



PRESS RELEASE

Ixaka strengthens IP Portfolio for its *in vivo* gene delivery platform and multi-cell therapy with key European and US patents

London, UK, 8 February 2021: Ixaka Ltd, an integrated cell and gene therapy company focused on the natural power of the body to cure disease, today announces that it has been granted two key patents – a European patent concerning *in vivo* applications of its proprietary polymeric targeted nanoparticle (TNP) platform, and a US patent concerning its autologous cell therapy REX-001.

EU patent for *in vivo* gene delivery platform

Ixaka's *in vivo* gene delivery platform enables therapeutic cells to be targeted and genetic modifications to be made directly within a patient's body. The gene delivery platform is currently being applied to generate CAR T-cell therapies *in vivo* for haematological malignancies. Component modifications will enable targeting of a broad range of therapeutic cells for the treatment of serious diseases, including solid tumours, rare genetic disorders, neurological and autoimmune diseases.

The European patent ([EP3406265A1](#)) covers complexes of viral-based therapeutic agents with poly(beta-amino ester)s (PBAEs) polymers. The said polymers are modified with at least one oligopeptide to increase the stability of the nanoparticle and to facilitate the transduction. It also covers encapsulating and treatment methods for *in vivo* applications.

US patent for autologous cell therapy REX-001

REX-001, Ixaka's lead multi-cell therapy asset, is an autologous cell-based product in clinical development for the treatment of chronic limb-threatening ischemia (CLTI). REX-001 is currently being evaluated in the pivotal Phase III SALAMANDER clinical trial at multiple sites across Europe.

The US patent ([No. 10,869,886 B2](#)), granted by the United States Patent and Trademark Office, covers the composition, dose and administration procedure of REX-001. This newly granted patent ensures patent market exclusivity in the US for Ixaka's proprietary cell suspension of adult bone-marrow-derived cells for use in the treatment or amelioration of CLTI. Further grants are expected to follow in Europe, China, Japan and other major markets.

Joe Dupere, CEO of Ixaka, added: *“The strengthening of our patent portfolio further expands the value of our offering. We will generate additional IP as we expand our oncology pipeline and continue to develop the technical components of our products and platform, while also progressing our lead REX-001 program through Phase 3 clinical trials in CLTI. We also seek collaborations for REX-001 and the application of our versatile targeted nanoparticle technology across new fields, including rare genetic disorders, neurological and autoimmune diseases.”*

Cécile Bauche, CSO at Ixaka, commented: *“The latest European and US patents add to our rapidly growing IP portfolio and highlight the pioneering nature of Ixaka's cell and gene therapy technologies. Receiving approval within 3 years of submission for the targeted nanoparticle gene delivery platform reflects the strength of our patent application and claim, and we are very satisfied with the scope of the US patent for our REX-001 multi-cell therapy.”*

IP portfolio overview

Building a robust and broad IP portfolio is at the heart of Ixaka's development strategy. The Company's ongoing R&D and upcoming clinical data will allow filing of additional patent applications across multiple territories.

Ixaka's current IP portfolio contains 1 patent family for its MCT platform and 11 patent families for its TNP platform, covering all key components of the technology, including a proprietary polymer, bald

engineered lentiviral vector, T-cell specific promoter and aptamer-based targeting agent. The portfolio also provides protection across a wide geographic range (including Europe, the United States, Japan, China, Canada, Brazil, Mexico, Australia, Korea and India).

The European patent is for products developed under a licence agreement between Ixaka (previously aratinga.bio), Sagetis Biotech (“Sagetis”) and universities (Institut Quimic de Sarria CETS Fundacio Privada and Institut d’Investigacions Biomediques). This exclusive and worldwide license covers the field of any retroviral-based (including lentiviral-based) and plasmid-based applications in any therapeutic area.

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About Ixaka

Ixaka is a cell and gene therapy company focused on using the natural powers of the body to cure disease.

Ixaka’s proprietary technologies enhance the naturally therapeutic power of cells by increasing the presence of curative cells at the site of disease, or by directly modifying cells within the body to improve disease targeting and boost their restorative effect.

Ixaka’s technologies – concentrated multi-cell therapies and nanoparticle therapeutics – demonstrate potential for the treatment of a broad range of serious diseases across oncology, cardiovascular, neurological and ocular diseases, and genetic disorders.

Ixaka has offices in London, UK with R&D and manufacturing operations in Seville, Spain and Paris, France and additional manufacturing capability in Frankfurt, Germany.

For more information, please visit www.ixaka.com

Connect with us: Twitter: https://twitter.com/ixaka_Ltd; LinkedIn: <https://www.linkedin.com/company/ixaka-limited/>

About Ixaka’s multi-cell therapies

Multi-cell therapies (MCTs) are derived from natural tissue extracts which are selected for the most active cells, removing components (such as red blood cells and platelets) that potentially reduce the activity of therapeutic cells. Our first MCT is REX-001, which is currently in a multi-site Phase 3 clinical trial for chronic limb-threatening ischemia (CLTI).

Ixaka’s REX-001 MCT consists of a combination of progenitor cells and immune cells (lymphocytes, monocytes and granulocytes) which are selected and concentrated from a patient’s own bone marrow and administered directly to the site of occluded blood vessels in the lower leg. Locally

administered REX-001 acts to regenerate blood vessels (through both direct and indirect paracrine mechanisms), modulate immune responses, improve blood flow, improve tissue oxygenation, and promote wound healing. These effects lead to a significant improvement in clinical outcomes and quality of life through complete ulcer healing and alleviation of chronic ischemic rest pain.

About Ixaka's *in vivo* gene-delivery technology

Ixaka's targeted nanoparticle (TNP) therapeutic is a platform which enables therapeutic cells to be targeted and genetic modifications to be performed directly inside the body. The first application is in the generation of chimeric antigen receptor (CAR) T-cell therapies for haematological malignancies. Modifications of the components however allows the technology to target a broad range of therapeutic cells for the treatment of many serious diseases including cancers, genetic disorders, neurological, autoimmune and ocular diseases.

The TNP *in vivo* gene-delivery approach enables targeting of specific cells and expression of the gene of interest directly in the patient. The technology is also targeted and controllable offering potentially improved efficacy and safety. Generation of enhanced therapeutic cells through genetic modification inside the body also enables more standardized manufacturing which is less expensive as it does not require costly dedicated manufacturing sites needed to expand cells before use (as is required for *ex vivo* cell therapies).