Geoffrey Jefferson
Brain Research Centre

Annual Report 2024/25

MANCHESTER 1824
The University of Manchester

NHS
Northern Care Alliance
NHS Foundation Trust

Working in partnership with the Manchester Academic Health Science Centre

Geoffrey Jefferson
Brain Research Centre

Foreword from our Directors

Since the launch of the Geoffrey Jefferson Brain Research Centre (the Jeff) in April 2021, we have established a clear brand and embedded ourselves in the translational research landscape across Manchester.

We are delighted to present the third annual report of the Geoffrey Jefferson Brain Research Centre. The last year has seen us continue the overwhelming success of the first two years, with further expansion of the reach and relevance of 'the Jeff'. The report illustrates the achievements and successes of the last year and demonstrates the integration of the Centre as being at the core of brain research in Manchester.

Noteworthy this year has been the addition of a new theme, epilepsy. This expands our research and relevance into an important disease area where novel translational research is essential, embodying the core aspects of the Centre to bridge, build and support strong relationships between clinicians and scientists.

One of our longer-term aims is to ensure we work to address health inequalities across our research themes, and we are proud to have new grant awards in age-related brain inflammation, and risk of dementia in a Black population. Dementia is an increasingly vital area of research and our continuing and expanding focus in this area reflects the wider need for new treatments.

Last year we held our inaugural showcase event, attended by over 150 academics, clinicians, leaders of key charities, industry colleagues and patients. This year we continued our drive to raise the profile of the Jeff by holding a Brain Health Day in city centre Manchester. Working alongside partners from multiple organisations this fantastic event showcased research in the Jeff and the brilliant work done by brain-related charities. The event highlighted the great potential to harness the enthusiasm of the public to reach our Centre's aims.

A consistent focus of the Jeff, and very much related to the reason for increasing our profile, is to increase our fund-raising efforts. This will continue over the next phase in our development: allowing us to support translational research and achieve our ultimate goal: to improve patient outcome and quality of life. As ever, we cannot achieve this aim without the incredible support of our philanthropists and fundraisers. We are deeply grateful to them and look forward to more collaborations with them in the future.

We hope you enjoy reading about all the Jeff has achieved in the last year and look forward to reporting back on an even more successful year in 2026.

To hear more about the development and future of the Jeff, check out this podcast

Stuart Allan and Andrew King

Directors of the Geoffrey Jefferson Brain Research Centre

Centre highlights from 2024/5

Themes

Integration of the Epilepsy theme, bringing more researchers into the Jeff team

Publications

84 new publications arising from the Centre

Researchers

8 excellent early career researchers were awarded externally funded fellowships

Grant income

£20 million new grant income from applications and projects associated with the Centre

Fundraising

Over £9,250 raised through patient driven fundraising

Partners

Continued and expanded support from our strategic charity partners

Capacity building within the Jeff - building the next generation of researchers

It has been a hugely successful year for our early career researchers, many of whom have been awarded externally funded fellowships. This is a crucial step for researchers to strengthen their portfolio of research and establish their own research groups, following their own independent ideas.

Investigating blood vessel remodelling in the context of atrial fibrillation and stroke

Katie Murray, British Heart Foundation

Investigating and targeting cortical spreading depolarisations in migraine

Alejandro Labastida-Ramirez, Brain Research UK

New collaboration with an incoming PhD student in October 2025

Investigating and targeting arterial ion channels in dementia

Harry Pritchard, Alzheimer's Society

Using sodium MRI scans to distinguish between vascular cognitive impairment and early-stage Alzheimer's disease

Sasha Philbert, Alzheimer's Society

Awarded his fellowship in 2024, Harry has already been awarded a further £316k from the British Heart Foundation to develop novel drugs to restore blood flow in vascular dementia

Exploring blood-brain barrier function in a Black population at risk of dementia using advanced MRI

Yolanda Ohene, Wellcome Trust

Understanding the contribution of the NLRP3 inflammasome to age-related inflammation

Chris Hoyle, Dowager Countess Eleanor Peel Trust

Salience-induced foresight and hindsight in human memory

Darya Frank, Royal Society

Exploring the role of brain inflammation and the immune system in sleep disorders

Juan Quintana, Wellcome Trust

Expansion of identified research themes

Epilepsy researchers join the Centre

We are delighted to announce that the Manchester Epilepsy Research Network (MERN) has joined the Centre as a new epilepsy research theme. Epilepsy affects over 50 million people worldwide, making it one of the most common neurological diseases globally. While existing treatments successfully manage epilepsy in around 70% of cases, further research is essential to improve treatment options for those whose epilepsy remains uncontrolled.

MERN's mission is to uncover the underlying causes of epilepsy and accelerate the development of more effective therapies. It connects leading researchers from The University of Manchester, the Manchester Centre for Clinical Neurosciences at Salford Royal Hospital (part of Northern Care Alliance NHS Foundation Trust), the Royal Manchester Children's Hospital, the University of Salford, and Manchester Metropolitan University.

MERN will expand its ongoing research, foster collaboration across the Centre's themes, and help develop innovative approaches to improving care and outcomes for people with epilepsy.

> This is an exciting time for epilepsy research in Manchester. Joining the Geoffrey Jefferson Brain Research Centre opens up new possibilities for tackling epilepsy from different angles and making real progress. By becoming part of the Centre, we hope to explore potential links with other areas of research, such as stroke and brain tumours, to better understand epilepsy and how it develops. This could lead to fresh ideas and, in the future, help us move closer to finding better treatments for people living with epilepsy.

