

RPA Division of Medicine Research Activity Report 2024



Publications,
Research Supervision
and Clinical Trials
activity across the 17
RPA Medical
Departments



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Introduction

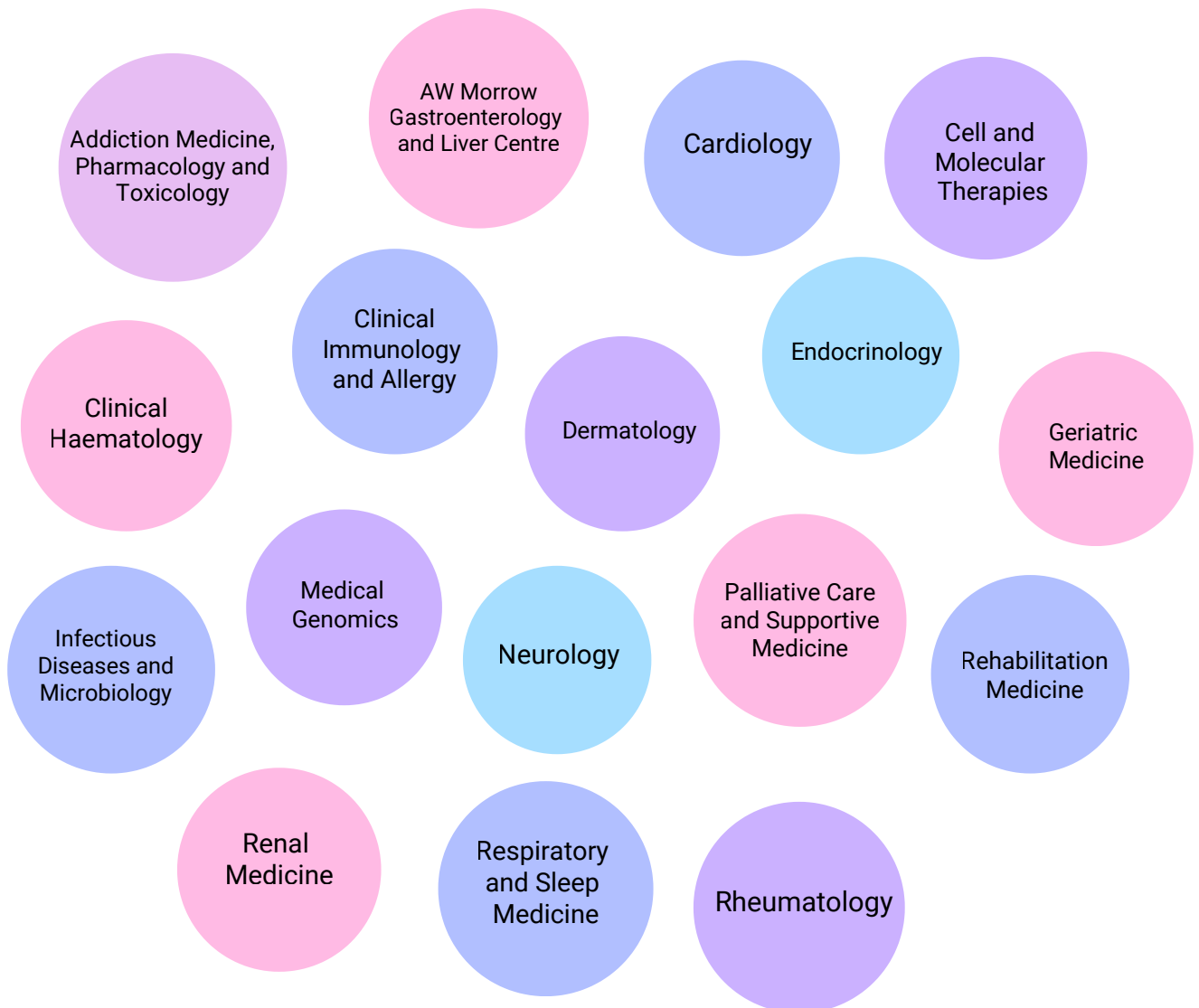
The RPA Institute for Academic Medicine (IAM) was established within the RPA Hospital Division of Medicine in 2023 to build on and expand the foundations of research excellence. The IAM is an academically-focused organisational body which works closely with the 17 RPA medical departments (Figure One) to identify synergies for research collaboration, provide strategic advice and advocacy and assist with tailored solutions for bespoke research programs.

