



Newsletter

Advancing Horizons: Development and Expansion of our Research Team

September 2023

Exciting changes are underway at the Gillies McIndoe Research Institute. Over many years, our dedication to innovative research to find better ways of treating cancer, vascular birthmarks (including strawberry birthmarks) and fibrotic conditions has been unwavering. We have recently expanded our team (see profiles in the [“Expanding team”](#) section) and capabilities through our breadth of collaborations in New Zealand and internationally, and in our pursuit of groundbreaking translational research.

The input of diverse perspectives and expertise has invigorated our research efforts and is helping us advance the scientific understanding of cancer and disfiguring conditions, with a focus on ultimately developing effective therapies that improve patient outcomes.

Moreover, we have seen an increase in financial support from generous donors, philanthropic organisations, and the wider public, allowing us to invest in cutting-edge technology and infrastructure (read the [“Impact on fundraising so far this year”](#) section), which in turn is empowering our researchers to push the boundaries of their innovative work.

Branding refresh

You may have noticed Gillies McIndoe's branding and website has a fresh new look. Our logo has been updated with a new tagline and a modern butterfly. We adopted the new look in May after extensive consultation with supporters through surveys and focus groups. We have also updated our entire [website](#) with the new branding and photos. The branding refresh and updated website reflects an exciting new chapter in our journey toward innovation and impact, and we hope you like it.



Gillies McIndoe
RESEARCH INSTITUTE
Innovating cancer treatment

Leadership role changes

We recently announced leadership role changes at the Gillies McIndoe Research Institute and the Gillies McIndoe Foundation. With a focus on promoting internal talent and recognising expertise, Dr Clint Gray, previously Chief Scientist, has been appointed Director of Gillies McIndoe, with Founder Dr Swee Tan becoming Chair of the Gillies McIndoe Board, and Paul Baines, the Chair of the Foundation. These changes bring an evolving perspective to the Institute's and the Foundation's strategic direction.

Expanding team

We are excited to undergo significant growth in the size and expertise of our team. Talented researchers and professionals have joined our ranks, bringing diverse skills and perspectives to the laboratory research programme. This fresh talent has strengthened our research efforts and extended Gillies McIndoe's culture of collaboration and innovation.



From New Mexico, USA, Dr Erin Smith joined the team as our inaugural Science Communication and Engagement Manager in March. Dr Smith is passionate about facilitating scientists' efforts to share our research with the wider public. Erin will play a crucial part in supporting our PhD students and Post-doctorate research fellows, enabling them to more effectively communicate their research findings to existing donors, supporters, and the broader public. She aims to generate greater awareness and understanding of the cutting-edge research and innovative therapies being developed at Gillies McIndoe. You can read more about Erin on our website [here](#).



Originally from Wellington, New Zealand, Dr Madeleine (Maddie) White is the inaugural Strategic Partnership Manager at Gillies McIndoe. Maddie has already extended relationships with key stakeholders such as AFT Pharmaceuticals, Massey Ventures, and the broader science innovation network. She is eager to strengthen connections further, and foster partnerships with the wider scientific community to achieve better healthcare impact. Maddie also supervises some of our scientists; new Post-doctoral Research Fellow, Alex Chan and new PhD students, Raka Mitra and Jasmine (Jaz) White. This expands her overall research focus to better understanding strawberry birthmark (infantile haemangioma), glioblastoma and investigating improved topical treatments for keloid disorder. You can read more about Maddie on our website [here](#).



Originally from Auckland, New Zealand, Alex Chan has joined our team as a Post-doctoral Research Fellow.

Alex is interested in researching ways to improve human health and disease treatments. His study focuses on novel treatments for keloid disorder, which is caused by an overgrowth of scar tissue following an injury in genetically susceptible individuals, and can cause pain, itching, and disfigurement. You can read more about Alex on our website [here](#).



Originally from Venezuela, but more recently from Madrid, Spain, Clara López Vásquez has joined our team as a PhD student. Clara's research focuses on meningioma, the most common benign brain tumour originating in the meninges, the protective layers surrounding the brain and spinal cord. Meningiomas are more prevalent in women than men, and Clara is working to understand the hormonal factors behind these biological differences. You can read more about Clara on our website [here](#).



From West Bengal, India, Raka Mitra has joined our team as a PhD student. Raka's PhD study focuses on developing a 3D organoid model (lab-grown mini-organ) of strawberry birthmark (infantile haemangioma) to better understand the molecular pathways involved in their development and treatment. Her research will help identify potential drug repurposing options that improve patient outcomes. You can read more about Raka on our website [here](#).



From Dorset, England, Jasmine (Jaz) White has joined our team as a PhD student and is the inaugural Melody Collins Memorial Scholarship recipient. Jaz's PhD study focuses on glioblastoma, the most common and aggressive brain cancer. Jaz will study the effect of radiation therapy and chemotherapy on metabolic dysregulation using 3D organoid models (lab-grown mini-brains) to mimic a healthy human brain microenvironment into which patient-derived glioblastoma tumour spheres can invade. She aims to find targetable points within dysregulated pathways to which drugs could be administered alongside radiation therapy and chemotherapy to reduce the recurrence rate of glioblastoma. You can read more about Jaz on our website [here](#).