-Dr Gareth Morris, Lecturer in Neuroscience at The University of Manchester and the new epilepsy theme lead for the Centre

Major funding successes in 2024/25

LindonLight Charity awards £1.5m grant to support research on paediatric low-grade gliomas

Prof Petra Hamerlik

The LindonLight Charity awarded a transformative five-year infrastructure grant of £1.5 million to support groundbreaking research into paediatric low-grade gliomas, a type of brain tumour affecting children.

This significant funding will enable us to bridge the gap between adult and paediatric care, with a focused effort on improving outcomes for children diagnosed with these challenging brain tumours.

The project will be led by Professor Petra Hamerlik, Chair of Translational Neuro-Oncology, and will involve an interdisciplinary team including Ian Kamaly, Ed Cheesman, and JP Kilday.

In the first year, the grant will facilitate the use of multimodal imaging techniques in collaboration with colleagues from our imaging theme, led by Professor Stavros Stivaros. This partnership will provide valuable insights into tumour biology and response to treatments, enhancing the precision of the research.

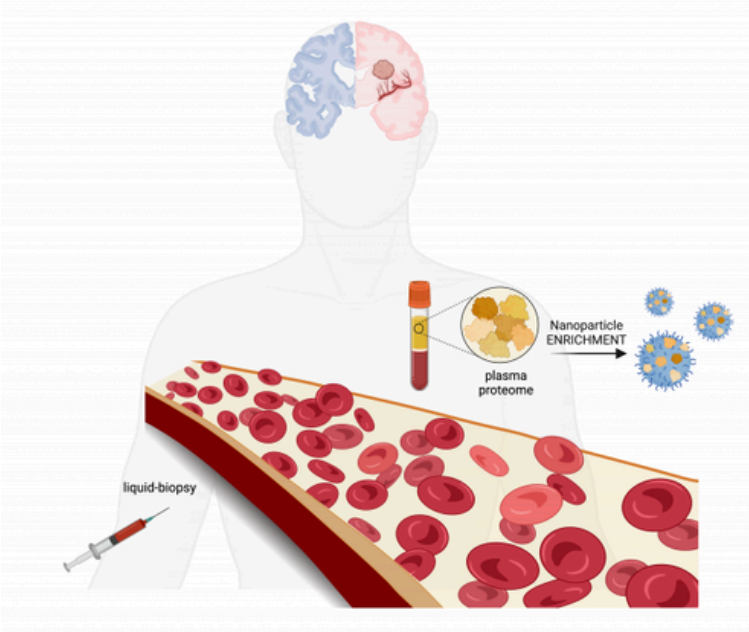
The primary aim of this initiative is to develop 3D spheroid cultures and patient-derived models for more accurate preclinical drug testing, which will also aid in the discovery of biomarkers essential for future therapeutic strategies. This pioneering research bridges a critical gap in paediatric brain cancer research and will contribute significantly to the development of better treatments for children.

European Research Council Starting Grant

Dr Marilena Hadjidemetriou

Dr Marilena Hadjidemetriou from our nanotechnology theme has been awarded a prestigious £1.28 million European Research Council (ERC) Starting Grant under the EU's Horizon Europe programme. These highly competitive grants support exceptional early-career researchers in launching ambitious projects and building their research teams. Dr Hadjidemetriou, Lecturer and Group Leader at The University of Manchester, leads the NanoOmics Lab within the Centre of Nanotechnology in Medicine. Her lab is pioneering the use of nanotechnology to explore disease pathways and discover molecular biomarkers in neurological disorders.

Her new ERC-funded project, NanoNeuroOmics, will develop cutting-edge nanotechnology platforms to profile proteins in blood and brain tissue. Focusing on Alzheimer's disease, Glioblastoma and Parkinson's, the project aims to identify disease-specific blood biomarkers and uncover shared molecular mechanisms between these two challenging neurological conditions.
By bridging neurodegeneration and neurooncology, NanoNeuroOmics represents a bold step towards earlier diagnosis, improved monitoring, and more effective treatment strategies.



