



Irina Abnizova

WTSI

My educational background is PhD in Applied Mathematics and Monte Carlo methods, Novosibirsk State University, Russia, Siberia. Later, I had a bioinformatics experience by developing statistical methods (including Machine Learning) for regulatory regions and motifs search, while working in Biostatistical Unit MRC Cambridge, UK. I also worked on NGS Quality Control, detecting various statistical biases in NGS, mainly for Illumina platform in Sanger Institute. Recently I have completed a Daphne Jackson Fellowship in the Babraham Epigenetics as a returner to science after a career break.

Currently I work in Sanger Institute as a postdoc in Pre-Cancer group of Phil Jones. My special interest is modelling of cell competition in epithelia: how mutations that alter the competitive fitness of normal cells give mutant stem cells the ability to spread through normal tissues. I am also very fond of finding appropriate statistical tests to estimate effects of different conditions on cell's behaviour.



Fatemeh Ahmadimoghari

The Institute of Cancer Research (ICR)

Fatemeh Ahmadimoghari is a specialized Bioinformatician and a postdoctoral training fellow with expertise in analyzing single-cell profiles. She has vast experience in designing, modeling, and implementing a range of data science techniques, especially in analyzing multi-omics and single-cell data. She specializes in developing computational approaches to identify therapy resistance in cancer and suggesting the most potential genes and pathways for targeted therapy.



Diana Alexander

Wellcome Sanger Institute

I'm a first year PhD Student in the Cancer Ageing and Somatic Mutation Department at the Sanger Institute. My rotation projects have focussed on the mutational landscape in normal breast tissue of individuals with germline BRCA1 predisposition, profiling structural genome variation during breast cancer progression, and identifying synthetic lethal paralogous gene pairs in cancers. My PhD will focus on genetic dependencies in cancer, both through combinatorial CRISPR screening to identify targets to eliminate cancer in individuals with cancer predisposition, and from measuring negative selection in tumours.



Sarah Benedetto

DKFZ - German Cancer Research Center

My name is Sarah Benedetto and I am a PhD student in systems biology at DKFZ in Heidelberg. I finished my studies in mathematics at the University of Vienna and I am currently trying to apply mathematical models to WGS data in order to gain more knowledge about cancer evolution. In particular, given heterogeneous structure of tumors, I am interested in timing different events, such as when the first tumor cell started growing or predict when the cells acquired a selective advantage that may lead to a faster expansion of the cancer.



Emily Black

University of Cambridge

Emily is a second year PhD student in the Fitzgerald group, in the Early Cancer Institute at the University of Cambridge. She is researching clonal dynamics and evolution in oesophageal adenocarcinoma (OAC), and its precursor lesion, Barrett's oesophagus (BO). In this research she is using large scale multi-sample sequencing data to assess the breadth of heterogeneity within the disease. Phylogenetic analysis will reveal the evolutionary paths within and between BO and OAC. This will be complemented by an agent-based model to understand and explain the clonal dynamics at play. When patients with OAC present with BO still present, their prognosis is better; Emily is particularly interested in understanding whether competition between OAC and BO is contributing to this difference in outcomes.

Emily has a MMath in Mathematics from the University of Oxford, and a MPhil in Computational Biology from the University of Cambridge. Her PhD studentship is funded by the Medical Research Council. She lives in Cambridge with her young family.



Erika Burioli

IHPE UMR5244

Researcher at the University of Montpellier (France) in the team IHPE, I am working on fish and shellfish pathology since 2013. After my PhD on OsHV-1 genetics and epidemiology, obtained in 2017 at the University of Bologna (Italy), my personal research focuses now on mussel transmissible neoplasia since 2017. I have developed diagnostic tools and collected information on genetics, transcriptomics, and on phenotypic characteristics of these cancers. I am now the coordinator of a new project on this topic that aims to study the infection pathways and the evolutionary strategies of the cancerous lineage MtrBTN2.



