

T-OP - European Training Network for Optimizing Adoptive T cell Therapy of Cancer

17th - 20th October 2022

Hyatt Regency Hotel, 55 Booth St West, Manchester, M15 6PQ



This project has received funding from the European Union's Horizon 2020 research and innovation program under the Marie-Skłodowska Curie grant agreement No 955575

T-OP MANCHESTER AUTUMN EVENT

Dates: 17th / 18th / 19th / 20th October 2022

Attendees

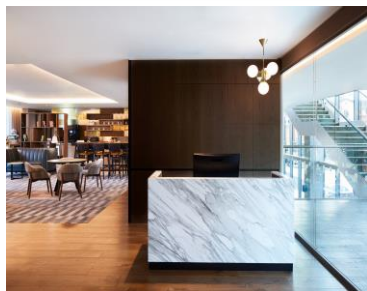
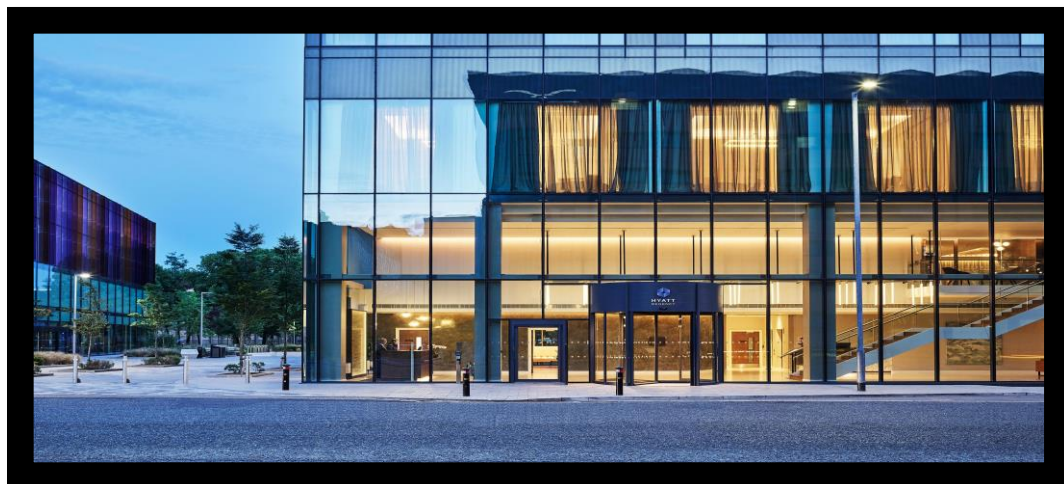
David Andreu Sanz
Keerthana Ramanathan
Andreas Kongsgaard
Fabian Richter
Mar Guaza-Lasheras
Annina Kurzay
Johanna Nimmerfroh
Emanuele Carlini

Dominic Schwarz
Catarina Guerra
Laura Marcos Kovandzic
Adriano Carboniero
Valeria Durante
Thy Luu
Imke Reith

Instil Bio

Dr Gray Kueberuwa Dr Milena KalaitSIDOU Kelly Gayle

Venue



Days 1, 2 and 4 will be held in the Club Lounge at the Hyatt Regency Hotel Manchester

Refreshments are available all day and snacks at break times. A 3-course buffet lunch will be provided on all days

