Sid Faithfull Brain Cancer Research Laboratory

Bringing us closer to more effective treatments for brain cancer patients and their families
All of us in the Sid Faithfull Brain Cancer Research Laboratory are thankful for your personal commitment and generous and important financial support for our work.

Your investment in our work enables us to build capacity, obtain resources and instigate trials that ultimately lead to better treatments and improved quality of life for many people. In this research update I will introduce to you the people who have been working hard with the help of your support, tell you about the progress of our trials and resource collection and provide you with information about our current projects and where we see our next steps.

Thank you again for not only sharing your vision with us of a better future for those diagnosed with brain cancer, but for also partnering with us to enable critical, life-saving research to continue.

With many thanks,

Prof Bryan Day
The Sid Faithfull Brain Cancer laboratory studies the most common and aggressive form of both adult brain cancer, Glioblastoma (GBM) and paediatric brain cancers, Medulloblastoma and Diffuse Intrinsic Pontine Glioma (DIPG).

The focus of our research is on understanding the molecular mechanisms which are responsible for the initiation and recurrence of brain cancers and to develop and test new and effective therapies to treat these aggressive diseases.

Our Vision

To continue to build an internationally competitive translational research program at QIMR Berghofer MRI in both adult and paediatric brain cancer. Our focus and commitment is to investigate the biological processes critical for the development of these aggressive refractory cancers and bring these basic findings to clinical trials.

The challenge of identifying new targeted therapies with efficacy in brain cancer is immense, especially since a combination of agents will almost certainly be required. The Sid Faithfull Brain Cancer Research Laboratory is investigating several promising projects, aimed at developing strategies to firstly, target tumour-initiating cells and secondly, to better understand GBM heterogeneity and validate combined approaches to achieve greater responses for brain cancer sufferers.

Better outcomes are urgently needed as overall survival for brain cancer sufferers has increased by months only in the last 50 years.
Our progress: SFBC Laboratory clinical trial involvement

1. Clinical Assessment of Ifabotuzumab (anti-EphA3) in Relapsed or Refractory GBM

This clinical trial has been instigated based on Professor Day’s and Professor Andrew Boyd’s discoveries of the role of EphA3 in GBM. The trial is a multicentre, phase I dose escalation study to evaluate the safety and efficacy of KB004 when given weekly by two hour IV infusion to patients with relapsed or refractory GBM. The study is being conducted in both Melbourne (Austin) Dr Hui Gan/Professor Andrew Scott and Brisbane (RBWH) Dr Po Inglis/Dr Paul Thomas. This trial is supported by a generous donation of $500,000 from the Cure Brain Cancer Foundation.

2. Clinical Assessment of HDAC Inhibitors in GBM

A clinical trial is currently underway in collaboration with Associate Professor Jennifer Martin to measure the efficacy of histone deacetylase (HDAC) inhibitors in GBM. The SFBC Laboratory has been actively involved in trial design and is responsible for collecting specimens from patients recruited to the trial for assessment of HDAC inhibitor concentration in the CSF.

3. Assessment of the EphA2 mAb, 4B3 as an Effective GBM Imaging Agent

In collaboration Professor Stephen Rose (UQCCR) and the Herston Imaging Research Facility (HIRF) and Dr Simon Puttlick (AIBN) we are preparing a first-in-man study as a proof of concept that the EphA2 mAb (4B3) can be used as an effective imaging agent in GBM. Our animal studies show that 64Cu-4B3 is better able to discriminate tumour from normal brain with less non-specific uptake than 18F-DOPA.

4. Using molecular-guided PET/MRI imaging to target hypoxia in glioblastoma

A preclinical study to identify novel pathways and define molecular signatures associated with hypoxia and poor patient outcome.