Nicola Calonaci
University of Trieste

Nicola Calonaci was born in Portoferraio, Isola d'Elba, a beautiful island on the west coast of Tuscany, Italy. He carried out classical studies at the high school in the small town of Piombino. Guided by a strong passion for human knowledge and science, rooted in his early studies of philosophy, he moved to study Physics at University of Pisa. After having specialised in physics of matter and defended a master's thesis on the elastic and plastic properties of polymers, Nicola met with Schrödinger's book "What is life?", which convinced him to turn his attention from matter to phenomena related to life. In order to carry out his studies, Nicola got enrolled in the PhD programme in "Physics and Chemistry of Biological Systems" at the International School of Advanced Studies (SISSA), in Trieste, a fascinating city at the border between Italy and Slovenia. After defending his PhD thesis on the development of computational methods for RNA folding predictions, Nicola won his current position as a postdoc in the Cancer Data Science Laboratory, led by Dr. Caravagna at the University of Trieste. Here he started focusing on the fascinating world of tumour evolution and population genetics. Beyond science, Nicola is a great passionate of literature, philosophy and politics, exploration of the wild, agriculture and cuisine.



Ryan Carr
Mayo Clinic

Ryan Carr is a Clinical Investigator and Assistant Professor of Medicine and Oncology at Mayo Clinic in Rochester, MN. His research interests are largely disease agnostic and range from the level of the cancer genome and epigenetic regulation to the tumor microenvironment, and the development of evolutionary therapy strategies. He has a particular interest in the management of gastrointestinal malignancies with an emphasis on pancreatic ductal adenocarcinoma and colorectal cancer. He believes the principles and quantitative tools of ecoevolutionary biology are critical to make sense of cancer complexity and to ultimately make meaningful progress in the treatment of patients afflicted with the disease.



Zoe Clarke
Zoe Clarke

Zoe Clarke is a PhD student at the University of Toronto, Canada, in the lab of Dr. Gary Bader. She is in the computational biology stream of the Molecular Genetics program, and studies liver cancer development that has been induced by the hepatitis B virus. Her work is from a single-cell perspective, as she works largely with single-cell RNA-sequencing data to compare the cellular landscape and transcriptional profiles of different regions of infected and cancerous tissue. Zoe completed her undergraduate degree at Queen's University, Canada, in Dr. Stephen Loughheed's lab with more of an ecological focus. Her thesis used SNPs from a species of South American sparrow to infer their colonization history. Outside of research, Zoe is a very passionate distance runner, opera singer, and baker.



Shania Corry

QUB

Hello!

I am Shania! I am currently a 2nd year PhD student at Queen's University Belfast! I carried out my undergraduate degree in Biomedical Science in Liverpool, entirely wet lab based. I really like wet lab; the practical/hands-on approach! I was then introduced to cancer immunology in my final year which I absolutely loved, so went on to complete a Masters in Bart's Cancer Institute in Cancer Molecular Pathology and Genomics. This degree was fantastic, I loved the molecular signalling lectures and began to develop my skills in programming with an optional course the centre offered, which then led me to complete another Masters in Bioinformatics in Belfast. I realised how complementary it was to carry out the wet-lab protocols followed by interrogating the data computationally and being aware of the grey matter that acts as a bridge between biological and computational analysis. The evolution of tumours is a key example of an area that benefits from the contribution of both wet-lab and computational analysis. I hope to gain a better understanding of mathematical and programming approaches to study this further in my own research which focuses primarily on stroma-rich colon cancer and reigniting the immune system.



Angèle Coutant

Cancer Research Center of Lyon

My name is Angele Coutant, I'm a French Bioinformatics PhD student at the Cancer Research Center of Lyon, France.

After I obtained a bachelor's degree in cell biology and physiology in 2017(Clermont Ferrand, France), I developed a strong interest in genomics and programming and completed a master's degree in bioinformatics, specializing in software development and data analysis (Marseille, France). Having a strong interest in research, and being very curious to know how cancer cells evolve, I chose to continue my academic career in the «Integrated analysis of the dynamics of cancer» team that I joined in 2020, first as an intern, then as a PhD student.

My current project focuses on quantifying phenotypic diversity by analyzing what cells do rather than what they are, using single cell and spatial transcriptomics data. The overall aim of my project is to understand the impact of plasticity on how resistance emerges in different breast cancer models, by analysing genetics and phenotypics traits before and after treatment.



