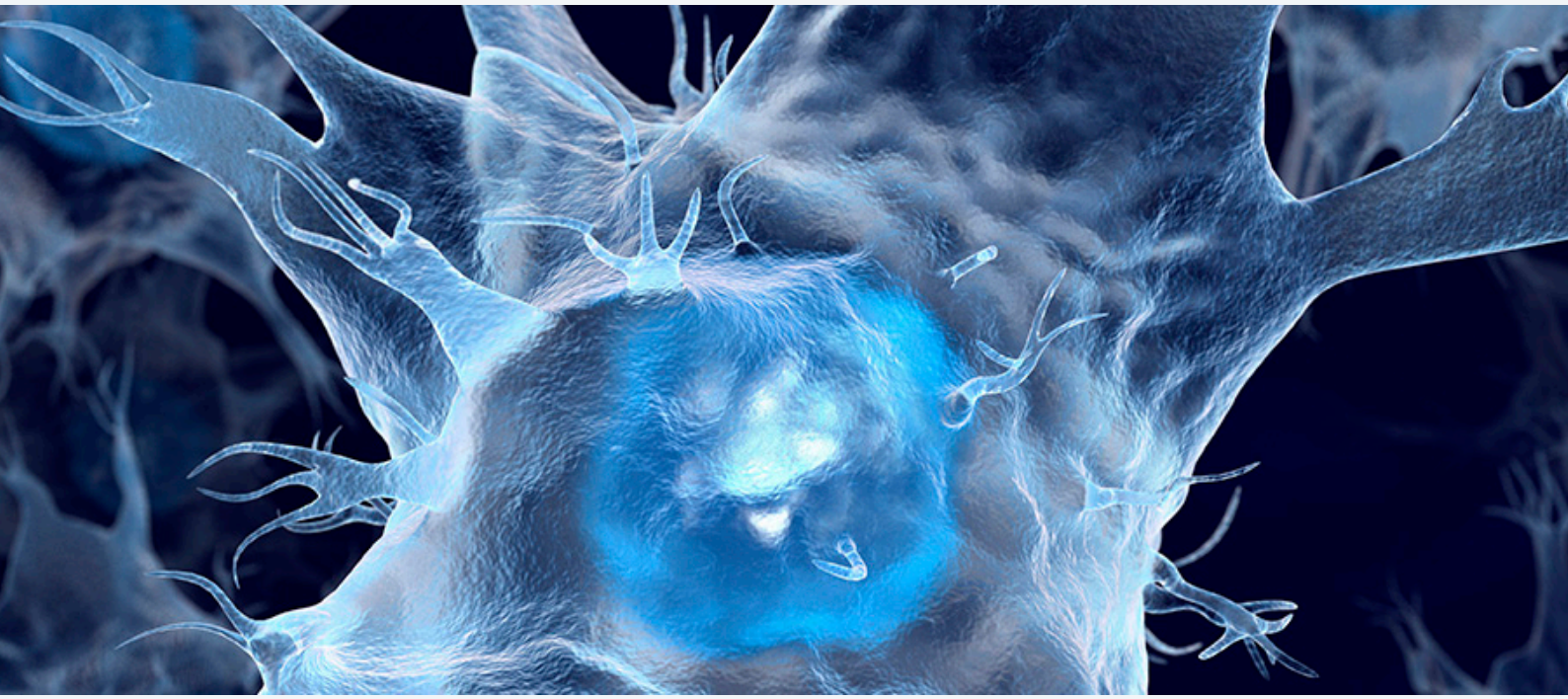
eTheRNA

Boosting the human immune system to fight diseases

eTheRNA
Company Profile



eTheRNA is a Belgium based clinical-stage Life Sciences company developing mRNA-based immunotherapies to help patients fight particular cancers and infectious diseases. eTheRNA's proprietary rationally designed TriMix technology aims to boost dendritic cells leading to more comprehensive, sustainable and immunotherapies than any other similar approach investigated.

So far an ex vivo (cellular product) immunotherapy concept TriMix-DC has been validated up to phase IIa clinical studies in melanoma patients. It is planned to further develop this through non-dilutive funding and in collaboration with external partners.

eTheRNA's main focus however resides in the further in-house development of a direct injection (intranodal/ intratumor) in vivo immunotherapeutic product that can be made available off-the-shelf.

In 2016 eTheRNA joined the J&J innovation JLINX incubation and investment model managed by Bioqube Ventures.

"The JLINX incubation and investment model offers eTheRNA a unique combination of expertise in the fields of scientific research, clinical test design, lab facility management and business management.