In collaboration Professor Stephen Rose (UQCCR) and radiation oncologist Dr Benjamin Chua (RBWH) we are undertaking a study to collect tissue from GBM patients. Pre-operatively we will assess hypoxic versus normoxic regions via PET/MRI imaging at the HIRF, using an [18F]-FMISO radiotracer (Professor Rose and Dr Chua). Imaging information will be used to guide surgery. Resected regions of hypoxia versus normoxia will be isolated and tumour tissue transferred to the SFBC Laboratory for molecular analysis. (Dr Jeffree, Dr Inglis, Dr Lwin). Hypoxic versus normoxic tissue will be analysed using the digital genomic NanoString technology, RNA sequencing and proteomics analysis (Dr Lim and Professor Day)
1. The Sid Faithfull Brain Cancer Research Laboratory had 18 journal articles accepted and published in the past 12 months. The paper entitled The Dystroglycan Receptor Maintains Glioma Stem Cells in the Vascular Niche was published in Acta Neuropathologica in December 2019. Acta Neuropathologica is a world-leading journal in neurological disease with an impact factor of 18.1.

2. Funding for the QIMR Berghofer arm of the Children’s Brain Cancer Initiative (formerly the Centre for Child and Adolescent Brain Cancer Research) was received in December 2019. Prof Day continues to play a vital role in the Directorship of this initiative with the aim to significantly advance the treatment and management of paediatric brain cancer.

3. Prof Bryan Day and his team hosted the first ever QLD Adult Brain Cancer Workshop in February 2020. This day sought to bring together the expertise and diverse perspectives of those in the brain cancer space. Since this meeting, the Sid Faithfull Brain Cancer Research Laboratory has begun planning a new clinical trial using neoadjuvant technologies.
Most of the current primary brain cancer cell lines in the Sid Faithfull Brain Cancer Research Laboratory are cultured in two dimensions on the surface of a cell culture flask. Two dimensional (2D) in-vitro models have their limitations and are best suited in studies of cell-intrinsic properties.

In comparison, three-dimensional (3D) tumour models mirror in-vivo tumour biology and drug response more faithfully. 3D tumour models also allow us to better study the tumour microenvironment and showcase the complexity of in-vivo animal models. They are therefore an important tool in the field of cancer research.

In collaboration with Prof. James Hudson (QIMR Berghofer) and Prof. Nikolas Haass (University of Queensland), we have established a glioblastoma organoid (GBO) culture technique that allows us to recreate miniature tumour models.

Fluorescently coloured tumour cells, “normal” human neuronal and innate immune cells (microglia cells) are used to track GBM heterogeneity, monitor cell-to-cell interactions and better observe therapy responses.

Therapy resistant cells are isolated by cell sorting and then compared to the control-treated cells. To assess mechanisms of resistance, RNA-sequencing will be performed on the resistance versus the control cells.

Initially, we seek to assess the genes associated with therapy resistance (e.g. DNA repair pathway gene expression) and also analyse potentially targetable oncogenes present in resistant cell populations.

Based on our findings, we will initiate a number of multi-arm drug targeting studies to assess viable therapies that can also be used with current standards of care.

Future studies will seek to assess the contribution of the immune system (microglia cells) to therapy resistance within these organoid cultures. If positive findings are generated, future therapies or novel gene targets will be explored using orthotropic animal models.

Resources and Technology Update

Glioblastoma Organoid (GBO) Culture

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QIMR Berghofer Tissue and Culture Tumour Bank & Q-Cell

The QIMR Berghofer Tissue and Culture Tumour Bank is now in its 11th year of operation. Prof Day and his team have been collaborating closely with the neurosurgeons at the Royal Brisbane and Women's hospital to maintain this tumour bank. To-date, we have collected a total of 327 brain tumour samples from consenting patients.

With 140 primary cell lines now established, 12 cell lines have been extensively characterised by our team. This panel of patient-derived GBM cell lines are urgently needed and are highly sought after in pre-clinical cancer research. These models are freely available to the scientific community through the lab’s Q-Cell resource. In the past 12 months, this resource has had over 20 different national and international laboratories requesting access to this panel of cell lines. Additionally, over 40 publications have cited the use of our Q-Cell resource in subsequent research.

Our team is working tirelessly to ensure that collaborators in the brain cancer community have access to these materials to ignite additional discoveries in the treatment of this disease.

Pair-matched GBM Tumours

With a focus on tumour heterogeneity, we aim to characterise our unique set of 16 pair-matched primary and recurrent GBM tumours that are now available in our adult brain cancer tumour bank. This will be achieved through the use of single cell RNA-sequencing.

