



QS ION Strategic Plan 2022-27

***Identifying Synergies
to Maximise Discovery and Translational
Neuroscience***

Executive Summary

This document outlines the vision, mission and high-level strategic plan for the Queen Square Institute of Neurology (QS ION) 2022-2027. It has been generated following a process of engagement with staff and students between September 2021 and January 2022.

Our Vision

Our overarching vision is to lead translational neuroscience on a global scale and provide society with deep scientific understanding of how the human nervous system functions across scales, at a molecular, cellular, system and whole organism level. This knowledge will drive advances in early diagnosis and in establishing effective therapies for neurological and mental health disorders, thus reducing the global major health burden of neurological disease, improving the lives of patients and benefiting society.

Our mission is to translate neuroscience discovery into new diagnostics and new therapies for patients by being:

- The world's leading translational neuroscience centre translating discovery into experimental studies to deliver new diagnostics and innovative therapies.
- The top student destination for educational programmes embedded in translational neuroscience research, and to train the next generation of translational neuroscientists.
- A centre working to overcome fragmentation and driving synergies across QS ION, Biomedical Research Centres (BRCs), the Faculty of Brain Sciences (FBS) and UCL; connecting industry, commercial partners, academics and patients to accelerate translational research, internationally.

Our values align with UCL's founding, radical, principles including academic excellence and research aimed at solving real world problems. We will ensure everything we do is sustainable and we will lead neurological thinking and actions to protect our planet. We will prioritise education and student experience and will ensure an open, supportive culture which truly harnesses the power of diversity. We will support all staff and wellbeing, especially our students and early career researchers. We are proud to be part of Queen Square and its history, and partnership with the NHS National Hospital (UCLH) and the BRCs based at QS. We deeply value our place in UCL Neuroscience, in FBS and UCL, and we will work together to shape the future.

Our Key Enablers

The next five years represent one of the most exciting periods in our history as we develop a new Translational Neuroscience environment centred around a "dual-hub" translational concept, which will include a new £281m building on Grays Inn Road (opening 2024), and enhanced experimental research and advanced trial facilities, at Queen Square. We will develop new ways of efficient, sustainable, digitally enabled laboratory and office working for our entire community of ~1,200 PIs, researchers, professional services colleagues and students across the dual hub. We will ensure this new environment is a catalyst for more partnerships across UCL Neuroscience and is an inspiring environment for all staff and students. Our eight Departments are central to our mission and are powerhouses of research, teaching and enterprise. All our Departments have major programmes of bidirectional translational research addressing the entire spectrum of neurological diseases. Our six Divisions are designed to be enablers cutting across Departments, which actively assist all researchers to easily access important research platforms and expertise while ensuring effective links with the Hospital and NHS patients and data. Our six Deputy Directors lead on education, EDI, climate change, translational research, communication and strategy. Our professional service teams are fundamental to delivering our mission. We will ensure financial sustainability of all our activities and work in partnerships with the BRCs, funders, philanthropy, industry, the hospital and with patients and the public.

Our Plans and Identifying Synergies

All Departments have developed detailed plans for the next five years and we will work together with each Department to deliver these plans. In addition, we have identified several areas which have potential for major synergies across QS ION, the FBS and UCL. We believe that, if delivered, these areas can be transformative in delivering our vision and demonstrating the societal value of UCL in London and globally within five years; they include:

- Genetic advanced therapies
- Brain cancer
- Advanced clinical trials platform and Queen Square trials centre
- Artificial intelligence (AI), data science, data enabled society
- Translational research in Parkinson's disease
- Rare dementias
- Neuroimmunology
- Climate change and the brain

Index

1. QS ION overview.....	5
2. Outline of the strategy process.....	9
3. QS ION themes and shared mission.....	10
4. Prioritised SMART objectives for 2022-2027.....	12
5. Abbreviations.....	17
6. Authors and endorsement.....	18