Thank you again to all our donors and funding supporters; every donation allows our team to grow, expanding our research and impact capability.

Project updates



Research Fellow Dr Matthew Munro is investigating how repurposed drugs can be used in the treatment of meningiomas, the most common benign brain tumour. Meningiomas are typically treated with surgery; however, many cannot be completely removed surgically and require radiation therapy. Some meningiomas are high-grade and can invade the brain and resist treatment. Currently there are no chemotherapy options for meningioma. Matt is examining whether any existing drugs can be repurposed to treat meningioma. He has been working in the lab treating meningioma cells from patient samples with off-patent Pharmaco-subsidised drugs. The next phase of his research aims to provide an understanding of how the drugs affect invasion of meningioma by looking at the proteins and metabolites in treated cells.

Matt and PhD student Clara López Vásquez had a poster presentation at the recent Queenstown Research Week conference, and he will present his meningioma project to the neurosurgeons at Wellington Regional Hospital.



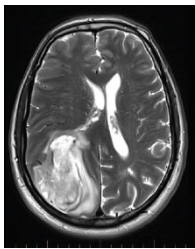
Dr Sam Siljee, MBChB, is in the second year of his PhD investigating the role of the p53 gene and the early changes in lung squamous cell carcinoma. The p53 gene has been given the apt title of “Guardian of the Genome” due to its role in repairing our DNA after damage. Recent research is finding more novel functions of p53. Therefore, he is investigating the differences that happen when p53 is blocked. Sam has been developing methods to block p53, so he can progress to the next phase of his research where he intends to use these methods to block p53 in a lab-based lung cancer model.

Sam will be presenting to the Cardiothoracic Department at Wellington Hospital and is always happy to chat about his project.



Our Graham Langridge Scholarship recipient, Freya Weth, is a year into her PhD studying the use of repurposed drug treatments in glioblastoma organoid models (lab-grown mini-brains with glioblastoma). Glioblastomas are extremely aggressive, and evidence suggests the aggressive nature is due to the presence of cancer stem cells, however, these cells are notoriously hard to target. Therefore, she is examining the use of several repurposed drugs to target glioblastoma. Freya has been treating glioblastoma tumour spheroid models (glioblastoma tumour cells grown together forming a sphere of grouped cells) with 17 different drugs to see their effect on cancer stem cell growth and ability to invade the protein gel which mimics the brain matrix (structure and function of the proteins, fats and carbohydrates). This step helps her progress to the next phase, where she intends to test her drugs on 10 different patient-derived GLICO models, which are the combination of patient-derived glioblastoma tumours and stem-cell grown mini-brains, to provide insights into the molecular mechanisms governing the survival, proliferation and migration of glioblastoma within the human brain environment.

Freya has presented at the recent NANOS Neurosurgery conference in Queenstown and at Victoria University of Wellington Te Herenga Waka for her one-year PhD meeting.



We are currently preparing for our glioblastoma phase II clinical trial, which is expected to begin early next year. Our phase I glioblastoma clinical trial shows a combination of repurposed drugs that act as inhibitors of the renin-angiotensin system and related pathways are safe and well tolerated. The phase II glioblastoma trial will investigate the efficacy of the trial treatment, which will be administered earlier following diagnosis and will include a larger number of patients. We are very grateful to The Hugo Charitable Trust, The Lindsay Foundation and many other donors for their support of the trial. The phase II clinical trial will involve a new PhD student, Dr Dorothy Chilambe Lombe, MBChB.

Image: MRI scan of a glioblastoma tumour indicated by the large white area in the bottom left of the image. Image Reference: Jeffrey, Rosalind L. “Current management of cerebral gliomas.” *Australian journal of general practice* vol. 49,4 (2020): 194-199. Doi:10.31128/AJGP-09-19-5063

New Ambassadors

We have two new Ambassadors who are committed to promoting our cause and research projects.



In May we welcomed Glenys Coughlan as an Ambassador. Glenys' extended life has taught her the significance of medical progress and pioneering treatments. Having been diagnosed with glioblastoma in 2019, she is a proponent of hope and breakthroughs in medical science and recognises the potential for improved treatments in the rapid advancement of medical knowledge. As she is acutely aware, those facing the prospect of terminal illnesses yearn for options. After a 35-year business career, Glenys's diagnosis compelled her to step away from being a business strategist, yet her commitment to shaping the future remains unwavering. A believer in innovation, she proudly supports Gillies McIndoe and, as well as being an Ambassador, she is a trustee of the Gillies McIndoe Foundation, advocating for funding and support for our transformative research. She values the unconventional approach to repurposing common medications and the potential to make cancer treatment more affordable and accessible.