This new technology allows us to look at the gene expression in individual tumour cells. Single cell RNA-sequencing allows us to better understand the tumour portion responsible for its aggressive character and subsequent recurrence.

Findings from these experiments will then be put to the test in the GBM organoid models. This allows us to test the effect of anti-tumour drugs in a relatively quick and cost-effective way. The drug candidates that will be discovered in this process are then able to undergo testing using our well-established patient-derived intracranial xenograft mouse model (PDX).

Paediatric Brain Cancer Initiative

The Sid Faithfull Brain Cancer Research Laboratory has progressed its research in both Medulloblastoma and Diffuse Intrinsic Pontine Glioma (DIPG) with the establishment of a Paediatric Brain Cancer Tumour Bank.

To-date, 12 Medulloblastoma and three DIPG samples have been collected from the Queensland Children’s Tumour Bank (QCTB). In addition to this, we have collaborated with Stanford University to obtain a further seven DIPG cell lines. We have also obtained six Medulloblastoma patient derived xenograft models from the Fred Hutchinson Cancer Research Centre in Seattle.
Publication Update


Professor Bryan W Day
Group Leader

BASc (Consumer Science), BSc Hons, PhD (Medical Science)

Professor Bryan W Day obtained his PhD from the University of Queensland in 2008. He heads the Sid Faithfull Brain Cancer Research Laboratory at the QIMR Berghofer Medical Research Institute and is the current Sid Faithfull Fellow.

Bryan and his team focus on the most common and aggressive form of adult brain cancer, Glioblastoma (GBM). His research interests also extend to paediatric brain cancer, with a number of active projects currently being carried out in both Medulloblastoma and Diffuse Intrinsic Pontine Glioma (DIPG).

Bryan is a past Director for the Australian Society of Medical Research (ASMR) and is passionate about maintaining the ongoing success and sustainability of medical research in Australia.

Among Bryan’s achievements have been the development of a brain tumour bank at QIMR Berghofer and the characterisation of the receptor EphA3 as a therapeutic target in brain cancer. This research has led to clinical testing of a novel EphA3 therapeutic antibody for aggressive treatment refractory brain cancers.

Bryan is a Principal Investigator in an ongoing clinical trial with a focus on recurrent GBM. He also plays a vital role in the Directorship for the Children’s Brain Cancer Initiative (formerly CCABCR).

Professor Day’s main research focus is on understanding brain cancer cell biology and identifying novel therapeutic agents to treat these aggressive diseases in order to develop more effective treatments for patients and improve their quality of life.
Dr Rochelle D’Souza
Research Officer

BSc (Microbiology/Zoology/Chemistry), MSc (Biotechnology), PhD (Biochemistry)

Having lost her grandmother to diabetes in her formative years; Rochelle was determined to bring about a meaningful change to both the treatment of this disease and the quality of life for patients during the course of treatment. With this goal in mind she completed her basic training (a Bachelor’s and Master’s) in Biological Science in India. Rochelle then moved to the Max Planck Institute for Biochemistry in Munich. Here she completed her doctoral studies under the tutelage of Prof. Matthias Mann at who is among the top proteomics (the study of proteins) experts of the world.

Having completed her PhD in 2013, she then moved to Australia where she was briefly based in Sydney prior to joining the Sid Faithfull Brain Cancer Research Laboratory. She was drawn to join this team due to its ground breaking work in translational brain cancer research.

Despite decades of intensive research to better understand the underlying biology of brain cancer, there has been no real meaningful change in the overall survival of patients in the last 30 years. This fact resonates with Rochelle’s personal motto and is the reason she comes to the lab everyday with the hope of bringing a change in GBM treatment.

The team in the Sid Faithfull Brain Cancer Research Laboratory have set up a brain tumour and cell culture bank that has close to 350 tumour specimens to-date and generated 100 primary lines. This resource is crucial to the success of Rochelle’s current projects where she is studying abnormal cancer cell signaling and analysing changes in protein and cell behaviour.

She was the lead author on a Sid Faithfull Brain Cancer Research initiative employing proteomics to analyse the proteins in a subset of primary cell lines (Q-Cell) which will guide biological and preclinical investigations to better treat GBM.