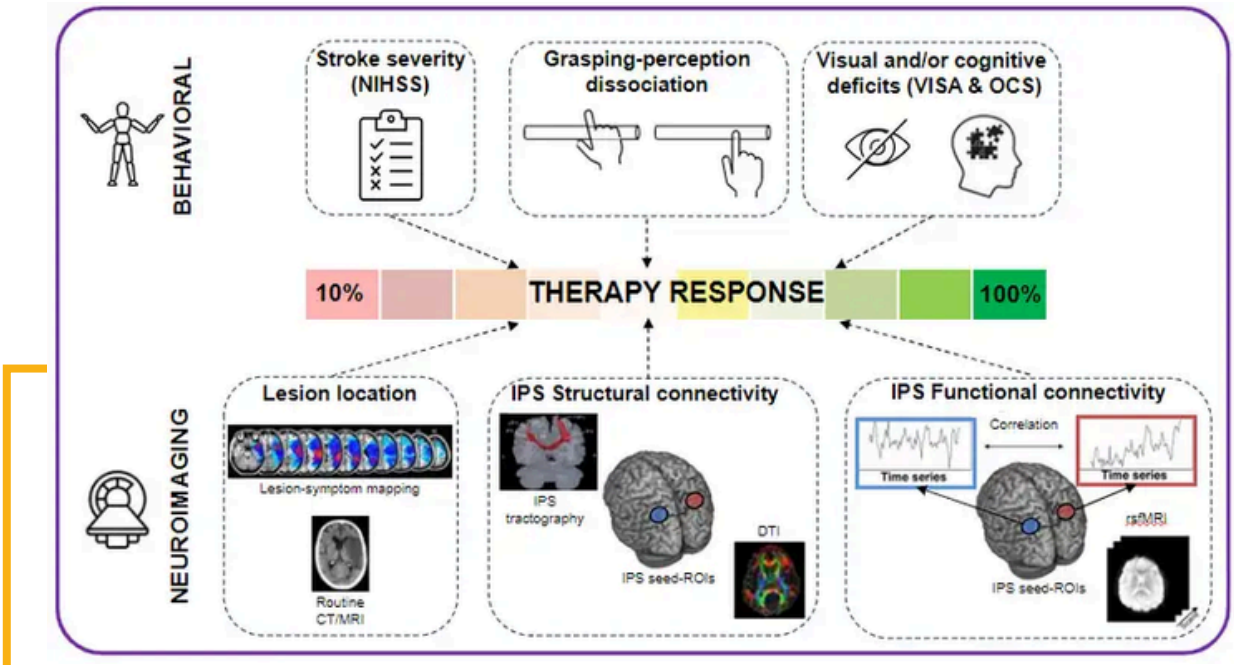
Marilena has also talked about her NanoOmics work in the "One in Two" podcast in collaboration with the Manchester Cancer Research Centre, discussing how nano-omics is being used to isolate molecular biomarkers that highlight the early stages of cancer in patients, making earlier cancer detection possible.

Listen here

Read about the team's latest work in this area

New national stroke trial to test promising rehabilitation therapy

Prof Audrey Bowen



A major new £1.2 million clinical trial funded by the NIHR Efficacy and Mechanism Evaluation programme will investigate an innovative therapy for stroke survivors living with spatial neglect – a disabling condition that affects one in three people after a stroke.

The SIGHT (Spatial Inattention Grasping Therapy) trial, led by Dr Stephanie Rossit at the University of East Anglia, will run across eight major stroke centres in England from January 2025 to February 2028. Professor Audrey Bowen, our Rehabilitation and Living with Disability Theme Lead, is a key co-investigator on the study, alongside Dr Claire Howard and Ann Bamford from The University of Manchester.

The new SIGHT therapy, which involves grasping and balancing rods with the less affected hand, has shown early promise in improving attention to the neglected side. The study will explore who benefits most from the therapy by analysing a range of factors including grasping ability, cognition, stroke severity, and brain function. Involving 206 stroke survivors, it aims to provide the robust evidence needed to bring this low-cost, portable intervention into wider clinical use.

If successful, SIGHT could transform recovery for stroke survivors worldwide—offering new hope for a condition that currently has no effective treatment.

Accelerating translational research in the Jeff

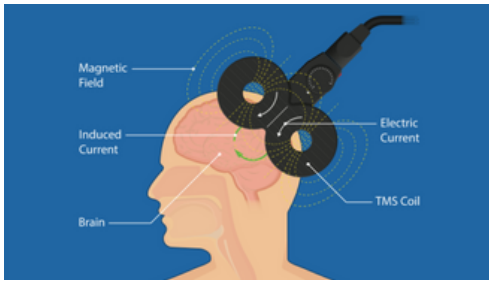
Four teams of Jeff researchers have been successful in internal funding calls, benefitting from a 'Confidence for Translation' scheme, which focuses on accelerating projects along the translational pipeline towards patient benefit.

DIAGnosis using NOvel technology for Subtypes In Stroke (DIAGNOSIS study)

Prof Adrian Parry-Jones

Stroke caused by bleeding in the brain is known as intracerebral haemorrhage, or ICH for short. ICH is a major cause of death and disability. When ICH patients are in the ambulance on their way to hospital, it may be a vital opportunity to start treatments to prevent further bleeding. However, we currently have no accurate and cost-effective way to tell which patients have an ICH and which have an ischaemic stroke, where a blood clot has blocked an artery.

This study aims to develop an accurate, quick, pragmatic, and cost-effective tool to identify intracerebral haemorrhage in the ambulance. They will recruit up to 300 suspected stroke patients as they arrive in the Emergency Department, collecting clinical features and test for a marker called GFAP on a rapid lateral flow test. This test will be combined with clinical features to see if they are accurate enough when combined. If so, they aim to then move on to testing accuracy in the ambulance in a future study.

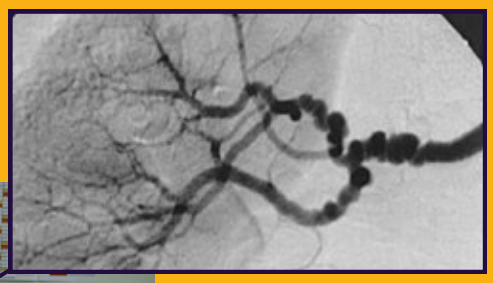


Cerebellar Metaplasticity in the Swallowing Motor System

Dr Ayodele Sasegbon

Repetitive transcranial magnetic stimulation (rTMS) is a technique which uses electromagnets to change the activity within specific regions of the brain. When it is used to stimulate the swallowing areas of the brain, it can improve swallowing function. This technique has been shown to improve swallowing function in people who have had strokes.

