LifeArc

Drug discovery collaborations

We collaborate with academic scientists to develop your research towards patient treatments.

lifearc.org

Accelerating the development of your research.

As a charity, we want to make sure that more science is developed and makes a difference to patients' lives. To achieve this we have invested heavily in our drug discovery and diagnostics development centres.

Through our Call for Targets campaign we look for promising drug or therapeutic targets. By collaborating with us you gain access to the expertise, facilities and resources needed to develop your research in a commercial environment.

You will bring biology and disease expertise and potentially access to relevant tools, assays and models. Speak to us if you have research with the potential to be:

Small molecule drugs

We provide the expertise and resources for all aspects of small molecule preclinical drug discovery.

Therapeutic antibodies

Our expertise spans from generation of new antibodies to delivering a humanised and fully characterised lead candidate. We have humanised 4 drugs currently on the market.

We invest in promising research

We are looking for research projects that can demonstrate:

- Novel therapeutic targets in any disease areas
- New approaches to modulating a known disease target
- Strong evidence linking the target to human disease
- Evidence from model systems showing that modulation of the target has a therapeutically relevant effect
- Disease biology expertise, such as access to enabling assays, reagents and disease models
- New technologies that could speed up drug discovery or allow us to tackle diseases and targets that can't currently be treated

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targets@lifearc.org

Accessing our expertise

Teams of nearly 80 scientists in our new Centre for Therapeutics Discovery offering:

- ADME/DMPK
- Assay development
- Antibody biophysical characterisation
- Antibody engineering
- Antibody humanisation
- High-throughput screening
- Medicinal chemistry
- Pharmacology
- Small molecule libraries
- Structural biology *in silico* screening

Screening against our compound library

120,000+ compounds, including:

- Annotated sets of pharmacologically active compounds
- Approved drugs
- Fragments
- Ion channel focused compounds
- Kinase targeting compounds
- Natural products
- Protein-protein interaction targeting compounds

Kerstin, Opportunity Assessment Group and (cover) scientists Afrah, Elizabeth and Jenny

Working collaboratively with researchers

APPLICATIONS

Target identification

Academic scientists submit proposals on promising new molecular drug targets. We also work with university TTOs to review existing portfolios.

Evaluation

Our due diligence team assesses the potential of each proposal through a two-stage application process and projects are selected by a panel of drug discovery experts.

Feasibility

We carry out feasibility work, such as reproducing key results from the PI's project, before project launch.

Project launch

£100,000 Translational Awards will be made to the PI after the successful review of the project and feasibility in our drug discovery labs.

DEVELOPMENT

Assay development

Our biologists adapt and develop industry standard assays needed for screening, hit confirmation and functional characterisation of new molecules.

Screening

We carry out high-throughput screening using proprietary in-house compound libraries. For antibody projects we screen antibodies for binding to the target antigen.

Hit to lead optimisation

Our medicinal chemists develop structure-activity relationships (SAR) to improve potency, solubility and physico-chemical properties of hits, generating drug-like molecules. For antibody projects we generate humanised or fully human antibodies and engineer lead candidates that have optimal binding affinity, functional efficacy and robust biophysical properties.

Proof of concept

We evaluate lead molecules in a range of relevant models, including human tissue, to demonstrate disease relevance and target engagement.

Partnering

We develop novel IP and a robust supporting data package suitable for partnering to pharmaceutical or biotechnology companies.

We are making a difference

CLINICAL DEVELOPMENT

Working with industry

Industrial partners have the resources to further develop our drug candidates and take them into clinical trials.

If one of our projects reaches the market any milestone and royalty payments we receive are shared with our academic collaborators.

Keytruda®

Our work led to the development of this groundbreaking cancer drug. It's now saving lives and generating royalties that fund our investment in promising medical research.

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LifeArc

To keep up to date with our latest news please follow us on twitter

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We are the bridge between great science and greater patient impact.

LifeArc is the new name for MRC Technology, a medical research charity with over 25 years experience in helping scientists and organisations turn their research into effective therapeutics and diagnostics.

Our new name reflects our purpose. To be the arc or bridge between research and improving patients' lives.

Our mission is to pioneer new ways to turn great science into greater patient impact.

We are a charity

LifeArc is: registered with the Charity Commission for England and Wales no. 1015243; a charity registered in Scotland with the Office of the Scottish Charity Regulator no. SC037861; a company limited by guarantee no. 2698321 incorporated in England and Wales.

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