The IAM is committed to its vision of improving patient care and clinical outcomes across its three key portfolios:

- 1) Professional Development and Education
- 2) Organisational Capacity of Research
- 3) Strategic Engagement and Collaboration

The 2024 Research Activity Report has been compiled by the IAM for the RPA Division of Medicine, RPA and SLHD senior leadership. It provides an overview of research activity reported for the 12-month period from January - December 2024. This report will be tabled at the IAM Advisory Council.

Figure One - The 17 Departments in the RPA Division of Medicine



Research at the IAM

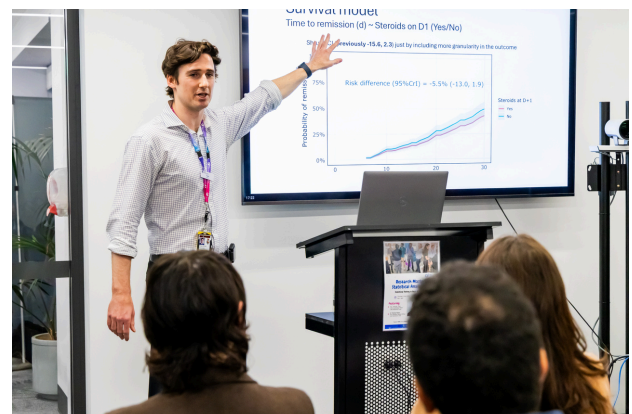
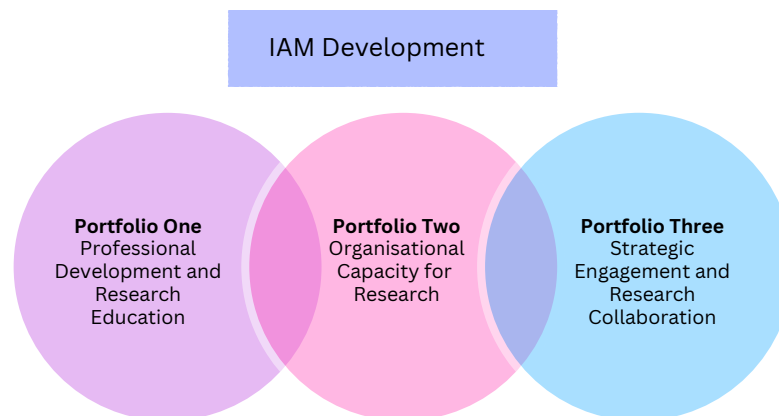
Organisational Capacity for Research is one of four IAM portfolios (see Figure Two). Its objectives are to:

- Build research capacity across Division departments and underrepresented groups
- Support diverse research, including health systems and implementation science, particularly with nursing and allied health staff
- Identify and address barriers to sustained research activity among clinician-researchers
- Advocate for and support women in research
- Facilitate links between the RPA Division of Medicine and the Sydney BioMedical Accelerator to promote research translation and improved patient care

Key initiatives include:

- Delivering IAM Accelerate as a platform to address research challenges
- Acting as a liaison between the Division of Medicine, RPA Hospital, and SLHD Executive
- Facilitating access to expert support e.g. biostatisticians
- Maintaining an up-to-date staff directory with Division of Medicine research profiles
- Publishing an annual report on research activity (publications, trials, grants, supervision)
- Offer formal and informal networking opportunities to facilitate communication between departments and enhance research collaboration opportunities
- Hosting multidisciplinary forums to shape research programs and share knowledge
- Establishing scholarships for Division trainees, HDR candidates, and early-career researchers
- Exploring streamlined financial management for clinical trials at RPA
- Investigate ways to streamline the financial management of clinical trials conducted within RPA