**Monday 17th
October**

Day 1

**Club Lounge, Hyatt
Regency,
Manchester**

9am – 5pm

Machine Learning for Biomedical Scientists

Presented by Professor Graham Ball

1. Introduction to Computational Biology

**** Break 10.45am – 11am ****

2. Statistical Basis of Computational Biology

**** Lunch 12.30pm – 1.30 pm ****

3. Data repositories and experimental design

**** Break 2.45pm – 3pm ****

4. Orange Data Mining

***** Finish 5pm*****

**Dinner – [Yard & Coop](#) 37 Edge St, Manchester M4 1HW
(Booking time to be confirmed)**

**Tuesday 18th
October**

Day 2

**Club Lounge, Hyatt
Regency,
Manchester**

9am – 5pm

Machine Learning for Biomedical Scientists

Presented by Professor Graham Ball

1. Machine Learning Theory

**** Break 10.45am – 11am ****

2. Gene set enrichment and Metamining Case Study

**** Lunch 12.30 – 3pm ****

3. Drug Discovery Using Machine Learning

**** Break 2.45pm – 3pm ****

4. Weka data mining

***** Finish 5pm*****

This is a free evening

**Thursday 19th
October**

9am – 5pm

Day 3

Site Visits

9am – Meet at Instil Bio

10am - The Christie
Tour of facilities and presentation

**** LUNCH 1pm at The Christie cafeteria then travel
back to Instil Bio****

2.30pm - Boardroom / Rutherford Room
Instil Bio Vice President of the UK Sites Scott Lorimer

3pm - Split into 2 groups for tour of facility and time with
Instil Bio staff to discuss careers, goals, experiences

***** Finish 5pm*****

**Dinner booked at [Sapporo Teppanyaki Manchester](#) 91-
93 Liverpool Rd, Manchester M3 4JN @ 6.45pm**

**Instil Bio,
Manchester
Incubator Building,
48 Grafton Street,
Manchester,
M13 9XX**

**The Christie NHS
Foundation Trust,
Wilmslow Road,
Manchester,
M20 4BX**

**Instil Bio, Core
Technology
Facility, 46 Grafton
Street, Manchester,
M13 9WU**

**Thursday 20th
October**

9am – 4pm

Day 4

Speakers

9.30am: Prof. Brian Bigger – Challenges of Cell Therapy

10.30am: Dr Grace Edmunds – Veterinary Cell Therapy

**** Break 11.15am – 11.30am

11.30am: Natalia Elizalde - Commercial Lentiviral Manuf.

**** LUNCH 12.15pm – 1pm ****

1pm: John Bridgeman - T cell engineering

2pm: Ryan Guest - Manufacturing of TIL

**** Break 14.45 – 3pm ****

3pm: Robert Hawkins - Development of ATMPs

4pm: Mike Penn - Intellectual Property and Cell Therapy

**** Finish 5pm ****

**Club Lounge, Hyatt
Regency,
Manchester**

Biographies

Professor Graham Ball



Prof Graham Ball is the Executive Director of the Medical Technologies Research Centre at Anglia Ruskin University and founder-CSO of Intelligent Omics. Prof Ball specializes in the application of innovative artificial intelligence and machine learning methods to the analysis of complex data in the biomolecular, biomedical, and pharmacological domains.

Prof Ball has led the development and validation of bioinformatics algorithms using Machine learning to mine molecular data for the last 20 years. He has focused on applying these approaches to public data repositories leveraging actionable and translational features from the data. He has published over 200 journal papers and seven patents in this area. After a PhD (UN-funded) modelling environmental systems, in 2000 he shifted his focus to analysis of proteomic and genomic data; searching for proteins and genes associated with cancer. His current research focuses on innovative computational methods that allow the identification of optimized biomarker panels, molecular systems of disease and druggable biology.

Professor Brian Bigger



Dr Bigger was awarded a Bachelors degree from the University of Bath in Applied Biology. His PhD was conducted in the Gene Therapy Research Group, Imperial College, London, where he worked with Professor Charles Coutelle on developing a gene delivery vehicle for mitochondrial gene therapy. On completion of his PhD in 2000, Dr Bigger joined Dr Mike Themis, Imperial College, London to work on a Wellcome Trust collaborative project with Cancer Research UK, investigating gene delivery to stem cells for liver diseases. In 2004 he joined Dr Suzanne Watt's group in Oxford University and the National Blood Service as a

Senior Research Scientist to work on mechanisms of stem cell homing. In 2006 Dr Bigger set up the Stem Cell & Neurotherapies laboratory at the University of Manchester and the Royal Manchester Children's hospital.

Dr Grace Edmunds



My research interests lie in comparative biology, cancer and immunology. I am using canine osteosarcoma as a model for human disease, considering both the genetic risk factors that drive a bone to become cancerous, and also the tumour microenvironment. In particular, I am interested in hypoxia-inducible mechanisms of suppression of anti-tumour CD8+ T cells. I collaborate widely on projects including canine mammary tumour biology and the immunology of immune-mediated polyarthritis. In the clinic, I am a specialist trainee in internal medicine with an oncology focus, and I look forward to the establishment of new immunotherapies for use in veterinary patients. I am passionate about the utility of dogs as a model with which to study

fundamental immunology and cancer biology, and the potential for canine patients to accelerate the translation of new therapies into humans.

