



Job title	Research Associate/Fellow in nanoparticle engineering and Covid19 vaccinology	Job family and level	Research and Teaching Level 4
School/ Department	School of Pharmacy	Location	The University of Nottingham Biodiscovery Institute

Purpose of role

Scientists at the University of Nottingham and Nottingham Trent University are developing a DNA vaccine to prevent COVID-19. Experts from both universities are working with Scancell Holdings plc, a developer of novel immunotherapies for the treatment of cancer, to adapt its existing cancer vaccine platform for the development of a new vaccine.

Innovate UK, as part of UK Research and Innovation's response to COVID-19, will fund an 18-month Research Fellowship and 12 month Technical position to aid the translation of the vaccine. Work will involve characterisation and testing of vaccine variants and development system to scale and formulate the vaccine for future clinical trials. We are looking for highly motivated individuals to join this high impact research project.

<https://www.nottingham.ac.uk/news/funding-for-covid-19-vaccine-to-clinical-trials>

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	Develop nanoparticle formulation for commercialisation and deployment as Covid19 vaccine with industrial partner <ul style="list-style-type: none"> Using iterations of the GET peptide system to optimize formulation and activity for vaccination with engineered plasmids 	60 %
2	Incorporate delivery modifications into present formulation to aid next generation system development <ul style="list-style-type: none"> Assess enhancements in the context of the vaccine based on chemical and physical improvements to formulation and delivery 	20 %
3	Report generation and collaborator/industrial interaction <ul style="list-style-type: none"> Proactive communication and collaboration within a consortium of collaborators 	10 %
4	Supporting pre-clinical and clinical testing of vaccine candidates <ul style="list-style-type: none"> Provide expertise to the industrial partner for quality control and to support formulation and characterization for testing. 	10 %

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Nanoparticle characterization (DLS, Zeta-sizing) and imaging (TEM) ▪ Transfection assays (reporter assays such as luciferase and GFP) ▪ Cell culture experience ▪ Flow cytometry 	<ul style="list-style-type: none"> ▪ Microfluidics ▪ Scale-up ▪ Spray drying/Lyophilisation ▪ Vector engineering ▪ Ballistic gene delivery technologies (Gene Gun) ▪ Peptide and vector synthesis
Knowledge and experience	<ul style="list-style-type: none"> ▪ Non-viral gene delivery technologies ▪ Vector design and engineering 	<ul style="list-style-type: none"> ▪ Product commercialization ▪ GMP/scale up ▪ Toxicology assessments ▪ Regulatory experience
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ PhD or equivalent in relevant subject area. OR near to completion of a PhD 	<ul style="list-style-type: none"> ▪ PhD awarded ▪ PDRA experience ▪ PIL licensee course



The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.



The University is a signatory of the Declaration on Research Assessment (DORA). As such we commit to focus on the scientific content of publications (where requested or provided as part of the recruitment and selection process) as a basis for review of quality, and consideration of value and impact of research conducted, rather than any proxy measures such as Journal Impact Factor.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
- Taking ownership** Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
- Forward thinking** Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
- Professional pride** Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
- Always inclusive** Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others