Unfortunately, not everyone experiences the benefits of this technique with some showing a greater increase in swallowing brain activity and swallowing recovery than others. This variability is due to individual differences in people's brains and is a problem as it reduces the overall effectiveness of rTMS. A technique called metaplasticity, where the brain is stimulated twice instead of just once has been shown to improve the effectiveness of rTMS. The team aims to use the technique of metaplasticity over the cerebellum (the area of the brain at the back of the head) to improve the proportion of people who gain benefit from rTMS. This study will initially be performed in healthy participants.



Dynamic retinal vascular analysis to unlock the pathophysiology and facilitate early detection of Fibromuscular Dysplasia

Dr Hala Shokr

Fibromuscular Dysplasia (FMD) is a rare vascular condition that predominantly affects younger to middle-aged women. It involves abnormalities in medium-sized arteries and is not caused by clogged arteries or inflammation. Two-thirds of FMD patients exhibit involvement of multiple vessels, with complications ranging from severe hypertension to stroke.

It is well known that small vessels can reflect the global health of the vascular system. However, it's hard to study small vessels directly because they're so tiny and different from person to person. An exception to this is the back of the eyes (the retina).

The research team has developed a method to indirectly evaluate small vessels through the retina in the eye. Using a specialized camera we can now examine both the structure and function of these vessels. This approach, a completely new area that offers direct and non-invasive evaluation of the micro-vessels and holds significant promise for advancing our understanding of the disease, vascular function and complications throughout the body in FMD patients.

This research will provide a new way to check the small blood vessels in FMD patients without needing to do invasive procedures like taking tissue samples or injecting contrast dye.

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Interleukin-1 in Vestibular Schwannoma (IL-VS): A biomarker development study
Prof Andrew King

In vestibular schwannoma (VS, a type of brain tumour), studies have shown that inflammation is associated with tumour growth. One particular mediator of inflammation called IL-1 is increased in patients with growing VS. Drugs that target IL-1 may reduce inflammation and therefore growth in these tumours. This study aims to understand the best tests or biomarkers that can evaluate whether targeting IL-1has an effect in VS.
The study will involve treating a small number of VS patients with an anti-IL-1 drug, and comparing them to VS patients without the drug.

A new phase III clinical trial for stroke

Further along the translational pipeline, we are excited to report that Prof Craig Smith's new phase III trial is ready to recruit its first patients.

The CLASP trial (CLArithromycin for post-Stroke Pneumonia) aims to investigate whether the antibiotic clarithromycin improves recovery from pneumonia in stroke patients.

Pneumonia occurs in 1 in 10 patients after a stroke. Despite modern stroke unit care and antibiotics, the chances of death are three times higher in stroke patients that develop pneumonia - the infection causes excessive, harmful inflammation in the lungs and bloodstream, which is thought to contribute to worse outcomes.

Clarithromycin is an antibiotic with anti-inflammatory properties. Prof Smith (Stroke theme lead) and his team have been awarded over £3m from NIHR to undertake a phase 3, multi-centre, randomised trial of clarithromycin treatment for stroke patients developing pneumonia.

The trial will take part in 45 stroke units across the UK and will enrol 1166 people hospitalised with a stroke complicated by pneumonia. The trial will determine whether addition of clarithromycin for 5 days to the usual antibiotic treatment received will improve clinical and health economic outcomes.

55 stroke units across the four UK nations have already expressed interest in the study, and all regulatory approvals have been received. Two research project assistants have been recruited to support delivery of the trial at Salford Royal.

The study is also registered on the Associate Principal Investigator scheme, which provides practical experience for health and care professionals starting their research careers.

How does Clarithromycin affect....?

- Recovery
- Carer burden
- Healthcare costs
- Mortality
- Quality of life
- Readmission to hospital
- Recurrent stroke
- Safety
- Time spent at home

Patient-led research

CLASP is a perfect example of the patient-driven research happening in the Centre.

- Reducing the complications of stroke such as pneumonia has been identified as a top 10 priority for stroke patients and healthcare workers in the UK.
- The GJBRC public and patient involvement stroke group contributed to the design of the study, with one stroke survivor Wendy Westoby closely involved in the successful funding application to NIHR.
- Now, a dedicated PPI group with representatives across the four UK nations has been set up to provide continued input to the project, where stroke survivors are part of the research team. They will advise at all stages of the trial including trial management, inclusion of under-served groups, development of participant information and dissemination of the trial findings.

Priority Setting Partnerships (PSPs) are a comprehensive method of identifying the areas in which research is most needed. Two PSPs for stroke have highlighted prioritised areas for prevention, diagnosis, hospital care, and long term care and rehabilitation of stroke patients. Stroke and rehabilitation research at the Centre aligns with many of these areas.

Read more about the stroke PSPs here

Wendy Westoby,
PPI contributor for CLASP

CLASP

Projects supported by Jeff strategic funds

Updates on projects awarded funding in early 2024

Speech After Stroke RecoverY Study (SAYS)

Dr Claire Mitchell & Ann Bamford, £10,000 award

This funding enabled the SAYS team to recruit a speech and language therapist for one day week, offering more training to the research nurses to help identify potential patients to recruit to their study. This study focuses on stroke survivors with dysarthria and aphasia.

Now over 200 stroke survivors have been recruited, with the funding enabling upskilling of the study staff, and enabling the team to carry out more in-depth interviews and assessments at later time-points.