Figure Two - IAM Strategic Portfolios

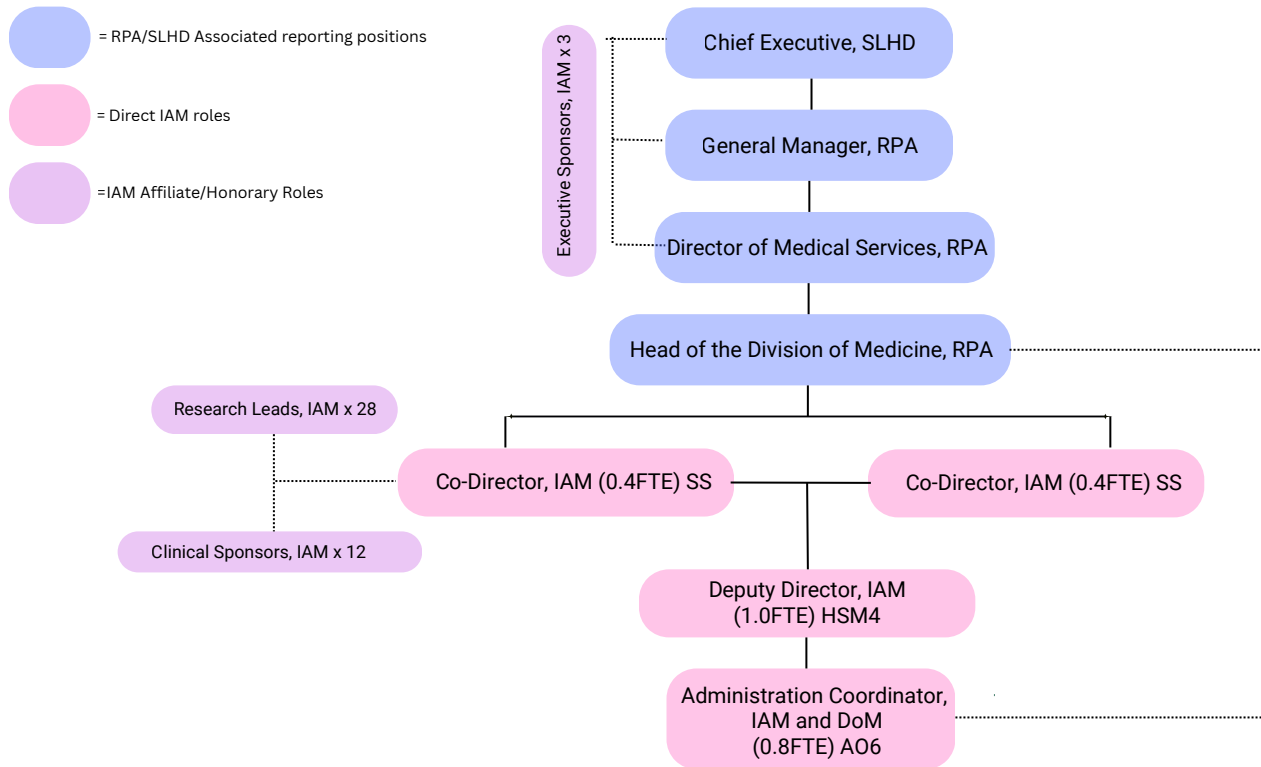




Research Governance

Figure Three outlines the current IAM governance structure

Figure Three - IAM Research Governance Structure



IAM Co-Directors
Associate Professor Lauren Troy Left
Associate Professor Stephen Adelstein Right



Head of the RPA Division of Medicine
and IAM Clinical Sponsor Left
Professor Kate Wyburn



IAM Clinical Sponsors

In 2024, the IAM had 12 appointed Clinical Sponsors from across the RPA Division of Medicine. Clinical Sponsors provide strategic and intellectual guidance to support IAM's research initiatives, contributing to the advancement of scientific knowledge and innovation. Their roles encompass mentorship, research program development, and leadership aligned with their diverse areas of expertise.

Clinical Sponsors regularly serve on IAM judging panels for research prizes, grants and competitions. They also present their notable research programs and pearls of wisdom at the IAM Accelerate forum, offering valuable perspectives on emerging issues in health and medical research relevant to IAM portfolios.