We have also welcomed Susan McWilliam as an Ambassador. Susan enjoyed a fulfilling career as a legal executive and retired at age 60 to travel in Europe, embark on cruises, and explore New Zealand in a motor home. With a loving family and active social life, retirement was vibrant. Despite imagining a spirited old age inspired by her nonagenarian parents, a life-altering change came in April 2023: a glioblastoma diagnosis. Through debulking surgery and ongoing treatment, she found strength and clarity, valuing life's essence alongside her husband. Already familiar with Gillies McIndoe's glioblastoma studies, we are very pleased that Susan now serves as an Ambassador.

Fundraising updates



The Gillies McIndoe Foundation is taking a more prominent role in future-proofing the Institute's research and clinical trial programme through advocacy and fundraising. Attracting donor and bequest income, major gifts, and research scholarship is vital. We thank our bequest and multi-year pledge donors, who believe in what we seek to achieve. Please

contact margie.beattie@gmri.org.nz if you would like to support the Foundation. Every donation helps in our aspirations.

Gala dinner



In late May, 180 guests gathered at the elegant Public Trust Hall in Wellington to support funding the phase II glioblastoma clinical trial. \$95,000 was raised from ticket sales, auction prizes and pledges, bringing the total raised in support of the trial to \$1.6 million. On the night, we heard inspirational stories from Ambassador Nick White and his message that there must be a "better way" than surgery for treating life-threatening cancers and an entertaining performance from musician Jonathan Densem, who took part in the phase I glioblastoma trial.

Thank you to Mark Sainsbury, our wonderful MC, who along with auctioneer Marty Scott made it an entertaining and informative night. We are very appreciative of the generosity of Maurice and Kaye Clark for their donation of the venue, and all the donors and guests for their support.



New Corporate Champions ThinkBird pledged to support Gillies McIndoe with funds raised through their leadership seminars which launched at the gala. ThinkBird seminars are for leadership teams looking to instil new approaches and tools to guide their organisations through periods of challenge and opportunity. Bookings are now open to attend the first two-day programme, in October 2023, hosted in Auckland. Contact [ThinkBird](#) for more information.

Further fundraising news



We are very grateful to receive a generous donation of \$200,000 from The Lindsay Foundation for the glioblastoma phase II clinical trial. Along with the much-appreciated cornerstone donation of \$1 million from The Hugo Charitable Trust, these donations have given this important initiative much-needed momentum for the trial to begin.



Special thanks to our Ambassador Susan McWilliam for her advocacy and the support of her colleagues at the Cancer Society (Wairarapa branch) for the \$50,000 donation towards purchasing an incuocyte cell counter. This has transformed much of our PhD students' time-consuming laboratory work.

Thank you also to our valued match donors and regular givers who make a difference to our special campaigns and keep the Institute's laboratory lights on!

Impact on fundraising so far this year

Your support has contributed to the following:

- The new lentivirus lab (cell culture annex)
- Mechanised cell counting through the incuocyte equipment
- Funding critical areas of research through two research scholarships
- Reaching the tipping point to begin planning for the glioblastoma phase II clinical trial
- Hosting a wonderful gala evening through sponsorship, auction donations, and attendance

THANK YOU TO EVERYONE INVOLVED!

If you would like to support innovative cancer research with a donation or a legacy, we would love to hear from you. Please email margie.beattie@gmri.org or call her on 021 457 281.

Open days

As Gillies McIndoe supporters, we invite you to visit and take a look “down the microscope” at the cutting-edge research being undertaken at our Wellington facilities, including a laboratory tour and opportunity to meet our growing team of dedicated scientists.

For up to 10 people at a time, the upcoming Open Days are:

October 2023

Monday	Wednesday
16 th	18 th
23 rd	25 th

November 2023

Monday	Wednesday
6 th	8 th

If you are interested in visiting, please contact us at info@gmri.org.nz or call 04 282 0366.

Published papers and book chapters from December 2022 - August 2023

Title	Publication
Implementing structured pathology reporting protocol for non-melanocytic skin cancers: practical considerations Gupta, R., Selinger, C.I., Ashford, B., Chua, M.S.T., Clark, J.R., Damian, D.L., Jackett, L.A., James, C., Johnson, S., Ladwa, R., Lambie, D., McKenzie, C., Tan, S.T., Scolyer, R.A.	The Journal of the Royal College of Pathologists of Australasia
Applications for Colon Organoid Models in Cancer Research: Review Munro, M.J., Tan, S.T., Gray, C	Organoids
The Renin-Angiotensin System and Cancer Koh, S.P., Kilmister, E.J., Wickremesekera, A.C., Munro, M.J., Gray, C., Tan, S.T.	Springer
Utility of the Cerebral Organoid Glioma 'GLICO' Model for Screening Applications: Review Weth, F.R., Peng, L., Paterson, E., Tan, S.T., Gray, C.	Cells

Share the updates!

If you learned something new or found value in this newsletter, we'd love it if you shared it with your family and friends!



Help Innovate Treatment

You can help us safeguard the future of the Gillies McIndoe Research Institute; all it takes is a small donation.

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