On request, the Jeff strategy board have agreed to provide an additional £4,881 to fund the team for another 6 months, recognising the importance of this patient-focussed research and the team's success in this area.

Capturing, diagnosing, and evaluating those at risk of Chronic Traumatic Encephalopathy (CTE) type dementia

Dr Andrew Greenhalgh & Dr Tom Grundy, £10,000 award

This pilot study aims to show feasibility of a rapid service for individuals that suspect themselves to have early signs of dementia, likely due to the career in professional rugby.

Through our partner charity Rugby League Cares, the first participant has been identified and successfully undergone neuropsychological and clinical assessment and had an MRI scanning. The study is ongoing, with other candidate participants ready to enrol.

D-2-HG detection in tear fluid of patients with IDH1/2-mutant gliomas: method development

Dr Irene Rebollido, £10,000 award

This project brings together a multi-disciplinary team to address one of the unmet needs in neuro-oncology, late diagnosis of malignant brain tumours, here with the focus on adult low-grade gliomas with IDH1R132H mutations. The funding has enabled the team to develop a new mass spectrometry protocol that can detect a potential cancer biomarker in liquid biopsy samples from mouse models. The method has been optimised in a clinical setting to improve its sensitivity and reproducibility.

Rapid genetic testing to reduce risk of secondary strokes in people with CYP2C19 gene mutations

Antiplatelet drugs are prescribed after a stroke, to reduce the chance of a secondary ischaemic attack. Clopidogrel is the most commonly prescribed, and is a "pro-drug", that is converted by enzymes in the liver into its active form. The main enzyme CYP2C19 contains many genetic variants which reduce its ability to convert clopidogrel to the active form of the drug. Previous studies suggest that ~30% white British people whereas ~60% of individuals from South Asia carry at least one variant in this gene.

Standard laboratory genetic testing takes 2-3 days and is often completed once the patient has left the stroke unit, meaning that the test results need to be communicated between secondary and primary care physicians which can be complicated and delayed.

The team, led by Dr Bill Newman have proposed a study to look at the feasibility of introducing rapid, near patient testing of cheek swabs for variants in CYP2C19 at the Hyperacute Stroke Unit (HASU) at Salford Royal.

This work is informing national policy in NHSE about the role out of pharmacogenetic testing in light of the NICE guidance [DG59].

As a result of funding:

- 3 Genedrive units have been set up at Salford Royal
- Advanced nurse practitioners have been trained to use them
- 134 tests have been conducted, identifying 42 individuals with poor response to clopidrogrel
- In these 42 individuals, 38 have had their prescriptions changed to a more effective drug
- The tests have proven to be straightforward, rapid (with a 60-minute run time), and non-disruptive to clinical pathways

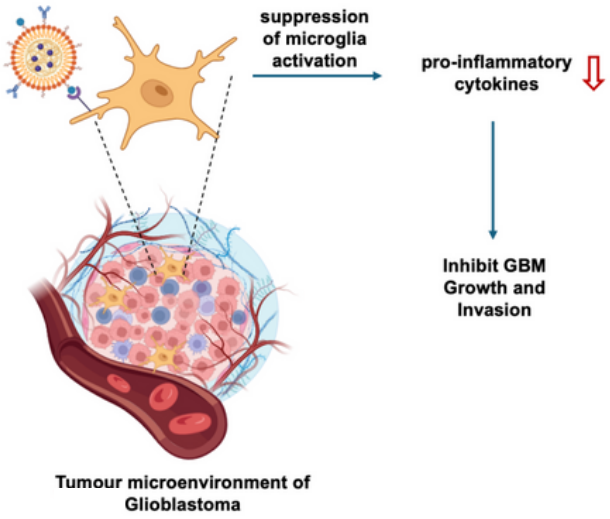
The project is continuing to collect data to determine the frequency of rare CYP2C19 variants, and ultimately aims to establish a reduction in recurrent stroke events.

Laura Nuttall legacy: funding brain tumour projects

In our previous annual report we expressed our gratitude to the family of Laura Nuttall, who donated £20,000 to the Centre after our inaugural showcase in early 2024. The Centre launched an internal funding call for researchers working on brain tumour projects, and we are proud to have been able to fund two projects that are advancing translational research in glioblastoma, the condition from which Laura sadly passed in 2023.

Study of the therapeutic effects of CD200-engineered microglial nanoparticle encapsulating IKK-16 for treating glioblastomas

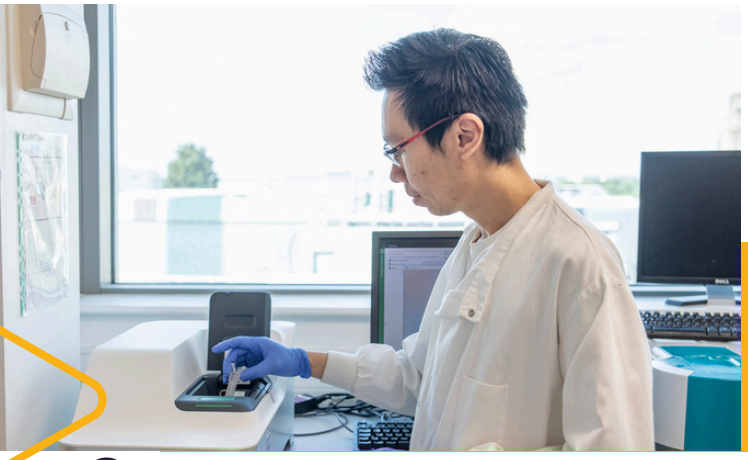
The first funded project, from Dr Roy Ng (brain inflammation), Prof Petra Hamerlik (brain tumours) and Dr Christos Tapeinos is investigating the therapeutic effects of drug-encapsulating nanoparticles for treating glioblastoma. This project has sparked a novel collaboration between Dr Ng and Prof Hamerlik, providing expertise in brain inflammation and human models of glioblastoma respectively.