All Clinical Sponsors were appointed for a two-year term, with renewals scheduled for 2025. The 2024 cohort included:

- **Professor Paul Haber**, Head of Addiction Medicine, Toxicology and Pharmacology
- **Professor Simone Strasser**, Head of AW Morrow Gastroenterology and Liver Centre
- **Professor David Celermajer**, RPA Cardiology
- **Professor Joy Ho**, Head of RPA Clinical Haematology
- **Associate Professor Roger Garsia**, RPA Clinical Immunology and Allergy
- **Professor Diona Damian**, Head of RPA Dermatology
- **Professor Stephen Twigg**, Head of RPA Endocrinology
- **Professor Michael Barnett**, RPA Neurology
- **Professor Steve Chadban**, Head of Renal Medicine and Nephrology
- **Professor Kate Wyburn**, Head of the RPA Division of Medicine
- **Professor Tamera Corte**, RPA Respiratory and Sleep Medicine
- **Professor David Sullivan**, Head of RPA Chemical Pathology
- **Professor Wendy Cooper**, RPA Tissue Pathology and Diagnostic Oncology



IAM Clinical Sponsor and Head of RPA Dermatology,
Professor Diona Damian



IAM Clinical Sponsor
Professor Michael Barnett

IAM Research Leads

In 2024, IAM was supported by 28 active Research Leads across the RPA Division of Medicine. These individuals embody RPA's historic research ethos and play a vital role in fostering interdisciplinary collaboration through shared learning and engagement.

Research Leads promote and facilitate research within their respective departments, serving as key liaisons with IAM. They provide timely updates on research metrics, present departmental or individual research activities, and participate in a range of IAM-led research programs and professional development initiatives.

The role of Research Lead is open to a broad range of professionals, including fellows, trainees, nurses, and allied health staff. It is not limited to consultant physicians, reflective of the IAM's commitment to inclusive and multidisciplinary research leadership.

Several members serve in dual roles as both IAM Clinical Sponsors and IAM Research Leads. The 2024 IAM Research Leads included:

- **Professor Kirsten Morley**, Addiction Medicine, Toxicology and Pharmacology
- **Professor Ken Liu**, AW Morrow Gastroenterology and Liver Centre
- **Associate Professor Belinda Gray**, Cardiology
- **Associate Professor Clare Arnott**, Cardiology
- **Associate Professor Rachael Cordina**, Cardiology
- **Professor David Celermajer**, Cardiology
- **Dr Nicolas Urriola**, Clinical Immunology and Allergy
- **Dr Alex Stoyanov**, Clinical Immunology and Allergy
- **Dr Peter Bradhurst**, Clinical Immunology and Allergy
- **Professor Diona Damian**, Dermatology
- **Professor Jencia Wong**, Endocrinology
- **Professor Joy Hoy**, Clinical Haematology
- **Dr Rihan Shahab**, Geriatric Medicine
- **Dr Nila Dharan**, Infectious Diseases and Microbiology
- **Dr Bethan Richards**, MDOK
- **Dr Amali Mallawaarachchi**, Clinical Genetics and Medical Genomics
- **Professor Craig Anderson**, Neurology
- **Ms Sumika Ouchida**, Neurology
- **Associate Professor Rebekah Ahmed**, Neurology
- **Dr Ali Tahayori**, Rehabilitation Medicine
- **Dr Tracey Ying**, Renal Medicine and Nephrology
- **Professor Tamera Corte**, Respiratory and Sleep Medicine
- **Professor Edmund Lau**, Respiratory and Sleep Medicine
- **Dr Simone Visser**, Respiratory and Sleep Medicine
- **Dr Anna Maclean**, Respiratory and Sleep Medicine
- **Dr Matt Parker**, Rheumatology
- **Professor Peter Youssef**, Rheumatology
- **Dr Riona Pais**, Palliative Care and Supportive Medicine



Dr Nila Dharan

IAM Research Lead for Infectious Diseases



Dr Alex Stoyanov and Dr Peter Bradhurst
Left and Centre

IAM Research Leads for Clinical Immunology and Allergy



2024 Highlights

Research at First Sight

In September 2024, IAM hosted its annual research competition, Research at First Sight (R@FS) — formerly known as My Research Rules. R@FS serves as a combined research showcase, competition, and end-of-year celebration for the RPA Division of Medicine

The IAM invites all RPA doctors-in-training, nurses, allied health professionals, and higher degree research candidates who intend to present at sub-specialty conferences or equivalent forum to submit a one-page abstract. Selected applicants are invited to present their research at IAM in a standard oral format, followed by a three-minutes of questions by the expert judging panel.