One of the new advancements in therapeutic approaches leverages the discovery that the protein EphA3 belonging to the Eph-ephrin family, of which is elevated in GBM and other cancers. Since EphA3 is found on the surface of cells and is known to transmit molecular signals into the cell, the protein as well as its signaling route is an attractive target.

Rochelle and the team have generated compelling data showing discrete expression between the EphA3 and its binding partner, ephrin A5. EphA3 is present on the more proliferative stem cell-like GBM tissue, while ephrin A5 is present on the more differentiated slower proliferating tumour fraction. They hypothesise that ephrin A5 could drive GBM cell differentiation, leading to a less aggressive tumour cell phenotype.

Employing a global and innovative protein analysis tool of mass spectrometry based phosphoproteomics, Rochelle is investigating what signals are activated by ephrin A5 and identifying novel druggable targets that could better treat this devastating disease.
Dr Carolin Offenhäuser
Research Officer

MSc (Biochemistry), PhD (Cell Biology)

Dr Carolin Offenhäuser is a postdoctoral researcher in the Sid Faithfull Brain Cancer Research Laboratory. She joined QIMR Berghofer in 2012, after obtaining her MSc in biochemistry from the University of Tübingen (Germany) in 2007 and her PhD in cell biology from the University of Queensland in 2012. During her first postdoctoral position under the mentorship of Prof Andrew Boyd, a renowned scientist in the field of Eph receptor biology and cancer, Carolin developed a keen interest in exploring Eph receptor tyrosine kinases as targets for cancer therapies.

In 2017 Carolin joined the Sid Faithfull Brain Cancer Research Laboratory under Professor Bryan Day to take up the opportunity to work in one of the leading brain cancer research laboratories in Australia. She was drawn to this opportunity because she believes that the lab’s vision and use of cutting edge technology, availability of primary cell lines and tumour tissues through its own brain tumour bank, and availability of in-house antibodies for preclinical studies are enabling highly translational research projects. Carolin believes this will allow her to make meaningful contributions to brain cancer research that will shift how we treat brain cancer and improve patient outcomes.

Building on findings from the Sid Faithfull Brain Cancer Research Laboratory and her prior experience, Carolin explores Eph receptor function and therapeutic targeting in brain cancer. She aims to develop more effective therapies for patients faced with the devastating diagnosis of a brain tumour.

In adult glioblastoma, the EphA3 receptor is found on GBM stem cells where it is involved in propagating tumours and promoting their invasive nature. Tumour invasion makes complete surgical resection impossible and contributes to tumour recurrence. Carolin and the team have recently shown that targeting of EphA3 with antibody-drug conjugates (ADCs) can significantly reduce tumour burden and improves outcome in preclinical GBM models. This work was published at the end of 2018 in the journal Cancers.

Carolin is now part of a new initiative in the Sid Faithfull Brain Cancer Research Laboratory, which is spearheading research into developing novel therapeutic strategies for paediatric brain cancer under the umbrella of the Children's Brain Cancer Initiative. As part of this initiative, Carolin is characterising EphA3 as a potential tumour-specific therapeutic target in paediatric Medulloblastoma and Diffuse Intrinsic Pontine Glioma (DIPG) and explores the use of antibody-drug conjugates alone and in combination with standard-of-care radiation and chemotherapy.

The hope of this research is that we can develop antibody-based tumour-specific therapies to improve survival and de-escalate current therapies, in particular radiation, to reduce long-term therapy-related side effects in children.
Dr Seçkin Akgül
Research Officer

BSc (Molecular Biology and Genetics), MSc (Cellular and Molecular Biology), PhD (Cellular and Molecular Biology)

Prior to joining the Sid Faithfull Brain Cancer Research Laboratory, Dr Seçkin Akgül received his Bachelor’s degree at Bilkent University in Turkey, and completed his PhD at the University of Michigan Medical School in the USA. Being well aware of the cutting-edge science conducted at QIMR Berghofer when he was in the USA, Seçkin was determined to fly to Australia and become part of Brisbane’s medical research community.