The team has developed nanoparticles encapsulating IKK16, a drug that inhibits inflammatory signalling. These nanoparticles can cross a simulated blood brain barrier in cell culture models, and show toxicity to a human glioblastoma cell line but not to normal cells of the brain, such as microglia.

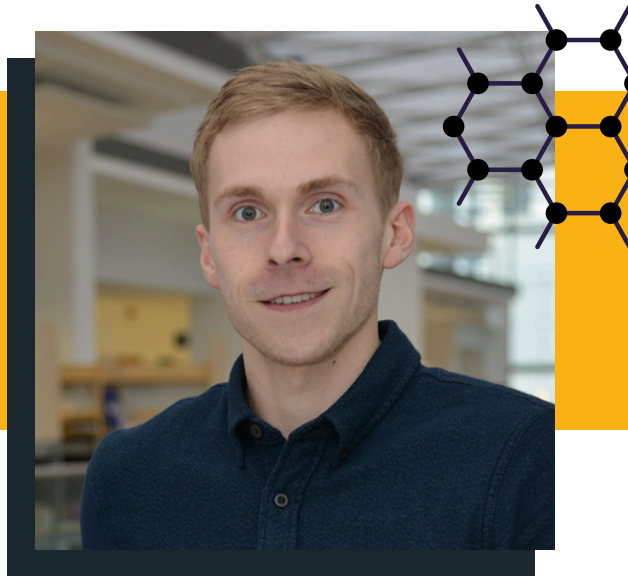
Next, the researchers will investigate the effects of the nanoparticles on patient-derived tissue, exploring which cells will interact with the nanoparticles.

These experiments are important to improve the efficiency of targeting inflammatory pathways while mitigating potential adverse effects, and if successful could highlight a significant breakthrough in the field of glioblastoma immunotherapy.



Nano-enhancers for TTFields in glioblastoma

Dr Tom Kisby, Dr Gerben Borst, Prof Kostas Kostarelos



Another cross-disciplinary project, led by Dr Tom Kisby (nanotechnology) and Dr Gerben Borst (brain tumours) was supported, aiming to develop novel nanoenhancers for tumour-treating fields (TTFs).

TTFs are a type of cancer therapy using electric fields to disrupt and kill cancer cells. Here, the project team are investigating whether nanotechnology-based strategies can enhance the effectiveness of TTF therapy, using novel graphene nanomaterials.

The team has set up and optimised an experimental system to test the effectiveness of nanoparticles and TTFs in human glioma lines. The results are encouraging, and further work is now needed to understand the mechanisms involved to guide how best to combine these different treatments. The team is using the data gathered in this project to develop follow-on studies, and to apply for further funding to test the materials in other models of glioblastoma.

We were also able to redirect some applications to this funding call to other sources.

Nano-Omics Enabled Blood Biomarker Discovery in Vestibular Schwannoma

A third project, led by Dr Marilena Hadjidemetriou (nanotechnology) and Cathal Hannan (brain tumours) aiming to identify blood based biomarkers of vestibular schwannoma (VS) growth, was funded via NorthCare Charity, using funds raised by patients with vestibular schwannomas themselves.

This project is ongoing but has already identified two proteins that show promising potential as biomarkers of tumour growth, and will later establish a prognostic panel for validation in patients with newly diagnosed VS. The study team is also analysing solid tissue samples to investigate the processes underlying tumour growth.

A key criterion in awarding funding to these projects was the opportunity to support novel cross-disciplinary research teams. At the Jeff we are always striving to build a more collaborative environment for our world-class researchers, to accelerate developments that will ultimately improve patient lives.

2024-2025 Financial Summary

Securing substantive funding for core posts continues to be a major focus of the Centre, to ensure its sustainability and ability to support its diverse portfolio of translational research.

Jeff researchers have been highly successful with grant applications in 2024-2025, bringing in over £20m of grant income through projects, fellowships, and Centre funding.

The team continues to work with colleagues in the NCA and UoM to establish funding for its core posts, and are now prioritising alternative funding sources of philanthropic and charitable donations, working closely with colleagues in the Division of Development and Alumni Relations at UoM, and NorthCare Charity at NCA.

We have now developed information leaflets for our disease-related themes and revamped the Centre's website donation pages, to drive income for specific projects.

Nonetheless, donations and fundraising for core Centre activities are warmly welcomed as these provide the infrastructure to support our ground-breaking research.

Summary of financial achievements

Over £9,250 in patient fundraising in 2024-2025

£55,000 in patient donations to the Skull Base Foundation

£20m awarded in grant funding to Jeff researchers in 2024-2025

Launch of philanthropy campaign leaflets & website

GJBRC donations page & specific projects for funding

Fundraising stories

5 years still standing skydive

"My neurosurgeon, Professor Omar Pathmanaban, is my real life superhero! How do you ever thank someone enough for literally saving your life? You can't. Words will never be enough. But what I would like to do is raise as much money as possible for the brilliant research foundation where he works alongside many other amazing life-saving superheroes to teach, train and research treatments and cures into often difficult and rare Skull Base conditions. Without such previous research I would not still be standing here 5 years later."