The first prize is valued at \$500 and awarded to support research-related expenses for the winning candidate. In 2024, the judging panel comprised Associate Professor Roger Garsia (IAM Clinical Sponsor), Professor Kate Wyburn (Head of the RPA Division of Medicine), and Professor Kate White (Professor of Cancer Nursing, Sydney Nursing School).

The 2024 winner was Dr Emma Gray, RPA Respiratory Consultant and PhD Candidate, for her project titled *Hypercapnia is not excluded by normoxia in neuromuscular disease patients: implications for oximetry*.

R@FS will return on 31 October 2025 as part of Friday Grand Rounds. The event is designed to complement the annual Patron's and President's Prizes for clinical and laboratory research at RPA.





IAM Research Masterclasses

In 2024, the IAM Masterclass program was expanded beyond its original focus on advanced trainees. The program now welcomes all RPA staff affiliated with the Division of Medicine who are seeking foundational education in research methodology.

While several sessions continue to support the Royal Australasian College of Physicians (RACP) advanced trainee research project, the curriculum has broadened to include holistic research development topics. These include securing seed funding and first grants, navigating RPA Ethics and Governance processes, and pathways to higher degrees in research.

The Masterclass series will continue in 2025. The full program is available at:
<https://slhd.health.nsw.gov.au/rpa-iam/what-we-offer#what's-on>





Workforce Expansion: Strengthening the IAM Network and Team

In 2024, the IAM enhanced RPA's organisational capacity for research by supporting and undertaking the creation, approval, grading, recruitment, and onboarding of new research positions within the Division of Medicine. These included:

Immunology Diagnostic Research Scholarship

The *SLHD Research Scholar in Diagnostic Immunology* is a two-year pilot dedicated to fostering diagnostic innovation. The scholar works across the RPA and Concord Departments of Clinical Immunology and Allergy. Candidates were required to have commenced or completed a higher degree and obtained their Advanced Training qualifications with the Royal Australasian College of Physicians and Pathologists for Australia.

This scholarship is designed to create a pool of immunologists capable of supervising future PhD students. It also strengthens the candidate's relationship with the University of Sydney, increases their publication output and recruits them to provide advice to the IAM and SLHD Immunology on suitable research support structures to enhance research productivity. **Dr Peter Bradhurst** is the inaugural scholar for the 2024-2026 years.



Dr Peter Bradhurst
Research Scholar,
SLHD Diagnostic Immunology

Immunology Research Manager

The IAM is also piloting a two-year Research Manager role across the Concord Hospital and RPA Departments of Immunology and Allergy. These departments focus on developing novel tests for diagnosing immune-mediated disorders, including autoimmune conditions, immunodeficiencies, and allergies.

This role aims to position these sites as premier locations for immunology research in NSW, enhance the performance and cohesion of the SLHD Immunology Research Unit, and boost trainee participation in translational research and evidence-based practice.

Dr Alex Richardson, the successful candidate, has been pivotal in submitting the Centre for Research Excellence (CRE) application, managing clinical specimen collection, biobanking, financial management, and increasing trainee involvement in research and evidence-based practice.



