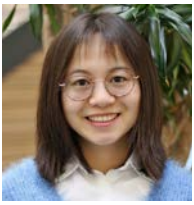
Project: Leveraging genomic approaches and genetic associations to identify potential new drug targets in cardiometabolic disease.

Supervisors: Professor Chris O'Callaghan (University of Oxford) and Dr Joanna Howson (NNRCO)

In 2021, I started my Novo Nordisk Postdoctoral Research Fellowship. My project investigates lipid-mediated genome-wide chromatin remodelling in vascular cellular models of coronary atherosclerosis. By using both multi-omics and genetic fine mapping approaches, this project aims to prioritise causal coronary artery disease variants and pathways. Additionally, I have been awarded the John Fell Fund grant to perform CRISPR screens, which will allow me to validate these prioritised targets.

I completed my PhD at The University of Adelaide (Australia) where I used a multimodal approach of meta-analysis and pre-clinical experimental models to characterise the arrhythmogenicity of epicardial fat. My PhD work led to multiple awards, including the Young Investigator Award (1st Prize) at the European Heart Rhythm Association Congress, Spain. I then began a postdoctoral position at The University of Adelaide in 2019. In 2020, I was awarded a Visiting Fellowship at Amsterdam UMC (Netherlands) to study proteomic phenotyping of epicardial fat in atrial fibrillation. In 2021, I was awarded The University of Adelaide's Emerging Leaders Grant for an in vitro study of cardiac fibrogenesis.

Email: **thomas.agbaedeng@ndm.ox.ac.uk**



Dr Jun Liu (2021 intake)

Postdoctoral Research Fellow, 2021-2025

Project: An integrative cross-omics study of NAFLD and NASH.

Supervisors: Professor Cornelia van Duijn (University of Oxford) and Dr Joanna Howson (NNRCO)

Beginning in September 2021, Jun served as a Novo Nordisk Research Fellow under the joint supervision of Professor Cornelia van Duijn (Oxford Population Health) and Dr. Joanna Howson (Novo Nordisk Research Centre Oxford). Her project, titled "An Integrative Cross-omics Study of Non-Alcoholic Fatty Liver Disease and Non-alcoholic Steatohepatitis," involved exploring multi-omics profiles and identifying potential drug targets for MASLD (formerly known as NAFLD), with a focus on proteomics and the integration of additional omics datasets. She also demonstrated that proteomics can effectively stratify the newly defined MASLD subtype, MetALD, into distinct risk categories.

Upon completing her fellowship, Jun joined Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China, as a Principal Investigator. In this role, she continues to pursue research in multi-omics and cardiometabolic diseases, while concurrently undertaking part-time clinical training in the Department of Ophthalmology.

LinkedIn: **www.linkedin.com/in/jun-l-6a1b7a120/**

Dr Jessica Kepple (2021 intake)

Postdoctoral Research Fellow, 2021-2024

Project: The cellular pathology of early kidney disease.

Supervisors: Dr Katherine Bull, Professor Richard Cornall (University of Oxford) and Dr Ramneek Gupta (NNRCO)

Starting in November 2021, I joined the University of Oxford as a Novo Nordisk Postdoctoral Research Fellow. The focus of my research is to identify early modulators of kidney disease in human renal transplant tissue. To complete this project, I will develop and utilize integrated imaging 'omics' platforms that can be applied to renal biopsies to reveal causative pathways and possible drug targets.

I graduated from the University of Florida with a dual BS/BA in Microbiology and Anthropology. Subsequently, I completed my PhD in Molecular Biology and Physiology at the University of Alabama, Birmingham, as part of the prestigious Comprehensive Diabetes Research Center. Under the supervision of Professor Chad Hunter, I investigated various aspects of brown adipose biology. In particular, my research illuminated novel transcriptional co-regulators governing tissue function and applications of brown adipose as an islet transplantation site.

Email: **jessica.kepple@ndm.ox.ac.uk**

Dr Inhye Park (2021 intake)

Postdoctoral Research Fellow, 2021-2025

Project: Deciphering the biology of resident vascular macrophages in atherosclerosis.