Elizabeth Flittner

Institute of Cancer Research

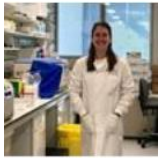
I am a first year PhD student within the Convergence Science Centre, a collaborative effort between the Institute of Cancer Research and Imperial College London. As part of the Tumour Functional Heterogeneity Team, led by Dr Marco Bezzi, I am interested how tumour heterogeneity can be controlled and exploited in light of evolution. Specifically, I am creating a single cell resolution barcoding technique to track molecular heterogeneity and clonal evolution of tumours.



Hasti Garjani

Delft University of Technology

Hasti Garjani is a second-year Ph.D. student at the Delft University of Technology in the Netherlands. Her thesis project is "Improving Treatment of Metastatic Cancers Through Game Theory and Dynamical Systems Theory". She received her M.Sc. degree in Control engineering from Tarbiat Modares University in Iran. Her research interests are game theory, dynamical systems, and mathematical biology.



Sian Hamer

The Institute of Cancer Research

I am a second year PhD student at the Institute of Cancer Research. As part of the Preclinical Modelling of Paediatric Cancer Evolution, led by Dr Alejandra Bruna, I am interested in understanding how mediation of cell plasticity primes neuroblastoma cells for evolution through non genetic mechanisms and developmental signalling pathways to drive resistance. My primary focus is to understand how developmental pathways mediate cell identity plasticity in neuroblastoma and how this could be an early driver of neuroblastoma evolution.



Franziska Hörsch

German Cancer Research Center

I finished my studies in the interdisciplinary field of biology, physics and mathematics in late 2020. After that I moved to Heidelberg to start my PhD at the German Cancer Research Center in the group of "Theoretical Systems Biology" led by Prof. Thomas Höfer. My main research interest is the somatic evolution of the hematopoietic system in mice. In my current project, I use deep sequencing data and mathematical models of somatic evolution to infer parameters from mutation dynamics.



Alvaro Henrique Ingles Russo Garces
The Institute of Cancer Research, London

Álvaro Henrique Ingles Russo Garces

Medical Oncologist

PhD student at the Institute of Cancer Research - London/UK and Clinical Research Fellow at The Royal Marsden Foundation Trust - Gynaecology Oncology.

Worked as a Clinical Research Fellow in the Gynaecology, Melanoma and Renal Cancer Unit, The Royal Marsden Foundation Trust, London – UK; Clinical Research Fellow in the Drug Development Unit / Phase I Clinical Trials at The Royal Marsden Foundation Trust and The Institute of Cancer Research, London – UK; Visiting Fellow at Centre de Santé et de Services Sociaux Champlain – Charles-Le Moyne/ Université Sherbrooke – Québec - Canada.



Brian Johnson
University of California, San Diego

I am a first year biomedical informatics PhD student at the University of California, San Diego. Working in the lab of Dr. Kit Curtius, my research seeks to develop an evolutionary understanding of cancer. Most recently, I have been applying phylogenetic-based approaches to genomic data in myeloid malignancies, in an effort to reconstruct the events leading to malignancy. I am also interested in mathematical modeling of the process of cancer initiation. In my free time, I like to run and surf.



Elizabeth Krakow
Fred Hutchinson Cancer Center

Dr. Elizabeth Krakow, MD, MSc (Epidemiology) is an attending physician in allogeneic hematopoietic cell transplantation and cellular immunotherapy at the Fred Hutchinson Cancer Center and the University of Washington. Her research focuses on novel approaches to prevent and treat leukemia relapse after transplantation. She is developing clinical decision support tools to inform longitudinal treatment selection in response to AML genomic evolution and clinical factors.



Lori D Kregar
Wellcome Sanger Institute

I am pursuing a PhD degree on the topic of phenotypic heritability in clonal hematopoiesis under the supervision of Dr Peter Campbell. I am interested in clonal dynamics of somatic tissues and would like to work in translational medicine in the future. I hold a master's degree in computational biology from the University of Cambridge and a bachelor's degree in business from the University of Ljubljana.



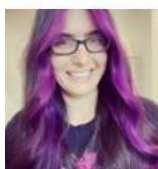
Veselin Manojlovic
City, University of London

After graduating from the University of Oxford with an MMathPhys in Mathematical and Theoretical Physics with a focus on quantum gravity, I started my PhD studies in Mathematical Oncology supervised by Dr Rob Noble at City, University of London. My research interests lie in adapting and applying systematic biology methods in oncology, mathematical modelling of spatially organised tumours, and general cancer evolution questions.