1. Queen Square Institute overview

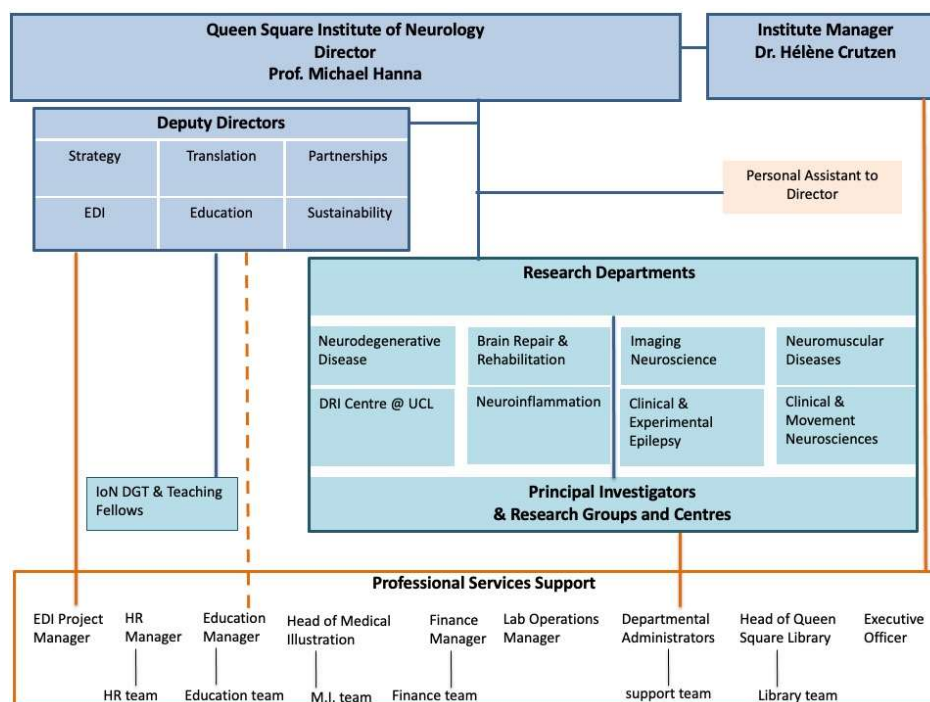
The [UCL Queen Square Institute of Neurology](https://www.ucl.ac.uk/ion) (QS ION) in Queen Square was established in 1950, merged with UCL in 1997, and is a key component of the Faculty of Brain Sciences (FBS) at UCL. The Institute has [eight academic research Departments](#), which encompass clinical and basic research within each theme. In parallel, there are currently six Divisions representing clinical professional affiliations.

Our mission is to translate neuroscience discovery research into treatments for patients with neurological diseases:

- A leading translational neuroscience centre in the world translating discovery into experimental studies in patients to deliver new diagnostics and new therapies;
- An excellent student destination for educational programmes embedded in translational neuroscience research;
- Overcome fragmentation by connecting industry, commercial partners, academics and patients to accelerate translational research, internationally.

In addition, several important research centres are based at the QS ION, affiliated with one of our academic research Departments: <https://www.ucl.ac.uk/ion/research/research-centres>. The Institute hosts the UK DRI Centre at UCL as one of its 8 research Departments: <https://www.ucl.ac.uk/uk-dementia-research-institute/uk-dementia-research-institute-ucl>.

An organogram of the QS ION including Research services is shown below:

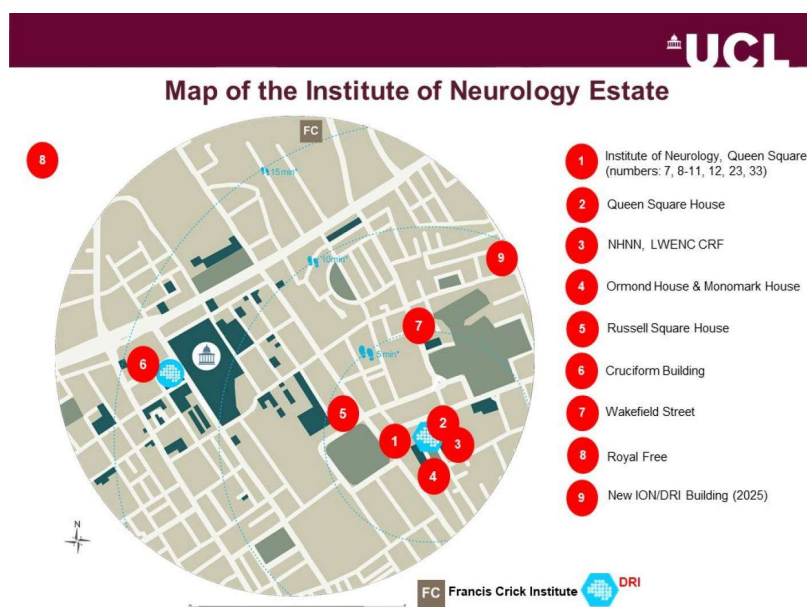


Departments and Divisions

The eight research Departments are the central powerhouses of our research, education and enterprise; and perform all the functions stipulated by UCL; <https://www.ucl.ac.uk/academic-manual/chapters/chapter-12-duties-and-responsibilities>. The Divisions were developed locally to ensure all researchers across Departments have access to expertise and support related to different areas including neurology, neurosurgery, neuropsychiatry, neuropathology, neurophysiology, and neuroradiology and neurophysics. Divisions also have an important role in education and links with the hospital.