Supervisors: Professor Claudia Monaco, Professor Irina Udalova, Professor Paul Riley (University of Oxford) and Dr Alexey Epanchintsev (NNRCO)

My research interest lies in characterising macrophage heterogeneity and exploiting macrophage behaviours to alleviate cardiovascular diseases. Prior to my fellowship, I completed a DPhil in Molecular and Cellular Medicine at the University of Oxford, after obtaining a Master's degree in Biomedicine from University College London. During my DPhil, I showed how a C-type lectin receptor CLEC4A2 directs macrophages towards a protective function in atherosclerosis. My Novo Nordisk fellowship aimed to investigate the molecular mechanisms of vascular macrophages and their interactions with vascular cells that could be exploited to target atherosclerosis. Using single-cell transcriptomic data of human and murine atherosclerotic tissues, I identified novel candidate molecules that define homeostatic functions of macrophages. For target validation, I developed a unique co-culture system where iPSC-derived macrophages obtain features like resident vascular macrophages. Currently, I am performing CRISPR screens to shortlist the targets and assess their function using in vivo mouse models for atherosclerosis.

To pursue my independent research, I applied for a BHF CRE Transition Fellowship to explore the role of a novel subset of vascular macrophages identified in my previous studies in acute and chronic heart failure models. This work is supported by two leading experts in this field, Prof. Paul Riley (IDRM) in cardiovascular regenerative medicine and Prof. Claudia Monaco (Kennedy) in cardiovascular inflammation. Through this fellowship, I aim to build on my own research linking immunology and metabolism in macrophages in cardiovascular disease and identifying therapeutic targets for translational application in the clinic.

Email: **inhye.park@dpag.ox.ac.uk**

Dr Taiyu Zhu (2022 intake)

Postdoctoral Research Fellow, 2023-2025

Project: Integrating genetics and deep neural networks to identify future drug targets for cardiometabolic disease

Supervisors: Associate Professor Alejo Nevado-Holgado (University of Oxford), Dr Joanna Howson, Dr Sile Hu, Dr Robert Kitchen (NNRCO)

Taiyu was awarded the Novo Nordisk Postdoctoral Research Fellowship in January 2023. His fellowship project developed novel AI, especially deep learning models, to analyse large human genomic datasets, improving risk prediction and pinpointing potential causal genes for cardiometabolic disease. The work was validated across diverse ancestries and benchmarked against a broad range of machine learning baselines and polygenic risk score methods.

Following the recent completion of his fellowship, Taiyu was appointed Lecturer (Assistant Professor) in Large Language Models for Healthcare in the Department of Biostatistics & Health Informatics at King's College London. He is now establishing his own group and leading multiple projects that apply large-scale AI models to multimodal clinical data, including extensive electronic health records, wearable device streams, and multi-omics dataset, in close collaboration with King's College Hospital and NHS partners.

Email: **taiyu.zhu@kcl.ac.uk**

Joint Steering Committee

Dr Martin Holst Lange

Executive Vice President & CSO, Research & Development, Novo Nordisk

Professor Bill Haynes

Scientific Corporate Vice President, Research & Development, Novo Nordisk

Professorr Lotte Bjerre Knudsen

Chief Scientific Advisor, Research & Development, Novo Nordisk

Professor Kees Hovingh

Chief Scientific Advisor, Research & Development, Novo Nordisk

Professor Keith Channon

Field Marshal Earl Alexander Professor of Cardiovascular Medicine and Head of the Radcliffe Department of Medicine, University of Oxford

Professor Jemma Hopewell

Professor of Precision Medicine & Epidemiology, Nuffield Department of Population Health, University of Oxford

Professor David Paterson

Professor of Cardiovascular Physiology and Head of the Department of Physiology, Anatomy and Genetics, University of Oxford

Professor Angela Russell

Professor of Medicinal Chemistry, Departments of Chemistry and Pharmacology, University of Oxford

Dr Martin Holst Lange

Executive Vice President and CSO, Research & Development, Novo Nordisk

Dr Martin Holst Lange holds a medical degree and a PhD in Endocrinology from the University of Copenhagen. With nearly 25 years of experience in the pharmaceutical industry, Dr. Lange has dedicated his career to advancing healthcare through innovative treatments in diabetes and other metabolic disorders.

Joining Novo Nordisk in 2002 as a medical doctor, Dr. Lange has worked on various projects involving growth hormone, GLP-2, and oral anti-diabetics. His career has taken him through several key leadership roles within the company, including a two-year period at Novo Nordisk Inc. in the USA that broadened his perspective on global healthcare challenges.

