

LIFT BioSciences Announces Publication of Review Article in *Frontiers in Immunology* Highlighting Broad Therapeutic Potential of Neutrophils and IMANs in Cancer

- *Neutrophils, long considered short-lived immune cells, can be therapeutically targeted when their appropriate subset and functional state are identified for the disease context*
- *LIFT BioSciences' immunomodulatory alpha neutrophils (IMANs) are designed to have the potent anti-tumour activity of naturally occurring N1 neutrophils fixed into their biology*

London, April 22, 2026 – [LIFT BioSciences](#) ('LIFT' or 'the Company') today announced the publication of an article in *Frontiers in Immunology* reviewing the recent advances in the understanding of neutrophil biology, heterogeneity, and plasticity, leading to several discoveries around their therapeutic potential in cancer and other indications. The review highlights the different functional states of neutrophils and their potential to enhance existing cancer therapies. The article also spotlights targeting neutrophils directly, given their ability to modulate immune responses and act as effector cells, and in this context provides an overview of immunomodulatory alpha neutrophils (IMANs), LIFT's proprietary, therapeutically-optimised neutrophils with anti-tumour properties. The article titled "Physiological, Patho-Physiological, and Potential Therapeutic Roles for Neutrophils in Cancer & Beyond" can be accessed using the [link](#).

Neutrophils, traditionally viewed as short-lived first responders of the immune system, are now recognised as a diverse and adaptable population of cells that can either promote or suppress tumour growth, depending on their state and the tumour environment. Broadly, they exist along a spectrum from anti-tumour "N1-like" to pro-tumour "N2-like" phenotypes, with this balance, rather than overall neutrophil levels, playing a key role in patient outcomes and response to treatment.

"This publication reflects a fundamental shift in how we understand neutrophils in cancer immunity and their potential to be harnessed for novel therapies," said **Dr. Mark Exley, Chief Scientific Officer at LIFT and corresponding author of the review**. "Its acceptance in a peer-reviewed journal underscores the growing recognition of neutrophils as a promising therapeutic avenue. We are now focused on advancing IMANs towards the clinic, building on compelling preclinical evidence of their anti-tumour activity."

Highlights from the review article in *Frontiers in Immunology*:

- Neutrophils play a vital role in cancer, which is influenced by their phenotype, balance, and activation timing rather than overall abundance
- Based on their ability to precede or accompany CAR-T cytokine release syndrome and influence adaptive immune response, neutrophils may enhance the effectiveness of

existing cancer therapies, including checkpoint inhibitors, CAR-T, and therapeutic antibodies

- Specific neutrophil markers and subsets may serve as more reliable indicators of prognosis and treatment response than traditional measures like ‘neutrophil:lymphocyte’ ratio alone
- IMANs are long-lived (about a month), cryopreservable, scalable anti-tumour neutrophil-type cells produced from haemopoietic stem cells that can kill tumours directly, and recruit into the tumour and activate T cells and NK cells
- Neutrophils play roles in several other disease areas, such as antimicrobial resistance, neurodegenerative diseases, autoimmunity and inflammation

Based on preclinical data to date showing that IMANs can infiltrate solid tumours and reactivate anti-tumour immunity *in vivo*, LIFT is preparing for a first-in-human clinical trial in Ireland. The Phase 1 study will evaluate the safety and feasibility of IMAN therapy in patients with treatment-resistant head and neck squamous cell carcinoma (HNSCC) and cervical cancer, where there remains a significant unmet medical need.

About LIFT BioSciences

LIFT BioSciences is pioneering a new class of immunotherapy for hard-to-treat cancers based on allogeneic Immuno-Modulatory Alpha Neutrophils (IMANs)[®]. Our proprietary, long-lived IMANs harness neutrophils’ innate tumour-homing and infiltrating attributes, combined with their ability to directly kill cancer cells and safely orchestrate broader immune responses, offering a powerful and antigen-agnostic treatment option to overcome cancer resistance mechanisms, like suppressive tumour environment and immune evasion. Backed by deep neutrophil biology expertise and a scalable manufacturing process, LIFT’s platform represents a one-of-a-kind opportunity to reshape medicine and drive forward a pipeline of new therapeutics with major impact for patients.

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