Demographics

The QS ION has a significant teaching and training portfolio, with nearly 500 graduate students. The Institute employs 750 staff, and hosts 300 honorary and visiting staff, spread over a complex and large estate comprising of over 15 buildings (see map below).



There are 137 Principal Investigators at QS ION, including: 97 professors/professorial research associates and 25 emeritus professors; 12 Fellows of the Royal Society; 30 Fellows of the Academy of Medical Sciences; 1 Nobel Prize winner.

Staff 2020/21	
PI FTE - Total	127.75
PI FTE - HEFCE Funded	50.21
PI FTE - % HEFCE Funded	39%
Researchers FTE	387.25
PS & Technicians FTE - Total	159.55
PS & Technicians FTE - HEFCE Funded	34.35
PS & Technicians FTE - % HEFCE Funded	22%
PS Admin FTE- total	83.50
PS Admin FTE - HEFCE Funded	25.35
PS Admin FTE - % HEFCE Funded	30%
PI FTE total/ PS Admin FTE HEFCE Funded	5.04
Total FTE	674.55
Total FTE/PS Admin FTE HEFCE Funded	26.61

The Institute is closely associated in its work with the National Hospital for Neurology & Neurosurgery (NHNN), University College London Hospitals' NHS Foundation Trust, and in combination they form a national and international centre at Queen Square for teaching, training and research in neurology and allied clinical and basic neurosciences. The Institute also has active collaborative research programmes with other centres of excellence and works in close partnership with them: <http://www.ucl.ac.uk/ion/about/related>.

Research Excellence

Our annual turnover is £84 million.

The Institute currently holds 673 active research projects, totalling £335 million, from the main medical charities concerned with neurological diseases, and from government agencies such as the Medical Research Council, and we also receive significant philanthropic support.

Research Grants 2020/21	
RESEARCH GRANTS-ACTIVE AWARDS-Direct Costs	£46,937,404.65
RESEARCH GRANTS-ACTIVE AWARDS-Indirects	£6,352,025.98
RESEARCH GRANTS-ACTIVE AWARDS-Total Contribution (Indirects + QR)	£11,322,630.99
RESEARCH GRANTS-ACTIVE AWARDS-Percentage Contribution	24.12%
TOTAL GRANT APPLICATIONS-Value	£166,831,547.91
TOTAL GRANT APPLICATIONS-Number	431
UKRI GRANT APPLICATIONS-Value	£33,403,289.50
UKRI GRANT APPLICATIONS-Number	68
Research Grants KPIs 2020/21	
Direct Costs / PI FTE	£367,404.36
Indirects / PI FTE	£49,720.73
Total Contribution / PI FTE	£88,628.33
Average Value /Application	£387,080.16
Average Application Value/PI FTE	£1,305,880.42
Applications / PI FTE	3.37
Total Contribution / PS Admin FTE - HEFCE Funded	£446,634.48
Average Value App / PS Admin FTE - HEFCE Funded	£6,580,866.39
Applications / PS Admin FTE - HEFCE Funded	17.00
Enterprise 2020/21	
Invention Disclosure Forms	13
Patent Disclosure	7
Licences Done	2
Spinouts, Equity Holdings	1
Consultancy 2020/21	
Consultancies-Income Received (income received by ION)	£178,339.10
Consultancies-Income Received (Overheads received by ION)	£31,065.01
Consultancies-New Contracts (includes those taken personally by PI's)	£775,519.03

A large proportion of the Institute's funding is obtained from the Higher Education Funding Council for England. The most recent research assessment exercise, REF2014, showed that the QS ION as part of the FBS, is the first rated UK institution for neuroscience research output.

UCL Neuroscience is currently rated second in the world by ISI Essential Science Indicators. In the calendar year 2020, QS ION staff published a total of 1,906 papers in the most prestigious scientific and medical journals.

2021 REF Return QS ION		
QS ION Research Department	No. Researchers	No. papers
Imaging Neuroscience	19	63
Neuromuscular Diseases	25	53
Neurodegenerative Disease	23	67
Clinical and Experimental Epilepsy	21	61
Brain Repair and Rehabilitation	13	24
Neuroinflammation	7	20
DRI Centre at UCL	7	21
Clinical and Movement Neurosciences	32	78

Teaching excellence

The QS ION has a significant teaching and training portfolio, with over 500 graduate students (over 280 PhD students) at Queen Square, and taught MSc/MRes courses in: Advanced Neuroimaging, Brain and Mind Sciences, Clinical Neuroscience, Neuromuscular Disease, Stroke, Clinical Neurology, Dementia: Causes, Treatments and Research (Neuroscience), Translational Neuroscience and Neurosurgery. We aim to provide an excellent student experience and to prepare students for whatever career they might select.