In January 2018, Dr. Lange became Senior Vice President of Global Development, taking on responsibility for the clinical development of Novo Nordisk's pipeline. He was promoted to Executive Vice President of Development in March 2021, and in August 2025, he assumed the role of Executive Vice President and Chief Scientific Officer (CSO) following the merger of the Research & Early Development and Development divisions. In these roles, he is responsible for all phase of drug discovery and development with a strong patient-centric approach.

Dr. Lange's leadership has contributed to expanding Novo Nordisk's focus on developing innovative therapies not only for diabetes and obesity but also for associated cardiometabolic diseases such as cardiovascular disease, chronic kidney disease, and MASH.

Professor Bill Haynes

Scientific Corporate Vice President, Research & Development, Novo Nordisk

Professor Bill Haynes is a Scientific CVP for Cardiovascular disease, focusing on driving a competitive and recognized level of innovation and scientific rigor to the research activities at Novo Nordisk.

Bill is a physician-scientist with more than 25 years of experience in academic-industry translational research in cardiometabolic disease, supported by Wellcome, National Institute of Health (NIH), Juvenile Diabetes Research Foundation and Swedish Foundation for Strategic Research. Bill trained in medicine and translational research in the UK and was a Professor of Endocrinology and Cardiovascular diseases at the University of Iowa. In 2013, Bill transitioned to the pharma industry, working in discovery research and translational medicine at Novartis and AstraZeneca, and driving novel targets in diabetes, non-alcoholic steatohepatitis (NASH), cardiovascular (CV) disease and obesity towards clinical development. He has led multiple high high-profile collaborations with academic institutions including the University of Oxford, Harvard, INSERM and the Karolinska Institute. Bill is a fellow of the American Heart Association and The Obesity Society and an elected member of the American Society of Clinical Investigation.

Professor Lotte Bjerre Knudsen

Chief Scientific Advisor, Research & Development, Novo Nordisk

Professor Lotte Bjerre Knudsen is the Chief Scientific Advisor for R&D at Novo Nordisk. She heads up the team IDEA (Innovation & Data Experimentation Advancement) that focuses entirely on human data driven insights to inform drug discovery.

Lotte has held her current role since 2022, after spending 2021 in Oxford. She is a long-time employee of Novo Nordisk, since 1989. Lotte is a co-inventor of liraglutide and has led all biology research programs for liraglutide and semaglutide from diabetes to obesity, cardiovascular, liver, kidney and Alzheimer's Disease. She has been part of representing Novo Nordisk in five FDA Advisory committees.

Lotte holds a degree in biotechnology from the Technical University of Denmark, and a Doctoral Degree in Scientific Medicine from the University of Copenhagen. Lotte has an H-index of 62, is an inventor on numerous patents, and a recipient of the Paul Langerhans Award, the Science Mani Bhaumik Breakthrough of the Year Award, the Lasker-DeBakey Clinical Research Award and the Breakthrough Prize of Life Sciences.

Professor Kees Hovingh

Chief Scientific Advisor, Research & Development, Novo Nordisk

Professor Kees Hovingh is Chief Scientific Advisor at Novo Nordisk and to provide scientific advice and clinical guidance on the R&D strategy to address clinical needs for individuals living with obesity, diabetes and/or cardiovascular disease.

Kees received his PhD in 2005 and his MBA degree in 2016 and is a full professor, internist and vascular medicine specialist. He saw patients until end 2024 at the Amsterdam University Medical Center. His research focuses on genetics and molecular biology in CVD, and he did a post-doctoral fellowship at Harvard Genetics. Kees co-authored over 390 publications (Scholar H index: 114).

Professor Keith Channon

Field Marshal Earl Alexander Professor of Cardiovascular Medicine and Head of the Radcliffe Department of Medicine, University of Oxford

Professor Channon is an Honorary Consultant Cardiologist at the John Radcliffe Hospital, Oxford. He is Director of the Oxford Academic Health Partners (OAHP) and Chairs the NIHR-BHF Cardiovascular Partnership across the major UK centres. His research group investigates the biology of cardiovascular disease and atherosclerosis, particularly using genetic models, and links these with clinical and translational research in coronary artery disease, through his leadership of the Oxford Acute Myocardial Infarction (OxAMI) Study.