Dr Alex Richardson
SLHD Immunology Research Manager





RPA Division of Medicine

Research Metrics

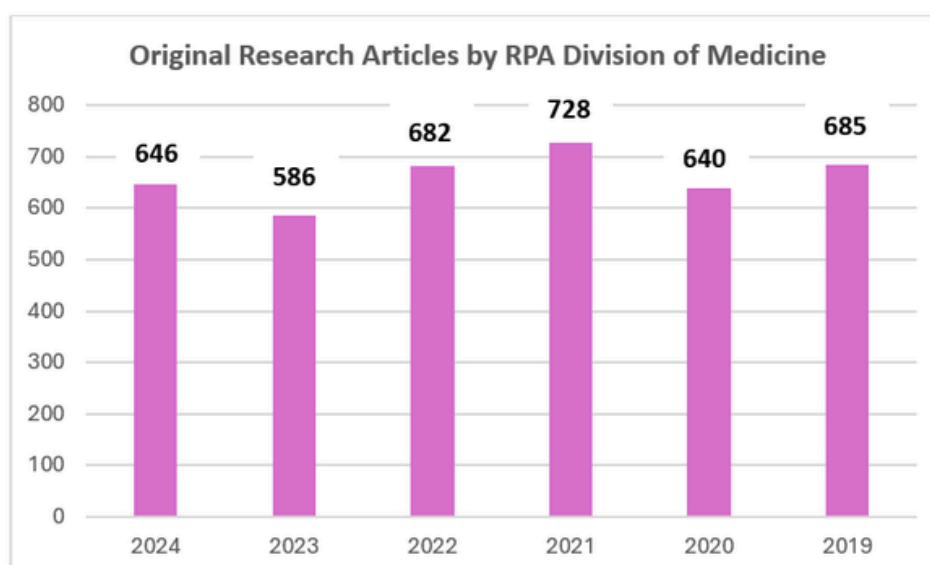
Original Research Articles

The total number of original research articles published by the RPA Division of Medicine was **646** in 2024, **an increase of 60 articles** compared to the previous year.

Cardiology, Neurology and **Respiratory and Sleep Medicine** were the top three performing medical departments for original articles.

9 of the 16 RPA Medical Departments increased their publication output in comparison to the previous reporting year, 2023.

Original Research Articles by RPA Medical Departments						
RPA Medical Department	2024	2023	2022	2021	2020	2019
Addiction Medicine, Toxicology and Pharmacology	59	81	97	119	104	137
AW Morrow Gastroenterology and Liver Centre	62	40	69	35	43	58
Cardiology	115	114	105	171	153	108
Cell and Molecular Therapies	1	8	15	10	13	6
Clinical Haematology	40	19	20	9	12	23
Clinical Immunology and Allergy	20	19	38	43	13	22
Dermatology	3	9	12	6	7	6
Endocrinology	53	41	52	43	51	48
Geriatric Medicine	3	1	0	3	0	6
Infectious Diseases	32	16	30	20	6	14
Medical Genomics	18	2	N/A	15	2	6
Neurology	98	98	121	132	131	119
Supportive Care and Palliative Medicine	1	3	8	0	3	1
Rehabilitation Medicine	0	0	0	0	0	0
Renal Medicine and Nephrology	16	23	27	26	37	40
Respiratory and Sleep Medicine	84	95	73	76	43	68
Rheumatology	41	17	15	20	22	23
TOTAL	646	586	682	728	640	685



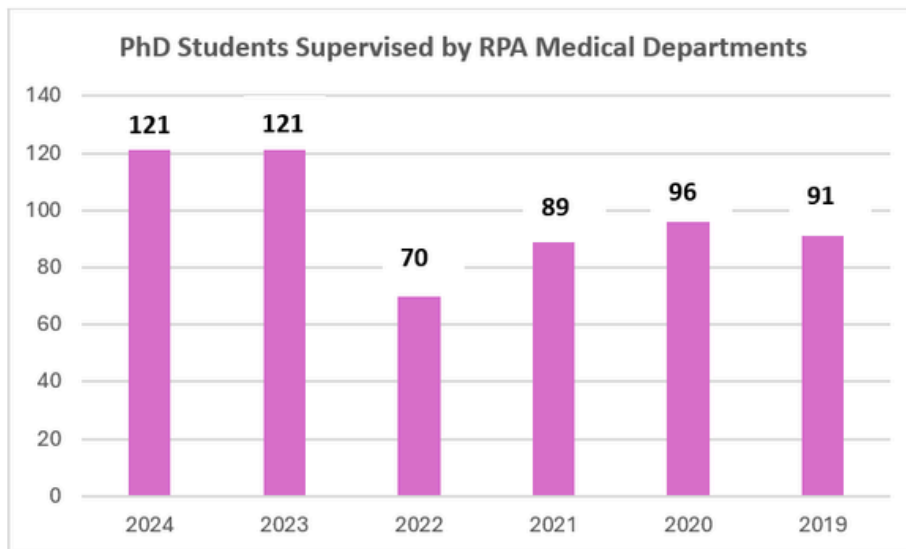


PhD Supervision

The total number of PhDs supervised by the RPA Division of Medicine was **121**, steady in comparison to the previous year.

