

Alethiomics

PRESS RELEASE

Oxford Spin-out Alethiomics launches to advance its multi-omics target discovery pipeline in blood cancer, as highlighted in ASH plenary

- Spin-out from University of Oxford built on a decade of world-leading research on blood cancers and breakthrough innovation in single-cell multi-omic analysis by founders Professor Adam Mead and Professor Beth Psaila
- £6m seed financing from science business builder Oxford Science Enterprises
- Novel therapeutics, based on targets discovered using the TARGET-seq platform, will be developed to address unmet need in blood cancers
- TARGET-seq highlighted in a plenary session at the American Society of Haematology (ASH) meeting on 12 December
- Led by pharma/biotech experienced Board and Management, Dr Mark Throsby, Chairman and Dr Edward Ainscow, CSO

Oxford, UK, 15 December 2021 Alethiomics, a drug discovery company focused on developing targeted therapies to treat a family of blood cancers called myeloproliferative neoplasms (MPNs), launched today, backed by £6m seed financing from Oxford Science Enterprises.

A spin-out from the University of Oxford, the company is based on world-leading discoveries in clinical haematology and single-cell multi-omics by its founders, Professor Adam Mead and Professor Beth Psaila. Mark Throsby Ph.D. has been appointed as Chairman and Edward Ainscow Ph.D. has joined as Chief Scientific Officer (CSO).

MPNs are a group of chronic blood cancers that begin with mutations occurring in cancer stem cells in the bone marrow. Currently available treatments, for example JAK2 inhibitors, provide symptomatic benefit, but do not tackle the underlying disease drivers meaning that many patients have a persistent burden of disease and remain at risk of disease progression.

Identifying new drug targets within these mutant cells is critical to developing targeted and curative therapies. Alethiomics' founders have pioneered the use of single-cell multi-omic approaches to better understand the biology of mutant-positive stem cells in MPNs and to discover novel molecular targets as the basis for drug discovery. They have also developed bespoke platforms for target validation to accelerate successful translation to the clinic.

Prof. Mead said: *“Despite tremendous advances in oncology, the quality of life and outcome for patients with many aggressive cancers remains poor. It is now clear that precision treatments targeted at specific driver mutations in cancer-initiating cells are required. Current approaches to single-cell tumour analysis are unable to resolve both cellular and mutational heterogeneity. The Alethiomics TARGET-seq platform simultaneously detects DNA mutations, the RNA transcriptome and cell surface proteins from individual cells to provide a holistic understanding of pathologies and more intelligent target identification.*

Prof. Psaila added: *“Our initial focus is on the most sinister MPNs, for which current treatments are really inadequate and many of our patients still suffer very poor outcomes. We are really excited to have founded Alethiomics and to be recruiting an experienced and dynamic team, enabling us to translate our discoveries in novel target identification into precision medicines to improve the lifespan and quality of life for the patients we care for in the clinic.”*

The breakthrough potential of the founders’ research is underlined by the fact that work using TARGET-seq, led by Professor Mead, was selected for the Plenary Session at one of most prestigious scientific presentations in haematology; the American Society of Hematology (ASH) annual meeting¹.

The seed financing will be used to establish Alethiomics’ research operations at the Oxford BioEscalator, to advance its pipeline of programmes in MPNs, and to industrialise the company’s proprietary TARGET-seq drug discovery and target prioritisation platform.

Claire Brown, PhD, MBA, Life Sciences Partner at Oxford Science Enterprises said: *“We are tremendously impressed by the unparalleled expertise in haematological cancer of Prof. Mead and Prof. Psaila, and their passion for bringing new therapies to the clinic to benefit patients. We look forward to building on their foundational discoveries and to developing clinical programmes and new therapies that deliver on the early promise of the technology.”*

Co-founders, Adam and Beth, will act as consultants to Alethiomics and serve on the Scientific Advisory Board, whilst continuing to lead their research groups at the MRC Weatherall Institute of Molecular Medicine, Radcliffe Department of Medicine, University of Oxford alongside their clinical practices in the Department of Haematology at Oxford University Hospitals NHS Trust.

Chairman Dr Mark Throsby is a biopharmaceutical executive with extensive research experience and a track record of innovation and execution. He is an expert in antibody engineering and immunology with over two decades of commercial experience gained in pharma and biotech at Crucell NV and Merus NV. Alongside his role at Alethiomics he acts as COO/CSO of Gadeta BV and serves on the Board of Ona Therapeutics.

CSO Dr Ed Ainscow brings two decades of experience working on innovative approaches to early drug discovery in both pharma and biotech. He joins from Carrick Therapeutics Ltd where he has been Chief Technology Officer for the past five years.

Alethiomics foundational research has been supported by academic and charitable grants including the support of Cancer Research UK, which becomes a minority shareholder in the company.