Professor Channon served as Director of the National Institute for Health Research (NIHR) Oxford Biomedical Research Centre (BRC) during 2008-2018, was Deputy Head of Medical Sciences Division (Research), University of Oxford, from 2016-2021 and Director of R&D at Oxford University Hospitals from 2013-2021. He is a past Chairman of the British Atherosclerosis Society, an NIHR Emeritus Senior Investigator, and a Fellow of the Academy of Medical Sciences. He plays active roles on grant funding and other committees at the MRC, British Heart Foundation, Wellcome Trust and the British Cardiac Society.

Professor Jemma Hopewell

Professor of Precision Medicine & Epidemiology, Nuffield Department of Population Health, University of Oxford

Jemma Hopewell is Professor of Precision Medicine and Epidemiology at the Nuffield Department of Population Health, University of Oxford. Professor Hopewell also leads cardiovascular medicine for the NIHR Oxford Biomedical Research Centre, is a British Heart Foundation Oxford Centre of Research Excellence Steering Committee member and leads their programme on "multi-omics to pharmaco-omics", as well as being a Board member of the European Society of Cardiology Council on Cardiovascular Genomics. She makes a range of contributions to scientific leadership, from Chairing global cardiovascular genetics consortia to having roles on clinical trial Steering Committees and international funding panels. Jemma directs a research programme focused on understanding the determinants, treatments, and sequelae of common cardiovascular diseases, including coronary heart disease, stroke and atrial fibrillation through large-scale clinical trials, population biobanks and meta-analyses. Her multi-disciplinary team capitalise on the value of multi-modal healthcare data to elucidate causal risk factors and disease mechanisms, establish the potential of drug targets and treatment strategies, and understand determinants of response to therapy. As a result, and through the strengths of collaboration across academia and industry, her research forms a platform for translation into clinical studies and more informed approaches to precision medicine and patient care.

Professor David Paterson

Professor of Cardiovascular Physiology and Head of the Department of Physiology, Anatomy and Genetics, University of Oxford

David Paterson is a cardiac neurobiologist and received his DPhil from the University of Oxford (1989) and his DSc (2005) from the University of Western Australia. He is Head of the Department of Physiology, Anatomy & Genetics at the University of Oxford, Professor of Cardiovascular Physiology, and a Fellow of Merton College, Oxford. David is Honorary Director of the Burdon Sanderson Cardiac Science Centre, Oxford and has held visiting and honorary Professorships at the Universities of Auckland, Otago, Melbourne, and Western Australia. In 2018 he delivered the Carl Ludwig Distinguished Lecture for the American Physiological Society at Experimental Biology and was awarded the Top Published paper in Hypertension in the Basic Science Category for the American Heart Association 2019. He is a Fellow of the American Physiological Society, The Physiological Society, The Royal Society of Biology, and an Honorary Fellow of The Royal Society of New Zealand. In 2020 he was appointed as a Core Member of the UKRI-BBSRC Bioscience Advisory Panel for an integrated Understanding of Health Strategy, and from 2020-22 served as President of The Physiological Society (UK and Republic of Ireland). In 2021 David was elected a Member of Academia Europaea. In 2023 he was made an Honorary Fellow of the Physiological Society (UK and Republic of Ireland) and received an Honorary degree from the University of Western Australia. In 2024 he was elected to the Academy of Fellows of the International Union of Physiological Sciences. In 2025 he was awarded an Honorary Doctor of Laws (HonLLD) from the University of Otago, New Zealand.

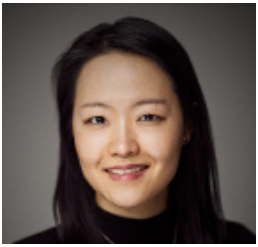
His research focuses on how both branches of the cardiac autonomic nervous system communicate at the end organ level and whether oxidative stress plays a role in uncoupling pre-synaptic and post synaptic signalling.

Professor Angela Russell

Professor of Medicinal Chemistry, Departments of Chemistry and Pharmacology, University of Oxford

Angela Russell is a Professor of Medicinal Chemistry and holds a joint appointment between the Departments of Chemistry and Pharmacology. She gained her MChem degree from the University of Oxford in 2000 and her DPhil in Organic Chemistry in 2004. In 2007 she was awarded a prestigious Research Councils' UK Fellowship in Medicinal Chemistry and in 2018 she was conferred to Professor of Medicinal Chemistry. She has published over 100 original articles, book chapters and patent applications. Her research interests are centered around the discovery of new molecules and mechanisms to manipulate cell fate and to translate them into therapeutic agents, particularly for degenerative diseases. She has initiated a number of collaborative research programmes, including a medicinal chemistry approach to the modulation of gene expression to treat fatal rare genetic diseases such as Duchenne muscular dystrophy (DMD). She co-founded the Oxford spin-out MuOx Ltd, (now part of Summit Therapeutics plc), and co-founded OxStem Ltd in 2016. In 2016, she was named as a 'Rising Star' in the BioBeat 50 Movers and Shakers in BioBusiness report. In October 2020 she was awarded a 2021 Harrington UK Rare Disease scholarship in recognition of, and in support of, her work on developing a therapy for DMD.