Graduate students of the highest quality are recruited to both QS ION and UCL-wide MPhil/PhD programmes, which are supported through Research Council, charity and industry funded studentships, and the Wolfson/Eisai 4-year PhD programme, QS ION-Cleveland Clinic London Clinical PhD Programme and the Pat Harris 4-year PhD Fellowship programme. QS ION staff contribute to undergraduate teaching at UCL and for the UCL Medical School, host an Elective programme for final year medical students and participate in the organisation of several CPD courses: <http://www.ucl.ac.uk/ion/education>.

Students 2020/21	
PhD students	270
PGT-Total Lecture Hours and Marking Hours (20-21)	2479.18
PGT students supervised as Primary supervisor/Research projects supervised	112
No. of students supervised as Personal Tutor	137
Students fees income 2020/21	
PGR	£1,276,133.38
PGT	£2,674,180.17

UG	£685,090.34
Student KPI's 2020/21	
PhD students / PI FTE	2.11
PhD students / PS Admin FTE - HEFCE Funded	10.65
PGT-Total Lecture Hours-Marking / PI FTE	19.41
PGT students supervised as Primary supervisor or Research projects supervised/PI FTE	0.88
Total Fee Income/PI FTE	£36,283.80

Equality, Diversity & Inclusion (EDI)

The Institute prides itself for operating in an all-inclusive environment. Teamwork is highly valued, individual strengths are recognised and celebrated, and there is a commitment to advancing the careers of everyone, regardless of gender or role: <https://www.ucl.ac.uk/ion/equality-diversity-inclusion>.

The Athena SWAN Charter recognises commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia. QS ION is delighted to have received an Athena SWAN Silver Award in October 2015, renewed in July 2020. We have reinforced our commitment to promoting equity and inclusion by signing up to an international declaration, which aims to provide fair and equal opportunities for underrepresented groups in neurosciences. Mentoring is a crucial part of supporting career progression. The Institute offers a range of mentoring schemes tailored to different staff and student groups to promote professional and personal development.

The Institute is proud to uphold both UCL's Dignity at Work and Work-Life Balance policies. As an Institute we commit to fostering a positive cultural climate where all staff and students can flourish and be their authentic selves, and actively support Wellbeing@UCL, the five year wellbeing strategy for the whole UCL community, supported by our Wellbeing Champions. EDI priorities are summarised in **Section 4**.

Environmental sustainability

The Institute is committed to operating within an environmentally sustainable environment, through the implementation of the UCL Sustainability policy at Departmental level. The Institute holds several Bronze, Silver and Gold Green Impact and LEAF awards. For more information, please visit our webpage at: <http://www.ucl.ac.uk/ion/green-awareness/>.

Sustainability priorities are summarised in **Section 4**.

2. Outline of the strategy process

The QS ION Director supported by the Institute Executive team, launched a roadmap in July 2021 to establish a QS ION Scientific strategy and a strategic plan 2022-2027. The aim was for the QS ION strategic plan to align with and be supported by the Faculty of Brain Sciences strategic vision, and for QS ION to contribute effectively to the UCL strategic planning process. This process enabled a collective QS ION response to the UCL consultation documents issued by the Provost; part of a process to deliver UCL's strategic plan 2022-27 in summer 2022.

Starting in September 2021, a series of initiatives have been carried out to capture views and direction of travel of eight QS ION Research Departments and six Divisions, and to discuss the working priorities set by the six QS ION Deputy Directors. To this end, Departmental

meetings led by HoRDs, and town hall meetings led by Deputy Directors were held in September-December 2021, which prioritised staff engagement comprising all QS ION PIs, early career researchers (ECR), PhD students and Professional and Research Services teams. The Departmental priorities were presented in the Institute PI Away Day in October 2021, whereby selected PIs canvassed the results of the Departmental consultation, which was then opened for general discussion. For the full programmes of work of the QS ION Deputy Directors and the strategic activities of the Research Departments and Divisions, please refer to the **QS ION Strategic Plan 2022-27**, which was finalised at the QS ION Executive Away day held in December 2021 and has been endorsed by all members of the QS ION Executive committee (Director, Deputies, HoRDs, BRC Translational Neuroscience and Dementia theme leads, Heads of Divisions, Institute Manager) and by the Hospital Clinical Director.