Dr Natalia Elizalde



Business Development and Project Management Director

Graduate in Pharmacy, developing her end of degree project at UCLH Hospital in London. Afterwards, she was awarded a European PhD as a result of a Thesis (University of Navarra with stay in Oxford University) focused on the Long-term effects of Chronic mild stress over behaviour and neurobiological markers (Extraordinary Doctorate award).

After her PhD, Natalia has specialised in Business Development in the Biotech sector for 12years, assuming various roles as Business Development Manager in a biotech Company specialized in Drug Discovery, Biobide, and as Head of Business Development at a CDMO Developing and Manufacturing Biologicals and Cell Therapy products, 3P Biopharmaceuticals.

Natalia is responsible for VIVEbiotech's Business Development strategy with respect to the international market, Project Management, Marketing and Communication.

Dr John Bridgeman



Dr. Bridgeman has over 15 years of experience in T-cell therapies and approaches to gene engineer T-cells. Dr. Bridgeman conducted his PhD under the supervision of Prof. Robert Hawkins and Dr. David Gilham at the University of Manchester. During this time his main interest was uncovering the signalling and molecular interactions of chimeric antigen receptors (CAR) and development of novel costimulatory CARs. Dr. Bridgeman undertook a postdoctoral position in the labs of Prof. David Price and Prof.

Andrew Sewell at Cardiff University where he focussed on T-cell receptor (TCR) gene transfer, using it as a tool to understand biological phenomena such as alloreactivity and TCR cross-reactivity. In 2013 he was awarded a Wellcome Trust/NISCHR ISSF research fellowship within the Institute of Infection and Immunity studying cross-reactivity profiles of virus specific T-cells. In 2014 Dr. Bridgeman was recruited to develop the R&D capabilities at Immetacyte, a company which developed the key technologies which Instil Bio is advancing.

Dr Ryan Guest



When Ryan entered the translational research field at the University of Manchester in 1998 he could hardly of anticipated that this was the start of a rewarding career spanning: basic cell therapy research in "T cell CAR therapy"; ATMP product development and tech transfer; innovative GMP facility design and management; process technology development & implementation; quality & regulatory management; and ultimately developing a company in the last

decade working with like-minded individuals to set-up Cellular Therapeutics Ltd (Immetacyte Ltd) now Instil Bio.

To date Ryan has had the privilege and responsibility to develop and clinically test more than 5 types of Advanced Therapy Medicinal Products (ATMPs) using both gene engineered and natural personalised cell therapies for industry-leading organisations.

More recently, Ryan was one of the industrial partners who sat on the Innovate UK sponsored Advanced Therapy Treatment Centre Network (<https://www.theattcnetwork.co.uk/>) steering committee representing Instil Bio's involvement in iMATCH, MW-ATTC & SAMPLE aiming to streamline the development of advanced cell based medicines both through treatment centres and industrial partners.

Ryan has dedicated his working career to translating concept cell therapies to clinic and beyond.

Professor Robert Hawkins



Robert Hawkins is Chief Strategy Advisor to Instil Bio Inc and Honorary Professor at University of Manchester. His main clinical specialty was renal cancer, and he led clinical development of several immune and targeted agents. In cell therapy, he has been the coordinator of several major European Union consortia and has published widely in scientific and clinical journals (H-Index 61). He founded a spinout company, Immetacyte Ltd, to focus on the development of adoptive cell therapy using tumour infiltrating lymphocytes and gene engineered products for a range of solid tumours. The company has filed several patents on manufacturing of TIL and on methods to engineer "second-generation" TIL products. Immetacyte was acquired by Instil Bio Inc and with substantial investor backing the combined company is expanding its operations in the US and UK. It is developing a range of TIL based clinical trials US and Europe with the aim of producing products to benefit patients with many solid tumours.