Current and Past Novo Nordisk Fellow Speakers



Dr Inhye Park

Past Novo Nordisk Postdoctoral Research Fellow, 2021 intake
(biography on page 31)

Dr Taiyu Zhu

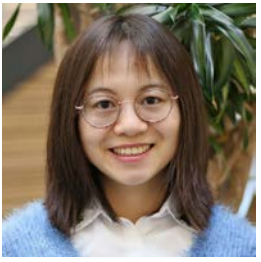
Past Novo Nordisk Postdoctoral Research Fellow, 2022 intake
(biography on page 32)

Dr James Liu

Novo Nordisk Postdoctoral Research Fellow, 2022 intake
(biography on page 9)

Dr Dragana Savic

Past Novo Nordisk Postdoctoral Research Fellow, 2018 intake
(biography on page 26)



Dr Jun Liu

Past Novo Nordisk Postdoctoral Research Fellow, 2021 intake (biography on page 30)

Oxford and Novo Nordisk Speakers

Professor Charalambos Antoniades

BHF Chair of Cardiovascular Medicine, University of Oxford

Charis Antoniades holds the BHF Chair of Cardiovascular Medicine at the University of Oxford and is a Consultant Cardiologist at Oxford University Hospitals. He was awarded a PhD with honours from the University of Athens for his work on the genetics of premature myocardial infarction, during which he received multiple Young Investigator Awards from the European Society of Cardiology, American College of Cardiology, ISHR, and other international societies.

Professor Antoniades has been recognised with the Outstanding Achievement Award from the ESC Basic Cardiovascular Science Council (2016), a National Clinical Excellence Award (2021), and an N3 National Clinical Impact Award (2024). He has delivered numerous named lectures both in the UK and internationally.

At Oxford, he serves as Director of the Acute Multidisciplinary Imaging & Interventional Centre and Deputy Head of the Division of Cardiovascular Medicine. His research focuses on the interplay between adipose tissue and the cardiovascular system, with particular emphasis on non-invasive imaging of inflammation and the application of artificial intelligence for cardiovascular risk prediction. He leads the Oxford Heart Vessels and Fat Programme and coordinates major national and international studies, including the UK C19-CRC and ORFAN.He has published over 350 peer-reviewed articles in leading journals, is Deputy Editor of Cardiovascular Research, serves on multiple editorial boards, and is a founder of the Scientists of Tomorrow initiative of the ESC. He is also Founder and Chief Scientific Officer of Caristo Diagnostics, a University of Oxford spinout company.

Biography on page 37.

Professor Angela Russell

Professor of Medicinal Chemistry, Departments of Chemistry and Pharmacology, University of Oxford

Oxford and Novo Nordisk Speakers

Biography on page 34.

Dr Martin Holst Lange

Executive Vice President and CSO, Research & Development, Novo Nordisk

Professor Nicola Smart

Professor of Cardiovascular Science, Institute of Developmental and Regenerative Medicine, Univeristy of Oxford

Professor Nicola Smart is a Professor of Cardiovascular Science at the Institute of Developmental and Regenerative Medicine, within the Department of Physiology Anatomy & Genetics, University of Oxford. After obtaining her PhD from the University of London, Nicola undertook post-doctoral research at King's College London and the UCL-Institute of Child Health, before moving to Oxford in 2012. From 2011-2024, Nicola was the recipient of the British Heart Foundation (BHF) BHF Ian Fleming Fellowship, funded by the family of the James Bond author in support of the work of the BHF. Nicola was awarded the inaugural BHF Research Fellow of the Year in 2011 and the British Cardiovascular Society's Michael Davies Early Career Award in 2012, in recognition of her research on reactivating embryonic mechanisms to regenerate the mammalian heart. Nicola's research continues to focus on understanding how to manipulate reparative responses and promote vessel growth and stability, based on insights from cardiovascular development. Her work revealing mechanisms impacting smooth muscle phenotype in aortic disease was recognized by the 2021 John French Prize Lecture from the British Atherosclerosis Society. Alongside research, Nicola is a Fellow and college tutor in Pre-clinical Medicine at Christ Church, Oxford.