The intention of this document is to summarise the objectives identified by each Deputy Director, HoRD and Head of Division based on their prioritisation for the next quinquennium. These SMART objectives are listed, together with indicators to effectively monitor progress, in **Section 4**.

3. QS ION Themes and Shared Mission

This series of meetings and general discussion forum provided clear evidence that **discovery science** and **translational science** sit on a continuum in most QS ION Departments and Divisions, allowing seamless connectivity among them. The integrated nature of these activities, effectively merging basic and clinical research, constitutes the backbone of QS ION daily activities and offers solid foundations for future developments, such as the planned QS ION Dual Hub.

In this regard, this consultation process confirmed that the QS ION Dual Hub **is a flexible integrated translational ecosystem combining excellence in clinical research and pathomechanistic discoveries, working towards the identification of novel therapies and predictive biomarkers of neurological diseases.**

Essential for its cohesion and integration, QS ION research culture is highly collaborative and focussed on supporting a growing and diverse community of exceptionally committed ECRs through effective mentoring. We recognise that our research culture is among our best, if not our very best, asset, and we strive for further improving it via boosting equality, diversity and inclusion.

The overall QS ION mission is **to improve the lives of patients with neurological diseases.** This mission is implemented via a series of **general aims** shared across Departments:

- Enabling bidirectional translational research – from patients to the lab and back.
- Performing deep patient phenotyping and studying patient cohorts.
- Developing personalised and precision therapies through wide collaboration with national and international academic partners, patients, charities, government agencies and funders, public-private partnership initiatives, pharma and biotech.

To achieve our goals, we are working closely with the two **BRCs** based at QS, which focus on Translational Neuroscience and Dementia. The activities of the **BRC Translational Neuroscience** are centred around the following areas:

- Neuro-Therapeutics
- Technologies and diagnostics
- Data Science

whilst the **BRC Dementia** focusses on:

- Genetics and Cellular Studies

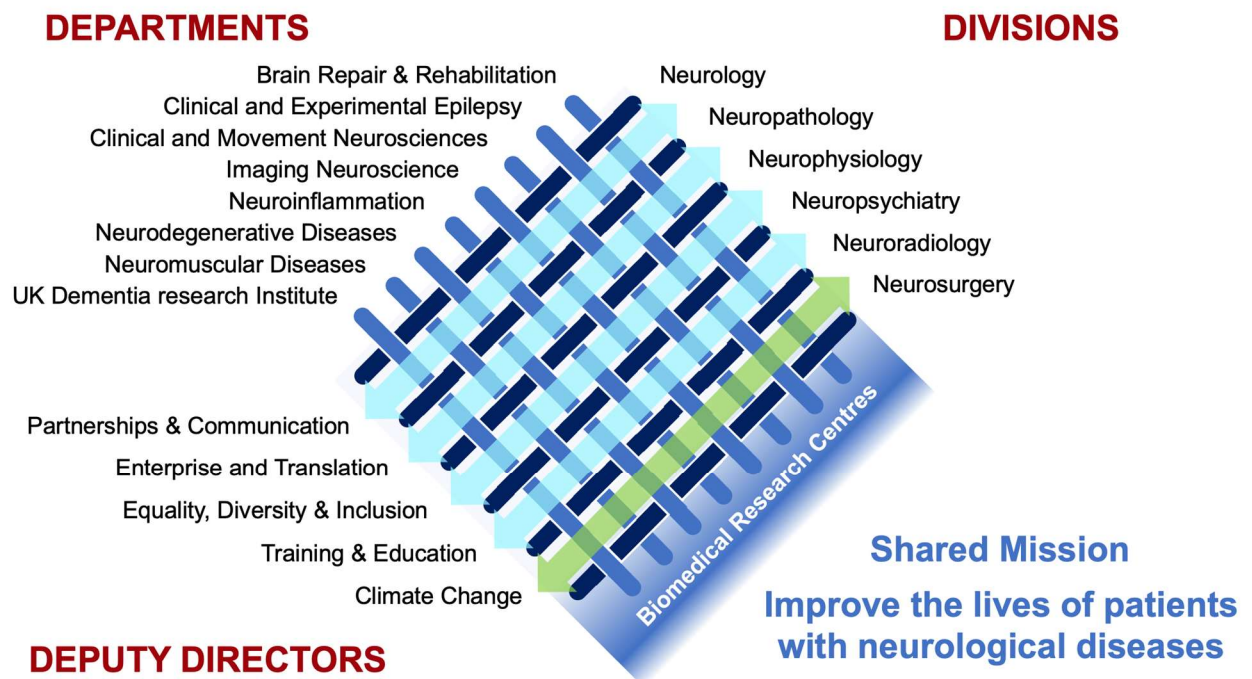
- Biomarkers
- Therapies for dementia

Several **shared themes** have emerged across Departments, such as:

- Understanding the nervous system in health and disease states across biological scales – molecular, cellular, tissue and whole organism in isolation and within a social environment.
- Discovering, developing and implementing new predictive biomarkers and new advanced therapies for neurological disorders.
- Developing therapeutic agents based on targets identified through discovery.