Dr Michael Penn



Mike joined Instil Bio at the beginning of 2022 as the Vice President of Intellectual Property, where he and his team are responsible for all aspects of Instil Bio's intellectual property matters.

Prior to Instil Bio, Mike was Principal Counsel at Amgen, where for over a decade he worked on a wide range of IP matters related to Amgen's marketed products, early pipeline and platform technologies, and IP Strategy, Policy and Advocacy initiatives. Mike was also the Chief Patent Counsel at bioMérieux, Inc., a medical

diagnostics company, where he and his team worked on a variety of IP matters related to a diverse range of technologies for medical devices and diagnostics.

Mike's first in-house counsel role was at MedImmune-AstraZeneca, and prior to his in-house roles he was an attorney at the law firm Sterne, Kessler, Goldstein & Fox (Washington, DC). Mike started his career as a scientist in the biotech industry working on gene therapies and immunotherapies, and transitioned out of the lab and into the patent world as a Patent Examiner at the United States Patent and Trademark Office.

Mike holds a J.D. from The George Washington University Law School, an M.S. from The Johns Hopkins University, and a B.A. from St. Mary's College of Maryland.

Dr Gray Kueberuwa



Dr Gray Kueberuwa PhD is the Director of Pre-clinical Safety Research at Instil Bio.

He attained a Masters in Biochemistry and DPhil from the University of Oxford. His DPhil was focused on the development of Sindbis virus as an oncolytic agent, which he followed up with a 1-year fellowship to combine oncolytic virotherapy with Sindbis virus and Herpes virus 1 with immunotherapy through genetic modification to induce the production of secreted antibody fragments. Upon moving to The University of Manchester, he led projects developing tumour infiltrating lymphocyte (TIL) therapy and chimeric antigen receptor (CAR) T-cell therapy of cancer and the production of immune

regulatory agents from within therapeutic cells. Gray then joined Instil Bio in 2018 as the Director of Pre-clinical Safety Research.

Dr Milena Kalaitidou



Dr Milena Kalaitidou PhD is the Principal Scientist in the Pre-Clinical Safety Group at the Department of Research at Instil Bio.

She attained a Masters in Immunology and Immunogenetics and PhD in Cancer Sciences from the University of Manchester. Her PhD focused on the understanding T cell responses towards leukemic fusion proteins and the potential application in cell therapy treatments. Subsequently, she led projects developing CAR chimeric antigen receptor (CAR) T-cell therapy for ovarian cancer in collaboration with Oxford Biomedica and the University of Manchester. Her adoptive cell therapy interests were further

cultivated during her fellowship between University of Manchester and GSK, whereby she worked on developing tumour infiltrating lymphocyte (TIL) therapy with or without engineering for an array of cancer types. She continued the TIL therapy development by joining Instil Bio where she has led TIL engineering projects from concept to clinical application.

Scott Lorimer



Scott is VP of Manufacturing Operations and Site Head at Instil Bio (UK). He also holds 30 years experience of bioprocess development, product launch, commercial manufacturing of cell & gene therapies and innovative biologics. Scott led GlaxoSmithKline's global manufacture of clinical trial material for oncology and immune disorders. Scott was also Chairman of BioAtrium, a Lonza-Sanofi joint venture for biomanufacturing of therapeutic protein for rare diseases. During the pandemic Scott led Catalent Pharma's contract manufacturing of cell therapies, gene therapies and COVID vaccines including Astra-Zeneca vaccine production in US.

About T-OP

Key facts of the European project T-OP – Training Network for Optimizing Adoptive T cell Therapy of Cancer



17 partners from industry, academy and public authority and hosted in 7 countries



From 01.03.2021 to 28.02.2025



4,1 Mio. € from the European H2020 Marie Skłodowska-Curie program

What we do

T-OP improves the efficacy of cell therapies by better defining the role of cytokines in their production. The generation of adoptive T cell therapy products is a complex but ill-defined process with limited harmonization across production and clinical studies, even for the same indication. Cytokines are central to the generation of such products, whilst also playing a key role in the efficacy and safety of the cellular product. There is however a limited understanding as to which cytokines might lead to the best outcome on any of these steps. T-OP targets a pioneering research question: How do cytokines influence the therapeutic outcome of ACT products?