Seçkin’s motivation and drive to work with Prof Bryan Day and his team came from his desire to contribute to the scientific progress of brain cancer research and through improved treatments, ultimately serve society.

Having the desire to comprehend how a perfectly normal cell transforms into a tumour, Seçkin is driven to do whatever he can to help people with cancer. His research is therefore dedicated to better understanding a phenomenon called “intratumoural heterogeneity”, which is one of the major factors behind the varying treatment responses observed in brain cancer patients.

Individual cells or compartments within a single tumour mass are associated with different molecular characteristics leading to many different tumour behaviours. Since current diagnosis schema is unable to fully recognise this molecular diversity to guide specific treatment plans, the majority of patients succumb to this disease while only a minority respond well to treatment.

Seçkin and his colleagues have designed novel models in the laboratory to create a comprehensive spectrum of human brain cancer in order to determine which unique tumour elements are resistant to current therapies and to potentially personalise therapeutic interventions to maximise therapeutic benefit.

Dr Akgül is currently undertaking his medical training at Griffith University while continuing to complete research in the lab. He hopes to combine his scientific expertise with his studies in medicine to serve patients with these incurable diseases in the most comprehensive way possible.
Dr Michelle Li
Research Officer

BSc Hons (Pharmaceutical Science), MSc (Cancer Therapeutics), PhD (Medical Science)

Michelle Li completed her PhD studies in the Sid Faithfull Brain Cancer Research Laboratory where she explored novel therapeutic strategies for the treatment of paediatric brain cancer. Prior to joining this passionate group, Michelle worked in an affiliated hospital of Peking University (Beijing, China) as a tumour biology Research Assistant for 5 years. This lab was located close to the radiotherapy department in the hospital. Young patients, especially children, came to the department with their parents for post-surgery radiation therapy. Big surgical scars and radiation skin markings were very visible on their heads. Watching the children and their parents deal with brain cancer prompted Michelle to rethink her career path.

Michelle’s hope is that someday her research can help these young patients to survive cancer. During her PhD, she worked to establish and characterise primary lines derived from medulloblastoma and DIPG patients. Michelle used these cells to investigate the Eph-ephrin signalling system and other potential therapeutic targets.

Medulloblastoma is the most common malignant brain tumour in children. Current treatments improve patient survival but lead to severe side effects due to high-dose chemotherapy and craniospinal irradiation given at a young age.

Another fatal malignant brain tumour occurring in young children is DIPG. Children typically do not survive more than two years from diagnosis, even with surgery, radiation and chemotherapy treatment. Michelle has a keen interest in establishing a reproducible protocol for culturing of primary paediatric medulloblastoma and DIPG tumours as building blocks to study Eph receptors as therapeutic targets.

Additionally she would like to establish and characterise a patient-derived xenograft medulloblastoma and DIPG model for preclinical drug evaluation.

These in vitro and in vivo studies will provide us with a better understanding of how Eph-ephrin signalling pathways are involved in medulloblastoma and DIPG development and progression, so that we can design personalised target therapies to minimise toxicity and improve quality of life in these patients.
Dr Ulrich Baumgartner

Research Officer

Laboratory Technician Federal VET Diploma (Chemistry), BSc (Bioanalytic and Cell Biology), MSc (Cell & Molecular Biology), PhD (Biochemistry)

Dr Ulrich Baumgartner is a Molecular and Cellular Biologist with seven years of experience in the field of oncology. His postgraduate and postdoctoral work has had a strong focus on non-coding RNA (microRNAs) and tyrosine kinase signalling in non-small cell lung cancer (NSCLC) and GBM.

Prior to his academic career, Ulrich worked for 10 years at F. Hoffmann La Roche as a research associate in organic chemistry and instrumental analytics. Here he obtained rigorous training in a broad spectrum of laboratory techniques.

Ulrich completed a Bachelor’s degree in Bioanalytic and Cell Biology at the University of Applied Sciences Northwester Switzerland and a Master’s degree at the University of Bern. During this time he investigated the role of small non-coding RNAs in resistance mechanisms in NSCLS and GBM.

Based on this research, he obtained a Doctoral degree in Biochemistry from the University of Bern and was awarded the prestigious Dr. Lutz Zwillemenberg award in 2018 for an outstanding PhD thesis.