These scientific aims are complemented by important **knowledge- and culture-focussed activities**:

- Educating future basic and clinical scientists at undergraduate, graduate and postgraduate levels through excellence in teaching and academic supervision.
- Providing an outstanding student experience.
- Sharing knowledge and promoting collaboration across QS ION Departments and Divisions, QS-based BRCs, the Faculty of Brain Sciences, UCL Neuroscience, UCL, collaborating Institutions and beyond.
- Create a supportive, open culture harnessing the power of diversity, with zero tolerance of bullying.
- Supporting collaborative working across all sites of the QS Dual Hub, Departments, Divisions and BRCs for discovery and clinical research.
- Working in a sustainable way, adapting to climate change and its far-reaching consequences.



The fabric of QS ION. Scheme exemplifying the matrix structure of QS ION, with Departments, Divisions and focussed activities of Deputy Directors and NIHR BRC contributing to the integrated structure of the QS ION community and its translational mission. There are many crucial partnerships including with UCLH NHNN.

4. Prioritised SMART objectives for 2022-2027

A full version of the QS ION 2022-27 strategic plan is available at https://www.ucl.ac.uk/ion/sites/ion/files/qs_ion_strategic_plan_2022-2027.pdf

Here we outline the key objectives in each area and who is responsible for delivery. Detailed SMART metrics have been developed with each responsible Director, Deputy Director and Divisional Head, but are not included here.

Deputy Directors responsible for delivery	
Strategy, Queen Square-GIR Dual-Hub, Philanthropy	
Establish expert user groups for the Core Facilities	2022
Establish state-of-the-art Core Facilities including an efficient cost recovery system allowing long-term sustainability	2023
Develop and implement fundraising strategy plan to fill the Core Facilities funding gap	2023
Assist the QS ION Director in delivering the new translational dual hub hosting UK DRI and QS ION research laboratories and advanced CRF	2024
Implement QS ION dual-hub concept with HoRDs, HDivs and Deputy Director Partnership and Communications	2027
Sustainability and Climate Change	
Adopt all Faculty pledges on sustainability	2022
Require that each Department have a sustainability representative and a standing item on sustainability activities	2022
Develop and implement a QS ION sustainable travel policy	2023
Review all SOPs to include sensible sustainability measures	2024
Organise at least two virtual conferences on climate change and neurology over the next five years	2027
Education	
Improve the quality and timeliness of feedback for masters students	2022
Improve support, supervision and social cohesion for PhD students	2023
Establish scholarships for students from low and middle-income countries	2023
Strengthen support and training for PhD supervisors	2025
Establish a new iBSc for medical students	2027
Equality, Diversity and Inclusion	
Publish QS ION EDI annual report	2022
Embed career support initiatives for all staff groups, including ECRs, research services personnel, research assistants and technicians	2022
Increase mental health support and improve workplace culture	2023
Achieve Athena SWAN Gold Award	2024
Achieve pay gap and workload gap transparency	2027

Enterprise, Translation and Advanced Therapeutics	
Increase by 20% the percentage of students and ECRs undertaking targeted training	2023
Organise an annual event on “Advanced Therapies in Neurology and Neurosurgery”	2023
Establish and support a Translational Advisory Group, supported by a Translational Research Manager	2023
Establish and support a Genetic Therapy Accelerator (GTAc)	2023
Establish a focus group bringing together Research Contracts, UCLB, TRO and JRO to promote effective translation	2024
Partnerships and communications	
Develop an internal communications strategy to ensure community cohesion across the dual hub	2023
Strengthen partnership with UCL Neuroscience and FBS by actively participating in their committees and strategic activities	2022
Establish QS ION ambassadors for public engagement	2023
Increase the external visibility and reputation of QS ION by increasing its presence on established media platforms	2023
Engage with the whole QS ION community for fundraising	2023