You will find all details and future developments on: www.itn-top.eu

T-OP trains future experts of cellular therapies by providing them with cutting-edge knowledge on T cell therapies and cytokine effects thereon. The training by research focuses on excellent individual supervision and on cross fertilization of expertise with secondments and mentoring. We organize regularly international conferences, workshops and career events. Follow all our events on LinkedIn – T-OP

Early Stage Researchers of T-OP

David Andreu Sanz



Project: Analysis of the influence of cytokine stimulation on adoptive cell therapy

Supervisor: Prof. Sebastian Kobold, Ludwig-Maximilians-Universität (LMU), Munich, Germany

Background:

Since 2021: PhD candidate at Division of Clinical Pharmacology, LMU

2020 – 2021: MSc in Biomedical Research – UPF, Barcelona, Spain

2016 – 2020: BSc in Biotechnology - IQS, URL, Barcelona, Spain

Keerthana Ramanathan



Project: Functional stimulation of CAR T cells with artificial antigen-presenting scaffolds

Supervisor: Prof. Sine Reker Hardup, Technical University of Denmark (DTU), Copenhagen, Denmark

Background:

Since 2021: PhD candidate at T cells and Cancer group, Department of Health and Technology, DTU

2020 – 2021: Master Thesis (Cancer Immunotherapy) - Rolf Kiessling's group, Dept Onco-pathology, Karolinska Institute, Sweden

2019-2020: Masters in Science (Immunology and Molecular microbiology), Uppsala University, Sweden

2017-2018: Bachelor thesis (Molecular genetics) - CSIR-Centre for cellular and molecular Biology Hyderabad, India

2014-2017: Bachelors in Biotechnology - SASTRA University, India

Andreas Kongsgaard



Project: Optimization of protocol for in vitro expansion of mucosal-associated invariant T cells (MAITs)

Supervisor: Prof. Tanja de Grujil, Amsterdam UMC, The Netherlands

Background:

Since 2021: PhD candidate at the Immunotherapy Laboratory and the Tumor Immunomonitoring Unit at Amsterdam University Medical Centers, Amsterdam UMC

2021: Master's Degree Molecular Biomedicine - University of Copenhagen, Denmark

2020: Bachelor's Degree Molecular Biomedicine University of Copenhagen, Denmark

Fabian Richter



Project: Enhancing effector CD4 T cell polarization for ACT of cancer

Supervisor: Prof. Christophe Paget, INSERM, Tours, France

Background:

Since 2021: PhD candidate at Université de Tours, France

2018 – 2021: MSc Medical Biology, Paris Lodron Universität Salzburg, Austria

2015 – 2018: BSc Biology, Universität Regensburg, Germany

Mar Guaza Lasheras



Project: Generation of CAR-T cells under minimally activating conditions

Supervisor: Prof. Christian Buchholz, Paul Ehrlich Institut, Germany

Background:

Since 2021: PhD candidate in Medical Research at LMU Munich

2019-2021: MSc. Immunology and Inflammation, University of Copenhagen, Denmark

2015-2019: BSc. Biomedical Sciences, University of Reutlingen, Germany

Annina Kurzay



Project: Therapeutic potential of MerTK signaling in T cells for cancer therapy

Supervisor: Prof. Per thor Straten, National Cancer for Immune Therapy (CCIT, UHH, Denmark)

Background:

Since 2022: PhD candidate at University of Copenhagen

2018-2021: M.Sc. Molecular Biosciences at German Cancer Research Centre (DKFZ)

2017-2018: BSc Hons Genetics (Immunology), University of Aberdeen/IMS, Scotland, UK

Johanna Nimmerfroh



Project: Glycan modifying agents for adoptive cell therapy

Supervisor: Prof. Heinz Läubli, Prof. Alfred Zippelius, Universitätsspital Basel (USB, Switzerland)

Background:

Since 2022: PhD candidate at Universitätsspital Basel

2018-2021: M.Sc. Biomolecular Engineering, TU Darmstadt, Germany

2017-2018: B. Sc. Biomolecular Engineering, TU Darmstadt, Germany

Emanuele Carlini



Project: Chimeric Antigen Receptors (CARs) + Chimeric Cytokine Receptors (CCRs)

