The Potential of Nucleic Acid Therapeutics

Nucleic acid therapies (NATs) have emerged as a major new class of medicines, offering enormous potential to treat a range of common and rare diseases. The timescales for NAT development can be quicker than other classes of drugs. In addition, NATs provide opportunities to tailor treatments to individual patients based on their genome sequence. However, the broader clinical application of NATs can be limited by current methods of manufacture and delivery; part of NATA's remit is to address these challenges.

Collaborate With Us

We have a flexible approach to collaborations and partnerships, developing bespoke solutions to meet their aims and needs. We can provide end-to-end support for your projects, advising and actively contributing to R&D activities, from a genetic target to pre-clinical proof-of-concept; or we can collaborate on a specific part of the translational pipeline. We are actively seeking new partnerships and collaborators.

Contact us to discuss how we can work together

Careers at NATA

At NATA, we have a unique working environment that supports interdisciplinary career development across chemistry and biology, bridging the gap between academia and industry. As a result, we are always interested to hear from highly-motivated individuals who want to join the NATA team so that we can, ultimately, deliver for patients. In addition, we partner with many types of organisations to fund academic research positions and fellowships.

For further information, contact us.

NATA
Nucleic Acid Therapy Accelerator

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NATA - Nucleic Acid Therapy Accelerator

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NATA

Nucleic Acid Therapy Accelerator

Delivering the translational potential of nucleic acid therapies through interdisciplinary collaboration

Human cells in culture forming a 3-D spheroid targeted with a fluorescently-labelled oligonucleotide; an in vitro *model for tissue penetration of nucleic acid therapeutics.*

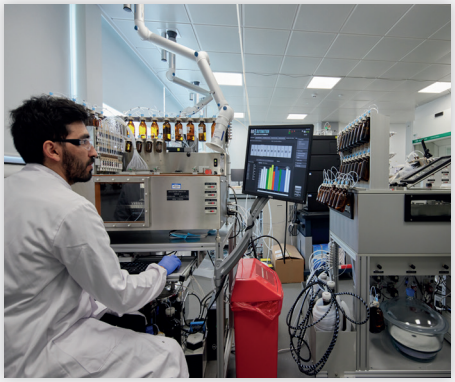
NATA
Nucleic Acid Therapy Accelerator

Translational Platforms

We have a unique, multidisciplinary skill set spanning chemistry, biology and pre-clinical testing.

About NATA

The Nucleic Acid Therapy Accelerator (NATA) is an independent, not-for-profit Medical Research Council (MRC) unit. Our mission is to advance the development of nucleic acid therapies (NATs) and associated technologies through high-quality science, collaborations and interdisciplinary research. We work with world-leading academics, clinicians, businesses and charities, bringing together a diverse network of expertise, skills and innovative technologies to bridge translational gaps in NAT development. We have the flexibility to focus on new chemical platform development and any disease area or gene target, and the agility to initiate new projects and collaborations quickly. We can also provide training in oligonucleotide therapeutics and knowledge exchange.



Chemistry Capabilities

- Oligonucleotide design, synthesis and analysis
- Novel chemical modifications
- Advanced conjugation chemistry

Biology Capabilities

- Cell- and tissue-specific targeting
- Developing 3-D cell models
- Delivery, efficacy, specificity and safety testing *in vivo*

NATA and Harwell Campus

NATA is based on Harwell Science and Innovation Campus, Oxford, UK, where we have unrivalled access to a unique combination of world-leading, state-of-the-art research and technology facilities, including:

Mary Lyon Centre — *In vivo* disease models and phenotyping
Central Laser Facility — Analysing complex biological reactions within cells
Rosalind Franklin Institute — Imaging life in five dimensions

Key Investment by the MRC and UKRI

NATA is funded by a £30M public investment from the UK Strategic Priorities Fund through the MRC and UK Research and Innovation (UKRI). Our strategy is to develop a hub of world-leading excellence for the acceleration of NAT technologies. In addition, we fund two Research Challenge consortia to address critical issues in the manufacture and delivery of NATs. By tackling these challenges and others, we can unlock the full therapeutic potential of NATs to bring health benefits to patients.

Scientific Questions NATA can Address

- How do I target my gene of interest?
- What are the options for oligonucleotide design and optimisation?
- Which *in vitro* or screening assays are the most relevant?
- What indicators of safety and efficacy are important?
- How do I assess the *in vivo* delivery of my lead?