Dirk Reyn – CEO eTheRNA

Johnson & Johnson INNOVATION | JLINX

bioqube ventures

janssen PHARMACEUTICAL COMPANIES OF Johnson & Johnson

Background

eTheRNA was founded in 2013 by Prof. Kris Thielemans, Sonja van Meirvenne and Carlo Heirman as a spin-off from the 'Vrije Universiteit Brussel' (VUB), following the joint development of the TriMix technology by the VUB Laboratory for Molecular and Cellular Therapy and the Brussels University Hospital 'UZ Brussel'.

In 2015 eTheRNA entered into a partnership with asset-centric drug development company Progress Pharma under the leadership of Dirk Reyn. Later that year eTheRNA obtained the worldwide exclusive license on the TriMix technology from the VUB.

In March 2016, eTheRNA secured EUR 24 million in a Series A investment with a strong international syndicate of investors, enabling the company to continue the development of mRNA-based immunotherapies for melanoma and triple negative breast cancer.

Inspired by the promising micro biome research undertaken by several JLINX member companies and access to JNJ oncology know-how, eTheRNA joined this J&J Innovation model in December 2016 to accelerate its immunotherapy research efforts.

In September 2017 eTheRNA received a €1 mio grant from Flanders Innovation & Entrepreneurship to further upgrade its state-of-the-art production process for TriMix mRNA immunotherapies.

AGENTSCHAP INNOVEREN & ONDERNEMEN
Vlaanderen is ondernemen

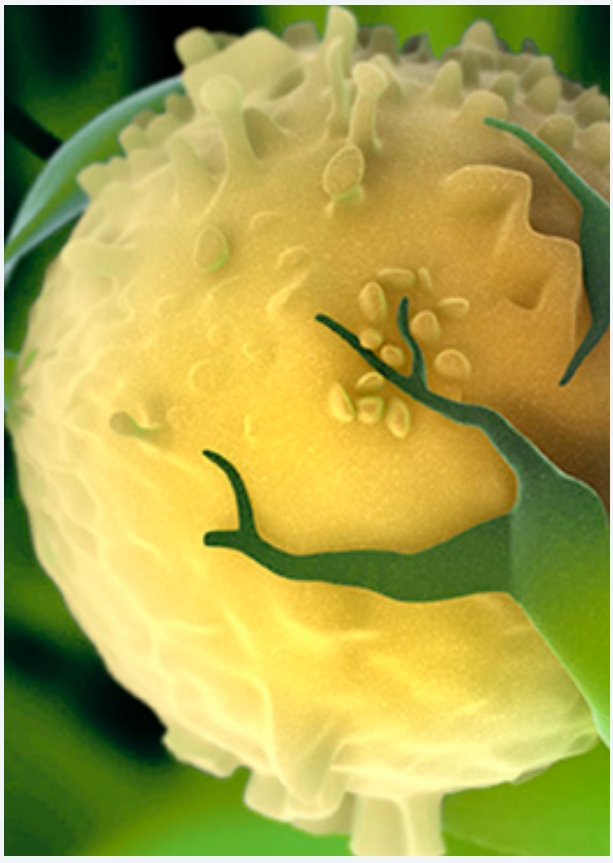
Technology

eTheRNA's TriMix technology is unique in the way it uses three mRNA molecules (caTLR4, CD40L, CD70) to circumvent some of the main obstacles faced by other immunotherapy concepts when attempting to induce the proliferation of T-cells into either mature helper T-cells or cytotoxic T-cells (i.e. the ultimate 'soldiers' of the immune system that fight cancer cells and infectious agents).

TriMix overcomes these obstacles by providing an additional triple boost:

1. enhancing the activation and maturation of dendritic cells,
2. stimulating the processes that lead to activated helper T-cells, and
3. promoting the processes that result in activated cytotoxic T-cells

The mRNA constructs of the TriMix-based immunotherapy are coding for both the tumor-specific antigens as well as for three unique and crucial proteins that jointly stimulate the patient's dendritic cells to produce a more potent and larger population of cytotoxic and helper T-cells.



Pipeline-Products

Early 2016, 2 phase IIa clinical studies validated the ex vivo TriMix-DC product in melanoma patients, as stand-alone and in combination with Ipilimumab. Thanks to the very good tolerability profile of this product, combination with other cancer drugs is possible.