-Clara Darcy, chordoma patient

Clara raised £2375 for the Skull Base Foundation doing a sponsored skydive, 5 years after her life-changing diagnosis.

Argyle Charity Golf Day

In August 2024 a local engineering & construction firm Argyle hosted a Charity Golf Day, supported by colleagues from NorthCare Charity.

Over 70 players teed off, raising £4018 for the Centre.

Update on our strategic partnerships

Jones et al, 2025. Read the latest work from the group

We are excited to announce continued support through NF2 BioSolutions, who have part-funded another 2 PhD students. Regyn Done and Abi Owen joined the Brain Inflammation theme in 2024, following in the footsteps of Grace Gregory and Adam P Jones, whose now-completed PhDs were also funded by the charity. Adam has now moved to the USA to continue his work investigating the tumour microenvironment.

Dr Grace Gregory

Grace will soon be returning to work with the Manchester team, supported by further funding from NF2 BioSolutions and a new partner - the Frances Barbara Thornley Trust, which together with the Jeff and the Manchester Skull Base Unit forms the Skull Base Foundation.

The skull base research collaboration landscape in Manchester, brought together by the GJBRC

The Manchester Skull Base Unit is the largest skull base unit in the UK dealing with almost 800 new skull base referrals a year, 200 of which are new vestibular schwannomas.

The Skull Base Foundation aims to support development in the care of patients with skull base disease through the education of surgeons and clinical and basic science research. The education is through training course and specialist fellowships in ENT and Neurosurgery.

The research programme is a collaboration between the clinical academics and scientists of the Jeff. It is ranked one of the highest in the world for both vestibular schwannoma and its associated, but much rarer, genetic condition, Neurofibromatosis Type 2.

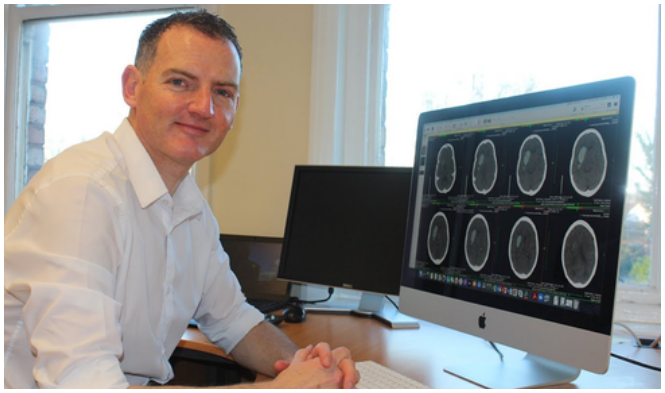
Continued partnership with the Natalie Kate Moss Trust

The Natalie Kate Moss Trust (NKMT) continues to support researchers at the Jeff, funding NKMT Research Fellow Dr Katie Murray to investigate mechanisms and potential targets to treat intracerebral haemorrhage (ICH). Primed by this support, Katie has now been awarded further funding for her work, with a competitive 2 year BHF Centre of Excellence Fellowship (page 3).

We are delighted to announce a further agreement with the charity, which will fund a further £100,000 per year starting in 2025 until 2029, to support two new research fellowships. These will focus on clinical aspects of ICH diagnosis and care.

£300k

- 3 year postgraduate research fellowship to Olivia Murray, to continue her research using machine learning in diagnostic imaging to improve diagnosis for stroke patients.
- 2 year clinical research fellowship to lead research on the ABC care bundle as it is rolled out across England.



Prof Adrian Parry-Jones, Consultant Neurologist & ABC project lead

We previously reported on the local success of this project in our 2022/3 Annual Report. It is now being scaled up across England, with the potential to impact many thousands of ICH patients each year. The ABC refers to:

A - anticoagulant reversing
B - blood pressure lowering
C - care pathway for neurosurgical referral

The combination of the above has been shown to reduce deaths from ICH within 30 days in local hospitals.

Raising the Centre's profile

Brain Health Day 2025

A public engagement event to raise awareness of neurological diseases & our research

Brain Health Day successfully brought together researchers, clinicians, and members of the public to raise awareness of brain health and showcase research related to our key themes.

The event was supported by the ARUK North West Network and took place during Brain Awareness Week.

Attendees had the opportunity to engage directly with researchers, ask questions and learn how to get involved in our current studies. Notably, five control participants were recruited for the Stroke IMPaCT study on the day.

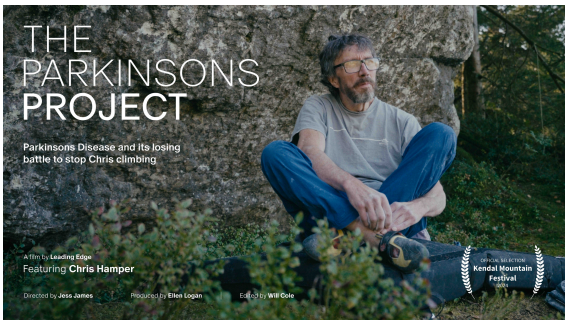
Our partner organisations played an important role. The Natalie Kate Moss Trust offered blood pressure checks and information on hypertension, while NF2 BioSolutions shared progress on research into NF2-related schwannomatosis and raised awareness of their campaign to End NF2.