Research Department- Heads responsible for delivery	
Brain Repair and Rehabilitation	
Establish a neuro-oncology research theme, and contribute to a Faculty Research Board for brain cancer	2023
Develop, communicate and resource Quantitative Neuroradiology Innovation and Adoption Centre (QUINIAC)	2023
Develop a Centre for Artificial Intelligence in Neurology Data Science Hub	2024
Improve access to expert biostatistics, bioinformatics, data science	2024
Develop a BRR translational neurological research laboratory	2025
Clinical and Experimental Epilepsy	
Identify and validate new therapeutic targets in epilepsy	2024
Rescue brain function via targeted genetic therapy	2025
Develop multimodal 3D image-guided targeted intracranial therapies	2027
Progress at least one clinical trial of disease-modifying therapies for epilepsy	2027
Identify and validate imaging biomarkers of pre-symptomatic epilepsy-related neurodegeneration	2027

Clinical and Movement Neurosciences	
Establish a Parkinson's Disease Centre for Translational Research	2027
Establish a Centre for Neuro-recovery Research	2027
Develop at least one personalised therapy for movement disorders	2027
Develop a novel trial design for movement disorders	2027
Imaging Neuroscience	
Acquire, integrate and use multimodal measurements across a wide range of biological scales, to inform advanced models of human brain function	2023
Develop non-invasive translational tools to allow: (1) earlier, more accurate diagnosis; (2) prediction of clinical outcomes; (3) precision therapies	2027
Appoint new Head and diversify funding for core staff and infrastructure	2023
Bolster collaborations and two-way dialogue across QS ION and UCL Neuroscience	2023
Develop effective links with NHNN clinical teams and QS Brain Bank	2024
Neuroinflammation	
Identify and validate a new therapy stopping MS progression	2027
Recruit leads in neuroimmunology and neuropathology - MRI correlation	2027
Establish the neuroimmunology laboratory	2027
Develop robust pathways of recruitment of NHS patients	2024
Establish a registry system using electronic health records, capitalising on routine NHS data and access them for clinical research	2024
Neurodegenerative Disease	
Extend Neurogenetic Therapies Programme (NgTP) - including FIH trials	2023
Improve education in early onset, atypical and inherited dementias	2024
Establish a Neurogenetic Therapies Centre	2025
Develop a Rare Dementia Support Centre	2025
Expand capacity for early phase trials	2027
Neuromuscular Diseases	
Identify and validate new therapeutic targets emerging from the study of RNA dynamics in neuromuscular diseases	2027
Establish at least one novel genetic therapy for neuromuscular diseases	2027
Develop biomarkers monitoring disease progression to aid diagnosis, improve stratification, and advance clinical trials	2027
Establish dedicated Enterprise Support for QS ION	2023
Increased early phase clinical trial capacity and infrastructure	2023
UK Dementia Research Institute	
Develop therapeutic agents based on targets identified through mechanistic discovery at UK DRI	2027
Develop strong clinical links and access to well characterised patient cohorts	2027

Accelerate access to data resources	2027
Expand strategic partnerships with industry	2027
Acquire and maintain translational science expertise	2027

Divisions- Heads responsible for delivery	
Neurology	
Develop plan for a QS clinical trial centre (QSCTC) to help deliver clinical trials, improve communication with research services and JRO, and lead CLRN activity for neurology in QS	2024
Modernise Gowers Round by implementing a hybrid format, which can be recorded and curated for use for all QS ION educational activities	2024
Liaise with NHNN leadership to ensure that all new NHS consultant appointments are research active.	2024
Neuropathology	
Create guidelines for the Royal College of Pathologists and other national and international organisations	2023
Secure significant research funding across brain tumours, neurodegeneration, neuromuscular diseases and epilepsy	2023
Integrate digital pathology with radiology using machine learning	2024
Developing Nanopore technology for diagnostics	2024
Ensure visible and easy access to tissues for all ethically approved research across QS ION departments	2023
Neurophysiology	
Ensure visible easy access to neurophysiology for all QS ION researchers	2023
Support one STP trainee (3-year) and one HSST trainee (5-year) towards completion of courses, thus establish a stream of physiologists in training	2027
Create a 3-month teaching program in neurophysiology for trainees and teachers across the UK	2024
Establish core facility using integration of novel fast TMS hardware, innovative software, brain navigation and robotics to provide one system for research and clinical use	2027
Set up advanced diagnostics for neurodegenerative diseases, such as ALS, dementia or dystonia, and response to therapy.	2027
Neuropsychiatry	
Support translational research by integrating neurology, neurosurgery and neuropsychiatry, especially in movement disorders	2024
Obtain NICE approval to introduce CRT in the clinic	2024
Establish immunotherapy for psychosis in the clinic	2027
Strengthen links with mental health across FBS	2024