After completing his PhD, Ulrich took on the role of compliance expert for biological drug products at Novartis in Stein, Switzerland. Here he received additional training in project management and a deep insight into the drug development process.

Having first-hand experienced with the devastating effects of cancer through a beloved family member, Ulrich felt the urge to make a difference in how we understand this disease.

This reason provided the adequate drive and desire to join the Sid Faithfull Brain Cancer Research Laboratory. Ulrich was excited at the prospect of joining a lab headed by Prof Bryan Day, a leading scientist in the field of adult and paediatric brain cancer. The access to exceptional research resources at QIMR Berghofer further enticed Ulrich to make the move to Australia.

Ulrich aims to investigate tumour heterogeneity and resistant mechanisms in primary and recurrent GBM. To this end he is establishing a tumour organoid model and applies single cell RNA-sequencing to study the process leading to resistance and recurrence. Ultimately, he aims to support and help patients suffering from this devastating malignancy.
Fiona Smith
Research Assistant

BSAppSc (Medical Technology), GradDip (Biotechnology)

Fiona Smith joined the Sid Faithfull Brain Cancer Research Laboratory in 2017 after many years working as a Research Assistant. She began her association with medical research straight from high school at the Walter and Elisa Hall Institute for Medical Research in Melbourne where she was employed as a laboratory technician.

Fiona loved science at school but deferred university to get some real world experience. While she was working she commenced a degree in applied Science (Medical Technology) which she completed over the next six years while working full time. It was at the Walter and Elisa Hall Institute that Fiona began working with Professor Andrew Boyd, a renowned leader in Eph receptor biology and cancer.

Moving to Brisbane to continue working with Andrew in the Leukaemia Foundation Laboratory at QIMR Berghofer, her main focus was studying Eph receptors and the role they played in Leukaemia and other cancers. This was also the laboratory that Professor Bryan Day started his scientific training (honours and PhD) and where he first researched EphA3 as a potential therapeutic target for Glioblastoma.

When Andrew retired at the end of 2016 Fiona took the opportunity to transfer to the Sid Faithfull Brain Cancer Research Laboratory. Fiona’s hope is that her laboratory skills and knowledge of Eph receptors can now be utilised to learn more about brain cancer and ultimately help in the challenge of finding better treatments for patients. Fiona enjoys coming to work each day and working with a fantastic group of scientists committed to cancer research.

Fiona loves working in this team, especially knowing that work done in this laboratory will potentially translate to better outcomes for patients suffering with brain cancer.
Courtney Jurd joined the Sid Faithfull Brain Cancer Research Laboratory in June 2018. She is a Bachelor of Business graduate with a professional background in Business Administration and Human Resource Management. Prior to joining the Sid Faithfull Brain Cancer Research Laboratory, Courtney worked in a number of paediatric and adult hospitals across Queensland, Australia. She thoroughly enjoyed contributing her administration skillset within the healthcare sector, an area she is truly passionate about.

This passion combined with the belief that evidence-based research is integral for patients wishing to attain optimal health, led her to join Professor Bryan Day’s team.

Courtney’s focus as a member of this group is to provide the best administrative support possible so that Professor Bryan Day and the wider team can concentrate first and foremost on the vital research being conducted.

During her time with the laboratory, she has had the opportunity to be part of a number of different projects. Courtney coordinates the Brisbane Brain Cancer Journal Club. This is a multi-disciplinary meeting held at QIMR Berghofer each month with the aim of discussing new research and enhancing collaboration within the brain cancer community.

Courtney is responsible for the maintenance of the QIMR Berghofer Tissue and Culture Tumour Bank and assists with sample pick-up. She also liaises with collaborating laboratories wishing to utilise the much sought-after Q-Cell resource.

She utilises her digital media skills to maintain the laboratory’s website as well as any electronic or in-print promotional materials. Courtney also had the opportunity to be part of the authorship team on the Acta Neuropathologica publication accepted in December 2019.

Courtney enjoys working with this highly skilled and motivated group in this highly fulfilling support role.