-Ends-

1. ASH Plenary Session Information

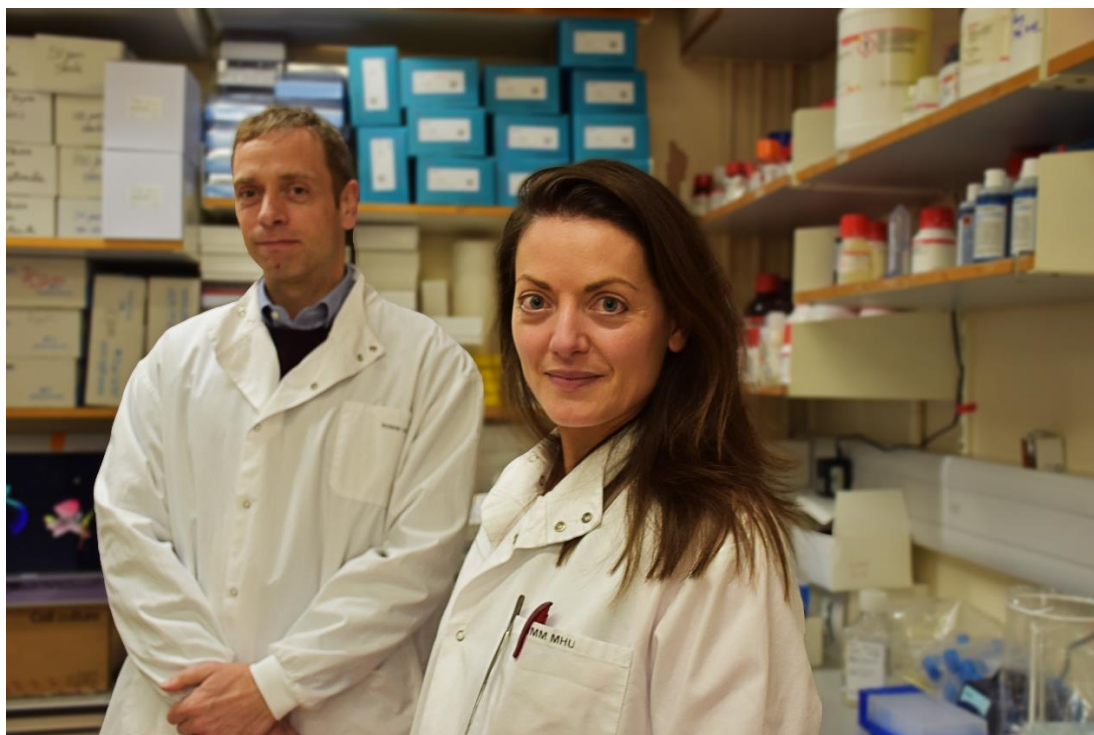
Title: Single-Cell Multi-Omics Reveals the Genetic, Cellular and Molecular Landscape of TP53 Mutated Leukemic Transformation in MPN

Plenary Scientific Session: Hematology Disease Topics & Pathways: Fundamental Science, Genomics, Translational Research, Hematopoiesis, Biological Processes

Presenter: Dr Rodriguez-Meira

Timing: Presented on Sunday, December 12, 2021, 2:00 PM-4:00 PM EST

Paper: <https://ash.confex.com/ash/2021/webprogram/Paper150191.html>



Caption: Professor Adam Mead and Professor Beth Psaila, co-founders Alethiomics
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Notes to Editors:

About Alethiomics

Alethiomics Ltd is a pre-clinical biotech company harnessing the power of single cell multi-omic technology to discover and develop life changing treatments for patients with blood cancer. A spin-out from the University of Oxford, Alethiomics was co-founded with support from Oxford University Innovation in 2021 by Prof. Adam Mead and Prof Bethan Psaila, both academic clinicians and expert haematologists.

With R&D facilities in Oxford UK, the company is financed by seed investment from Oxford Science Enterprises.

Find out more: www.alethiomics.com | [LinkedIn](#) | [Twitter](#)

About Oxford Science Enterprises

Oxford Science Enterprises is a Science Business Builder, committed to helping solve the world's toughest problems for more people, in more places, faster. The company does this by transforming world-leading science into world-changing businesses, partnering the best scientists from the world's best university with the best business brains. Oxford Science Enterprises grows its companies with care and expertise, investing for real-world impact, not only financial returns, and re-investing proceeds back into the next generation of original research and world-changing businesses.

Since 2015, the company has received an automatic stake in all Oxford University science spinouts – and has taken a leading role in creating and building enterprises that

address problems that affect people in life-changing ways: their health, the availability of food, the survival of the planet.

Find out more: oxfordscienceenterprises.com | [Twitter](#) | [LinkedIn](#)

MRC Weatherall Institute of Molecular Medicine (MRC WIMM)

The MRC WIMM was founded in 1989 by Sir David Weatherall, and was the first institute of its kind in the UK to link basic research in molecular and cell biology with clinical research. The MRC WIMM is a strategic partnership between the Medical Research Council and the University of Oxford. The institute brings together over 500 researchers, staff and students now focusing on five research areas: rare genetic diseases, haematology, immunology and infection, stem cell and developmental biology, and cancer biology.

Find out more: <https://www.imm.ox.ac.uk/>

Radcliffe Department of Medicine (RDM)

The RDM is one of the two main departments of medicine at the University of Oxford, and aims to tackle some of the world's biggest health challenges by integrating innovative basic biology with cutting edge clinical research. The RDM has internationally renowned programmes in a range of areas including cardiovascular sciences, diabetes and endocrinology, immunology, haematology and pathology.

Find out more: <https://www.rdm.ox.ac.uk/>

About Cancer Research UK

Cancer Research UK is the world's leading cancer charity dedicated to saving lives through research. It's pioneering work into the prevention, diagnosis and treatment of cancer has helped save millions of lives. Cancer Research UK has been at the heart of the progress that has already seen survival in the UK double in the last 40 years. Today, 2 in 4 people survive their cancer for at least 10 years. Cancer Research UK's ambition is to accelerate progress so that by 2034, 3 in 4 people will survive their cancer for at least 10 years. Cancer Research UK supports research into all aspects of cancer through the work of over 4,000 scientists, doctors and nurses. Together with its partners and supporters, Cancer Research UK's vision is to bring forward the day when all cancers are cured.

Find out more: www.cancerresearchuk.org

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For Further information, please contact:

At the Company

Ed Ainscow, CSO, ed.ainscow@alethiomics.com

Media Enquiries

Sue Charles, Charles Consultants, sue@charles-consultants.com, +44 (0)7986 726585