Dr Nils Rorsman

Senior Research Scientist, Research & Development, Novo Nordisk

Dr Nils Rorsman holds DPhil in Ion Channels and Disease from the University of Oxford. After completing his DPhil in Paolo Tammaro's lab in the Department of Pharmacology, Nils joined a synthetic biology company spun out of the University of Oxford where he led the development of a detector of volatiles which was based on the incorporation of ion channels into a PCB. Following this, Nils joined a CRO, where he led the cell culture team in the Automated Gene Editing group.

Nils Joined Novo Nordisk in 2021 as a Research Scientist in the Discovery Biology and Pharmacology Department to help develop the gene editing capabilities of the team and to provide biological input on smooth muscle cells to complement the growing efforts in cardiovascular research at NNRCO.

Professor Jason Lerch

Professor of Neuroscience and Director of Preclinical Imaging, Oxford Centre for Integrative Neuroimaging, University of Oxford

Jason P. Lerch, Ph.D. is Professor of Neuroscience and the Director of Preclinical Imaging at the Oxford Centre for Integrative Neuroimaging (OxCIN) at the University of Oxford and an Adjunct Scientist at the Mouse Imaging Centre (MICe) of the Hospital for Sick Children and Professor in Medical Biophysics at the University of Toronto. Jason joined Oxford in March of 2019; prior to that he completed his Ph.D. in 2005 in the Department of Neurology and Neurosurgery at McGill University and a post-doctoral fellowship at MICe from 2005-2008 with Dr. Mark Henkelman and Dr. John Sled. He received his B.A. in 1999 in Anthropology and Social Studies of Medicine from McGill University. His Ph.D. research, under the supervision of Dr. Alan Evans, was on in-vivo measurements of cortical thickness from MRI. His current research focus is on detecting neuroanatomical changes due to behavioural and genetic manipulations in tightly controlled mouse models, primarily related to neurodevelopmental disorders, and to relate these findings to sadly not so well controlled human subjects. As an antidote to these academic pursuits, he likes to leave the city and hike in the woods, whenever possible.

Keynote Speaker

Sir Martin Landray
Professor of Medicine and Epidemiology

Sir Martin Landray is Professor of Medicine & Epidemiology at the University of Oxford, and Chief Executive of Protas (www.protas.co.uk), which is focused on transforming the efficiency of large randomized trials for common health conditions. He has 25 years' experience of leading trials of treatments for cardiovascular and kidney disease. He co-leads the RECOVERY trial, the world's largest trial of treatments for COVID-19. He leads the Good Clinical Trials Collaborative (www.goodtrials.org) which developed principle-based clinical trial guidelines that have now been adopted into the WHO Guidance for Best Practices for Clinical Trials. In June 2021, he was knighted for services to public health and science.

Fellowship Coordinators

Dr Maryam Atakhorrami

Senior Director, Research & Development External Innovation, Innovation and Assessment, Novo Nordisk

Dr Maryam Atakhorrami, holds the role of Senior Director at NovoNordisk R&D External Innovation for Assessment and Innovation, since October 2025. In this role, she is supporting the R&D strategic priorities through creating innovative R&D partnerships. Maryam holds PhD in biophysics from Vrije Universiteit Amsterdam (2006) with speciality in physics of complex living systems. Her career spans internationally across Medtech, Academia, startups, public and private investment, and Pharma. Maryam has dedicated her career to translating biomedical sciences through partnerships to impact for patients and healthcare system across variety of therapeutic areas in chronic disease management (respiratory, neuro degenerative conditions, and cardiometabolic diseases), with expertise in new product development for Diagnostics, Devices and Digital health from ideation to commercialisation. She has solid understanding of drug discovery process from target discovery through first in human experiments. In nearly 20 years, Maryam has held strategic and operational leadership roles at Philips (Innovation Program Manager), UCL (Head of strategic Industrial Partnership) and HDRUK (COO- for London) before joining Novo Nordisk in 2022, as head of Regulatory Professionals in Digital Health and IVD. She joined the Development External Innovation in 2024, focusing on building R&D partnerships with Medtech Industry and Academia.