Neuroradiology and Neurophysics	
Establish GIR as world-leading translational and clinical adoption MRI facility	2024
Support the working relationships between the MRI scanner groups, develop SOP and portal to access research scan time	2022
Establish Academic Radiography and integrate computer scientists	2026
Transform the MSc in Advanced Neuroimaging to be the leading UK course and expand MR Physics courses	2024
Establish an educational programme with the Division of Neuropathology	2026
Neurosurgery	
Develop and expand the MRes (Neurosurgery) programme	2022
Establish integrated academic training (IAT) programmes to build mechanism-based research from the ground up	2023
Recruit consultants and promote specialty research days to foster culture change and increased collaboration across UCL	2024
Develop a simulation centre for neurosurgical training	2025
Establish and develop UCL brain cancer centre including expand numbers of academic neurosurgeons prioritising Brain cancer	2025

5. Abbreviations

ALS	Amyotrophic Lateral Sclerosis
BRC	Biomedical Research Centre
CLRN	Clinical Research Network
CPD	Continuing Professional Development
CRT	Cognitive Rehabilitation Therapy
ECR	Early Career Researchers
EDI	Equality, Diversity & Inclusion
FBS	Faculty of Brain Sciences
FIH	First in human
FTE	Full time equivalent
GIR	Gray's Inn Road
GTAc	Genetic Therapy Accelerator
HEFCE	Higher Education Funding Council for England
HoRDs	Heads of Research Departments
HoDivs	Heads of Divisions
HSST	Higher Specialist Scientist Training
IAT	Integrated Academic Training
JRO	Joint Research Office
LEAF	Laboratory Efficiency Assessment Framework
MRI	Magnetic Resonance Imaging
NgTP	Extend Neurogenetic Therapies Programme
NHNN	National Hospital for Neurology & Neurosurgery
NICE	National Institute for Health & Care Excellence
PGR	Postgraduate Research (students)
PGT	Postgraduate Taught (students)
PI	Principal Investigator
PS	Professional Services
QS ION	Queen Square Institute of Neurology
QSCTC	Queen Square Clinical Trials Centre
QUINIAC	Quantitative Neuroradiology Innovation and Adoption Centre
RNA	Ribonucleic acid
SMART	Specific, Measurable, Achievable, Relevant, Time-Bound
STEMM	Science, Technology, Engineering, Maths & Medicine
STP	Science Training Programme
TMS	Transcranial Magnetic Stimulation
TRO	Translational Research Office
UCL	University College London
UCLB	UCL Business
UCLH	University College London Hospitals' (NHS Foundation Trust)
UG	Undergraduate (students)
UK DRI	UK Dementia Research Institute
UKRI	UK Research and Innovation

6. Authors

Professor Michael G Hanna Institute Director

Dr H el ene S G Crutzen Institute Manager

Deputy Institute Directors

Professor Gipi Schiavo	Deputy Director Strategy, QS GIR Dual-Hub, Philanthropy
Professor Helene Plun-Favreau	Deputy Director Equality, Diversity and Inclusion
Professor Selina Wray	Deputy Director Partnerships and Communications
Professor Alex Leff	Deputy Director Education and Student Experience
Professor Sanjay Sisodiya	Deputy Director Sustainability and Climate Change
Professor Dimitri Kullmann	Deputy Director Enterprise, Translation, Advanced Therapeutics

QS ION Heads of Research Departments

Professor David Werring	Department of Brain Repair & Rehabilitation
Professor Ley Sander	Department of Clinical & Experimental Epilepsy
Professor Anthony Schapira	Department of Clinical & Movement Neurosciences
Professor Cathy Price	Department of Imaging Neuroscience
Professor Sarah Tabrizi	Department of Neurodegenerative Disease
Professor Nick Fox	Department of Neurodegenerative Disease
Professor Olga Ciccarelli	Department of Neuroinflammation
Professor Linda Greensmith	Department of Neuromuscular Diseases
Professor Karen Duff	Department of UK Dementia Research Institute at UCL

QS ION Heads of Clinical Divisions

Professor Mary Reilly	Division of Clinical Neurology
Professor Sebastian Brandner	Division of Neuropathology
Professor Martin Koltzenburg	Division of Neurophysiology
Professor Eileen Joyce	Division of Neuropsychiatry & Neuropsychology
Professor Tarek Yousry	Division of Neuroradiology & Neurophysics
Professor Rob Brownstone	Division of Neurosurgery: BRUK Chair of Neurosurgery

All above colleagues endorsed this document April 2022