Katelyn Mullen
Memorial Sloan Kettering

I am a fourth-year graduate student in the Iacobuzio-Donahue lab at Memorial Sloan Kettering Cancer Center. I also work as a content curator for OncoKB, MSK's Precision Oncology Knowledge Base that contains information about the biological effects and treatment implications of specific genetic alterations found in cancer. For my thesis, I use primary and metastatic tissues collected from research autopsies in combination with next-generation sequencing to understand genetic intratumoral heterogeneity of late stage pancreatic cancer.



Cleopatra Petrohilos
The University of Sydney

Patra is a PhD student researching contagious cancer in Australian native wildlife.



Zofia Piszka
UCL Cancer Institute

I am a first-year PhD student with Dr Marnix Jansen at the UCL Cancer Institute. My project is funded by CRUK and its aim is to use CRISPR to create cellular models of mismatch repair deficiency genotypes observed in patients with colorectal cancer. I will then use the models to compare the genotypes in terms of mutation rate, mutation signature and bias within the genome as well as population diversity emerging over time and response to stress. Privately, I love rock climbing, hiking and mountaineering, and I'm always trying to catch up on all the amazing books I haven't read yet.

This course is a unique opportunity for me to build a solid knowledge foundation in cancer ecology and evolution - I have not had a chance to receive such training before. I'm looking forward to hearing from the experts in the field, testing my understanding during the tutorials and socialising with other participants :)



Kane Smith

Institute of Cancer Research

I have a strong background in molecular biology and its application to human disease. These skills were developed through the completion of a BSc in genetics at Cardiff University, a MSc in regenerative medicine at QMUL and a three-year research technician role at the Barts Cancer Institute where I investigated novel genomic biomarkers for colitis-associated colorectal cancer.

I have recently been awarded funding from Bowel Research UK to undertake a PhD at the Institute of Cancer Research within the Genomics and Evolutionary Dynamics laboratory. My aims are to further previous tissue-based biomarker findings by developing a non-invasive cell-free based blood test to identify early signs of bowel cancer and predict future risk in inflammatory bowel disease (IBD) patients. My hope is that the test will improve the quality-of-life for people with IBD and reduce the demand for colonoscopies in hospitals.

Throughout my PhD journey, I wish to develop the computational and bioinformatic skills required for big data genomic analysis. I would like to apply these tools to better understand the evolutionary trajectory from normal to malignant transformation in the bowel and have a direct translational path to the clinical setting.



Amanda Stafford
Barts Cancer Institute

I am in the second year of my PhD, which covers both the wet- and dry-lab. The hypothesis for my PhD is that chromatin architecture influences CNA distribution and diversity by altering susceptibility to genomic instability, and that changes in chromatin architecture are associated with metastatic progression. To date, I have developed a new bioinformatics method to quantify the degree of tumour-wide CNA diversity using a single colorectal biopsy. With regards to my wet-lab work, I have begun to establish a new experimental methodology that I have named “double ATAC-seq” to concurrently measure CNAs and chromatin architecture in single cells. For the remainder of my PhD, I will generate double ATAC-seq data from metastatic CRCs, and perform a combined analysis of these data together with existing multiomic data in my lab to consider the interrelationship between chromatin accessibility and CNA occurrence. Outside the scope of my PhD, I have a keen interest in how the microbiome and metabolome influence cancer risk and progression.



Nair Varela Rouco
Universidade de Vigo

My name is Nair, I have studied a Degree in Biology and a MsC in Bioinformatics. Currently I am doing a PhD in cancer evolution. I am focused on the identification of the genomic characteristics of CTCs (Circulating Tumour Cells) and CTC-clusters that succeed to produce metastases to understand when, where and how CTCs and CTC-clusters originate and propagate.



Konstantinos Zormpas-Petridis
The Institute of Cancer Research, London

I am currently a postdoctoral researcher in the Institute of Cancer Research, London (ICR) using artificial intelligence to improve clinical MRI workflows. I have a PhD in Computational Medicine from the ICR for developing computational science methodologies to combine multi-parametric MRI and digital histology to map tumour (spatial and temporal) heterogeneity in childhood neuroblastoma. I also hold a M.Sc. in Electronics and Information Processing and B.Sc. in Physics from the University of Patras, Greece.