Supervisor: Prof. Sebastian Kobold, Ludwig-Maximilians-Universität (LMU), Munich, Germany

Background:

Since 2021: PhD candidate at Division of Clinical Pharmacology, LMU

2019 -2021: MSc Pharmaceutical Sciences, ETH Zurich

2016-2019: BSc Pharmacology (Hons), King's College London

Dominic Schwarz



Project: Designer cytokine receptors for ACT of cancer

Supervisor: Dr. Christian Klein, Roche Innovation Center Zurich, Switzerland

Background:

Since 2021: PhD candidate at LMU

2021: Masters Degree Biochemistry, Technical University Munich (TUM)

2019: Research Traineeship at TUM and supervision of a student team at Helmholtz Center Munich

2018: Bachelors Degree Molecular Biotechnology Technical University Munich

Catarina Guerra



Project: Improving migration, tumour accumulation and persistence of ovarian cancer Tumour Infiltrating Lymphocytes

Supervisor: Prof. Robert Hawkins, IB

Background:

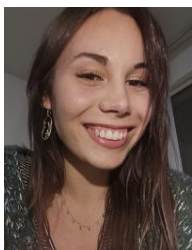
Since 2022: PhD candidate at University of Manchester and ESR at IB

2014-2019: Integrated Master's degree in Pharmaceutical Sciences, University of Coimbra, Faculty of Pharmacy, Portugal

2019-2021: Research collaborator - Drug Development and Technologies Lab

Pharmacist, University of Coimbra, Faculty of Pharmacy, Portugal

Laura Marcos Kovandzic



Project: Impact of the gut microbiota in maintenance or activation of Adoptive T cell Therapy in cancer

Supervisor: Prof. Laurence Zitvogel, UPS, Paris, France

Background:

Since 2021: PhD candidate at UPS

2020: Master 2 Thesis Institut Curie France

2018-2019: Master Degree - Master Oncology- Vrije Universiteit Amsterdam, The Netherlands

2018: Bachelor Degree Biomedical Sciences, University of Sevilla, Spain

Adriano Carboniero



Project: Metabolic reprogramming of cytotoxic lymphocytes by tumour-derived cytokine networks

Supervisor: Prof. Sebastian Theurich, Gene Center, LMU

Background:

Since 2022: PhD candidate at LMU Faculty of Medicine

2021: Master of Science in Biotechnology, University of Rome Tor Vergata, Italy

2018: Bachelor in Biotechnology, University of Rome Tor Vergata, Italy

Valeria Durante



Project: Development of a novel model system and analytical approach to study T cell responses in the tumour microenvironment

Supervisor: Dr. Sonja Schallenberg, Miltenyi Biotec B.V. & Co. KG, Germany

Background:

Since 2021: Doctoral candidate at LMU Faculty of Medicine

2021: Master's Degree Biotechnology University of Rome Tor Vergata, Italy

2018: Bachelor's Degree Biotechnology University of Rome Tor Vergata, Italy

Viet Thy Luu



Project: Exercise in immunotherapy - Functional impacts of adrenaline on T and NK cells

Supervisor: Prof. Per thor Straten, National Cancer for Immune Therapy (CCIT, UHH, Denmark

Background:

Since 2021: PhD candidate in Immunology and Infectious Diseases at University of Copenhagen, Denmark

2019 – 2021: MSc in Molecular Medicine and Innovative Treatment, University of Groningen, The Netherlands

2014 –2018: BSc in Biotechnology, Vietnam National University, Ho Chi Minh City, Vietnam

Imke Reith



Project: Targeting immune receptor SLAMF6 in transferred T lymphocytes for improved T cell therapies

Supervisor: Prof. Michal Lotem, Hadassah Medical Organization Hebrew University of Jerusalem, Israel

Background:

Since 2021 PhD candidate at Hadassah Medical Organization Hebrew University

2019-2021: MSc Medical Biotechnology, Wageningen University, The Netherlands

2014-2017: BSc Biotechnology, Wageningen University, The Netherlands