Dr Serena Briant

Programme Manager at Oxford, Senior Research Facilitator, RDM

Serena holds a BSc in Physiological Science and a PhD in Systems Neuroscience, both from the University of Bristol. In 2015, Serena joined the University of Oxford, working as a Research Administrator within the Department of Physiology, Anatomy and Genetics. Serena moved to the Radcliffe Department of Medicine in 2016 and works as a Senior Research Facilitator in the RDM Research Strategy and Funding Team, and also as Programme Manager to the Novo Nordisk – Oxford Fellowship Programme.

Email: **serena.briant@rdm.ox.ac.uk**

Dr Nuala Simpson

Operations Manager at Oxford, Research Facilitator, RDM

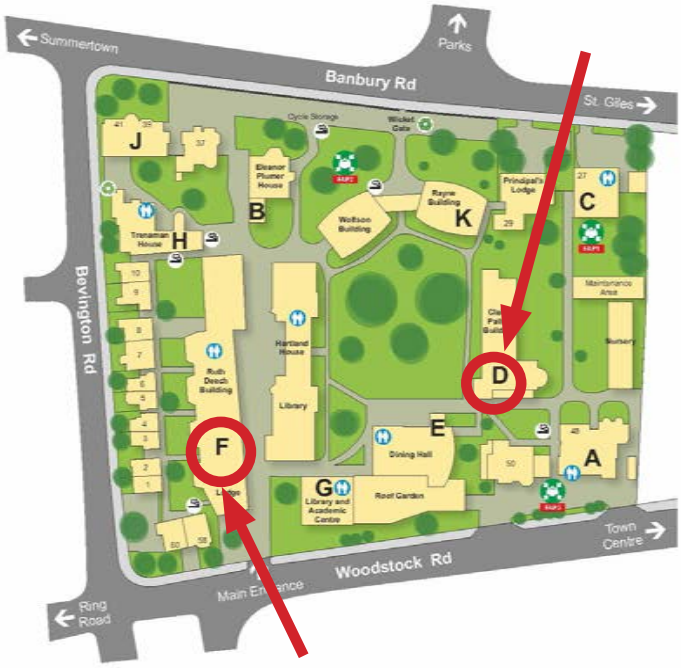
Nuala holds a BSc (Hons) in Genetics from the University of Sheffield and completed her DPhil at the University of Oxford studying the genetics of autism spectrum disorders. She then spent ten years working in academic research as a postdoc investigating the genetics of neurodevelopmental disorders, such as specific language impairment. Nuala subsequently worked for the Biotechnology and Biological Sciences Research Council where she was a Portfolio Manager. Her role involved the management of funding calls from submission of applications to grants being awarded. Nuala joined the Radcliffe Department of Medicine at the University of Oxford in September 2023 working within the RDM Research Strategy and Funding team as a Research Facilitator and Operations Manager for the Novo Nordisk-Oxford Fellowship Programme at Oxford.

Email: **nuala.simpson@rdm.ox.ac.uk**

Acronyms

BBSRC	Biotechnology and Biological Sciences Research Council
DPAG	Department of Physiology, Anatomy and Genetics
DPhil	The Oxford term for a PhD
IDRM	Institute of Developmental & Regenerative Medicine
MRC	Medical Research Council
NDCN	Nuffield Department of Clinical Neurosciences
NDPH	Nuffield Department of Population Health
NIH	National Institute for Health
NIHR	National Institute for Health Research
NHS	National Health Service
NNRCO	Novo Nordisk Research Centre Oxford
OCDEM	Oxford Centre for Diabetes, Endocrinology & Metabolism (which is part of the Radcliffe Department of Medicine)
RDM	Radcliffe Department of Medicine
WHG	Wellcome Centre for Human Genetics (which is part of the Nuffield Department of Medicine)

Sessions 1, 2 and 3



St Anne's College
University of Oxford

KEY

A - Seminar Rooms 1, 2, 3, 4 & 5
B - Conference & Events Office
C - Seminar Room 6
D - Mary Ogilvie Lecture Theatre
E - Lower & Upper Common Rooms
F - Seminar Rooms 7, 8 & 9, & Tsuzuki Lecture Theatre
G - Seminar Rooms 10 & 11
H - STACS
J - College Bar
K - Accommodation Office & Domestic Bursar
WC
Fire Assembly Point
Recycling Point
Smoking Area

Registration, refreshments and posters

Contact details

For information on the fellowship programme, email nn.fellowships@ox.ac.uk