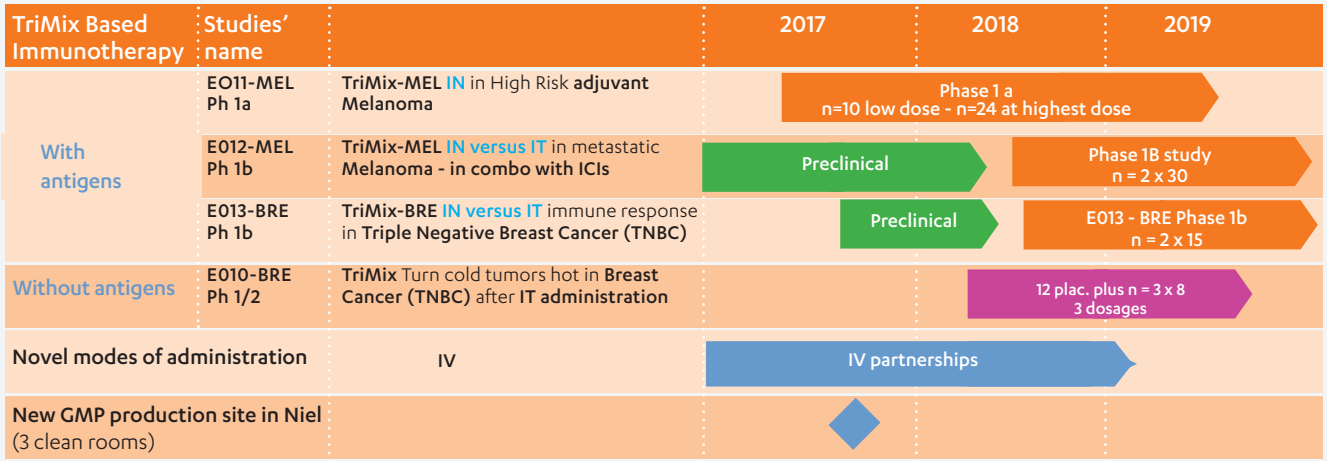
eTheRNA intends to select external partners to further develop this ex vivo/cellular therapy as a more personalized therapy.

Based on positive preclinical results, in June 2017 the first Phase Ib oncology clinical study was started to evaluate the safety and tolerability of eTheRNA's novel in-vivo immunotherapy candidate TriMix-MEL in adjuvant melanoma patients. Results are expected in Q3 2018.

In the coming months, eTheRNA plans to start several further clinical studies, designed to confirm that TriMix in vivo therapies can become the cornerstone for cancer immunotherapy and can deliver clinical proof-of-concept results alone and in combination with immune checkpoint inhibitors in melanoma and breast cancer.

eTheRNA's focus resides in the further in-house development of an injectable in vivo immunotherapeutic product that can be made available off-the-shelf.

Pipeline chart



Why JLINX

The JLINX incubation and investment model offers eTheRNA a unique combination of expertise in the fields of scientific research, clinical test design, lab facility management and business management

Via the close link with the Human Microbiome Institute and direct access to the Janssen R&D site , JLINX offers excellent scientific support, regulatory advice, clinical study design support etc. Cross-fertilization with other JLINX residents, especially those into micro biome and oncology, offers invaluable advantages in terms of knowledge sharing and speeding up solutions.

JLINX hosts a dedicated micro biome lab offering ultra-performing equipment such as a state-of-the art colony picker and liquid handling machine, all unaffordable for early-stage start-ups.

Through the involvement of Bioqube, JLINX offers expert guidance in developing business plans and investment plans. The mix of experienced business entrepreneurs and scientific leaders within JLINX is priceless.

Advisory Board

The Scientific Advisory Board of eTheRNA immunotherapies includes some of the world's most renowned experts in the field of immunology, oncology and immune-oncology.

The Scientific Advisory Board is a neutral body that assists the management team in scientifically guiding the company and provides feedback and advice at each development stage of the company's R&D pipeline.

Highlights

2013

Foundation eTheRNA

2015

Partnership with Progress Pharma

Worldwide Exclusive license on TriMix technology

2016

Series A investment round secures 24 million

eTheRNA joins JLINX

2017

Start Phase Ib melanoma clinical study (E011-MEL) for TriMix-MEL (ECI-006)

€ 1 mio grant from Flanders Innovation & Entrepreneurship

Start phase Ib breast cancer study (E011-BRE)

Future

Q1 2018

GMP certification of new production site in Niel

Q4 2018

Results Phase Ib oncology clinical studies for TriMix-MEL (ECI-006) expected

Start further clinical studies

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