Bringing together people of all ages from across Manchester during Brain Awareness Week 2025

Visitors engaged with discovery stalls, interactive brain games, and a series of health checks.

Expert Talks

Parkinson's theme lead, Professor Monty Silverdale highlighted Manchester's pivotal role in advancing Parkinson's disease research. Our Rehabilitation and Living with Disability co- theme lead, Dr Claire Mitchell shared her expertise on stroke rehabilitation, Dr David Coope focused on the latest breakthroughs in brain tumour research and the cutting-edge treatments being developed in Manchester and Dr Harry Pritchard spoke about how reduced blood flow in the brain in dementia affects overall brain helath.



A screening of The Parkinson's Project - a film documenting British climber Chris Hamper's experience with Parkinson's disease - was followed by a Q&A session with filmmaker Jess James and Prof Perdita Barran, offering insight into both the scientific and personal aspects of the condition.

The event was well attended and received positive feedback from both the public and participating organisations. We now hope to run this type of event each year, to promote further collaboration and public involvement in brain health research.

Events sponsored

Our centre has participated in and sponsored several key events in the last year that underscore our dedication to community engagement, research collaboration, and scientific excellence.

Early Detection Workshop

Event sponsorship

Researchers and clinicians from the UK gathered in Manchester to discuss innovative methods for improving brain tumour diagnosis. The conference focused on new technologies and strategies for enhancing patient care. Presentations highlighted the importance of integrating these advancements into healthcare systems for equitable access and rapid diagnosis.

Society for Research into Hydrocephalus and Spina Bifida

Prize sponsorship

The centre supported and sponsored the Society for Research into Hydrocephalus and Spina Bifida (SRHSB) Annual Scientific Meeting in September, providing prizes for three excellent early career researchers.

MDRS MANCHESTER 2024

Event sponsorship

We were honoured to participate in the prestigious Memory Disorders Research Society meeting, hosted by Prof Daniela Montaldi. This international event, rarely held outside the US, brought together world-leading memory systems scientists. Our local students attended and assisted with the event, gaining valuable exposure to cutting-edge research.

Public and Patient Involvement & Engagement events

DRAGON Launch - Dementia PPIE group

We were delighted to be invited to the launch of the Dementia United and UoM's NIHR-Dementia fellowships' Dementia Research Action Group Our Network (DRAGON). The first meeting featured research presentations, community engagement, and networking opportunities.

So Many Beauties Dementia Friendly Music Festival

We attended this public-facing festival at the Bridgewater Hall in Manchester. The festival offered a welcoming space for people of all ages to enjoy musical experiences together, and supportive and research charities to engage with patients and carers.

These events provided valuable opportunities for networking, sharing knowledge, and supporting initiatives that align with our goals.

The Brain Fix

A podcast series from the Division of Neuroscience at the University of Manchester and the Geoffrey Jefferson Brain Research Centre covering all things neuroscience

Listen on Spotify here

Launched in early 2025, The Brain Fix podcast gives an insight into the world of neuroscience, how the brain works, and how our researchers are trying to treat diseases of the brain

- The Fly Brain
- How we detect light
- The Jeff
- Who was Geoffrey Jefferson
- Psychedelics in neuroscience

Who was Geoffrey Jefferson?

Geoffrey Jefferson was one of the greatest medical personalities of his time, and although his life's work was devoted to neurosurgery, a specialty which he himself did much to create, he combined the meticulous technical skill of the surgeon with the care and insight of the physician and the wisdom of the philosopher.

He was born in co. Durham and was educated at Manchester Grammar School and Manchester University. He passed the London M.B. in 1909 and in 1913 was awarded the University gold medal when he took his mastership in surgery. In 1915 he joined the Anglo-Russian Hospital in Petrograd, subsequently moving to France where he oversaw a special department for the treatment of gun-shot wounds of the head.

After the war he became assistant surgeon to the Salford Royal Hospital in 1919 and in 1926 the Manchester Royal Infirmary provided a small neurological department for him. In 1939 Manchester University created for him the chair of neurosurgery, and in 1950 a fully equipped neurosurgical unit was opened at the Manchester Royal Infirmary, a year before Jefferson's retirement.

He was knighted in 1950 and became a member of the Medical Research Council in 1951 and first chairman of its Clinical Research Board.

Excerpt taken from https://history.rcp.ac.uk/inspiring-physicians/sir-geoffrey-jefferson

Thank you from the core team

Prof Stuart Allan
Co-director

Prof Andrew King
Co-director

Alisha Whitehead
Centre Manager

Dr Josie Thomas
Strategic Research Manager

Gill Burns
Centre Administrator

The Centre would not be what it is without the excellent researchers, clinicians, patients, volunteers, and public contributors who are committed to improving brain health in Greater Manchester and beyond.

We would also like to thank all of our generous fundraisers and donors, and grant and charity funders and partners, whose support has been fundamental to our progress as a translational research centre.

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Working in partnership with Manchester Cancer Research Centre, The Christie NHS Foundation Trust, and Royal Manchester Children's Hospital.

Geoffrey Jefferson Brain Research Centre,
Clinical Sciences Building, Northern Care Alliance, Stott Lane, Salford, M6 8HD.

www.gjbrainresearch.org

www.linkedin.com/company/geoffrey-jefferson-brain-research-centre/