Courtney Jurd
Administration Officer and PA

BBus Hons (Human Resource Management & Digital Media)
Anja Kordowski
PhD Student

BSc (Biological Science), MSc (Cell Biology and Molecular Neurobiology)

Anja is a first year PhD student in the Sid Faithfull Brain Cancer Research Laboratory enrolled at the University of Queensland.

After obtaining a degree as a registered nurse in Germany and working in this job for six years, she completed a Bachelor’s degree in Biological Science at Ruhr-University Bochum and a Master’s degree at the European Cancer Stem Cell Research Institute at Cardiff University in the UK.

For both of her theses, Anja focused primarily on GBM research and was determined to find a PhD project in this very field. When she started looking for positions, she did not expect to find the ideal project 16,000km away, but this together with the chance to work in a lab with exceptionally good resources, made it easy for her to decide to move to Australia.

Prof Bryan Day gave Anja the opportunity to establish and work on projects that concentrate on a rare, but lethal paediatric brain cancer – Diffuse Intrinsic Pontine Glioma (DIPG).

She is very excited to investigate this untreatable disease and is highly motivated to better understand the mechanisms driving this rare cancer. During her PhD, Anja plans to study Eph receptors as therapeutic targets, as well as intratumoural heterogeneity and the tumour microenvironment.

With her background as a nurse, Anja keeps sight of the big picture and hopes that she will contribute something meaningful with her research into the treatment of DIPG. Ultimately, she aims to support and help young patients suffering from this devastating malignancy.
Kylah Bradbrook
Research Assistant

BBiomed Sc (Hons)

Kylah Bradbrook graduated from the University of Queensland with a Bachelor of Biomedical Science after completing her honours year within the Queensland Brain Institute in 2018. After graduation, she worked full time as a practical demonstrator within the School of Biomedical Science at the University of Queensland.

Her passion for helping others combined with her avid interest in neuroscience and molecular biology, led her to join the Sid Faithfull Brain Cancer Research Laboratory as a volunteer researcher in January 2020. She was motivated to volunteer with this laboratory as she had a desire to help research brain cancer due to the poor survival and quality of life experienced by these patients.

Kylah is now working as a Research Assistant, helping with the culturing of GBM cell lines and various molecular biology techniques. Her work is focused on research with samples of rare gliomas such as oligodendroglioma and epithelioid GBM, sourced through the laboratories GBM tumour bank.

Through utilisation of these primary cell lines, she aims to identify potential therapeutic targets specific for these cell lines such as Eph receptors that can be translated to novel treatments.

Kylah hopes that her research will contribute to closing the gap in our understanding of brain cancer and hopefully contribute to personalised care for these patients.
Professor Andrew Boyd is the long term mentor of Professor Day; they have worked together on brain cancer since 2004 at QIMR Berghofer. Professor Boyd’s research focus is the biology of cancer, particularly the elucidation of potential targets for cancer therapy and Eph receptor biology.

Together the achievements of Professor Boyd and Professor Day and their respective groups have led to the development of a successful and diverse international competitive brain cancer research program at QIMR Berghofer.
New Staff

Niclas Skarne
Niclas will be joining us as a PhD student after completing his Master’s of Research (Biochemistry) at University College London. He will be studying the underlying molecular mechanisms that drive brain cancer recurrence.

2019/2020 Alumni

Soonjung Lee
BBiomedSc (Hons)
Soonjung spent the majority of 2019 with the Sid Faithfull Brain Cancer Research Laboratory completing an Honour’s project. Her hard work combined with the guidance she received in our team allowed her to graduate with a High Distinction.

Soonjung has gone on to pursue further studies in the field of Medicine.

Dr Manasi Jiwrajka
BA (Hons) Neuroscience, MBBS, MPhil Candidate
Dr Manasi Jiwrajka has recently submitted her MPhil thesis and has finalised her experiments in the Sid Faithfull Brain Cancer Research Laboratory.

Manasi will go on to work full-time at the Royal Brisbane and Women’s Hospital as a clinical doctor. Here she will work alongside a number of our clinical associates in the Neurosurgery Department.
Thank you again for your ongoing support.

Your generosity has enabled us to continue making significant advances in brain cancer research. Better treatments and patient outcomes are closer than they have ever been.