Addiction Medicine, AW Morrow Gastroenterology and Liver Centre and **Neurology** supervised the highest number of PhD students across the Division of medicine, at **35, 15** and **14** respectively.

PhD Students Supervised by RPA Medical Departments						
RPA Medical Departments	2024	2023	2022	2021	2020	2019
Addiction Medicine, Toxicology and Pharmacology	35	29	23	28	22	15
AW Morrow Gastroenterology and Liver Centre	15	8	9	0	3	3
Cardiology	8	8	5	8	17	12
Cell and Molecular Therapies	0	2	1	0	0	0
Clinical Haematology	6	3	2	2	2	2
Clinical Immunology and Allergy	5	2	0	3	5	11
Dermatology	6	3	1	0	1	0
Endocrinology	8	12	11	20	13	14
Geriatric Medicine	0	0	0	1	0	2
Infectious Diseases	1	0	0	0	0	1
Medical Genomics	1	1	N/A	0	0	0
Neurology	14	28	14	11	20	11
Rehabilitation Medicine	0	0	0	0	0	0
Renal Medicine and Nephrology	5	5	5	0	0	6
Respiratory and Sleep Medicine	12	16	18	16	13	13
Rheumatology	5	4	4	0	0	1
Supportive Care and Palliative Medicine	0	0	0	0	0	0
TOTAL	121	121	70	89	96	91



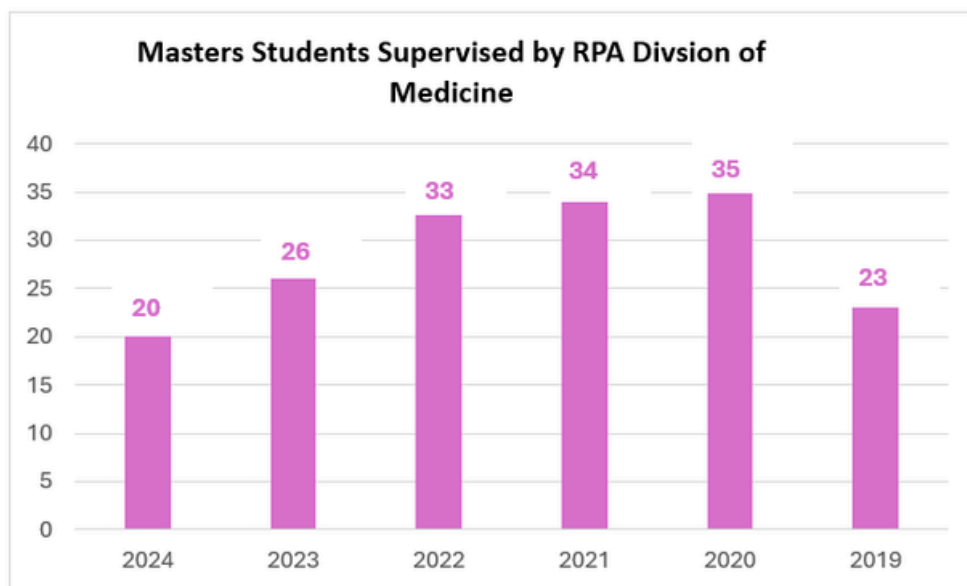


Masters Supervision

The total number of Masters supervised by the RPA Division of Medicine was **20**, a decrease of 6 in comparison to the previous year.

Addiction Medicine, **Cardiology** and **Endocrinology** supervised the highest number of Masters students across the Division of medicine, at **4**, **3** and **3** respectively.

Masters Students by Medical Departments						
RPA Medical Departments	2024	2023	2022	2021	2020	2019
Addiction Medicine, Toxicology and Pharmacology	4	5	15	17	18	9
AW Morrow Gastroenterology and Liver Centre	1	4	1	0	3	4
Cardiology	3	5	2	1	4	1
Cell and Molecular Therapies	0	0	0	0	0	0
Clinical Haematology	2	0	3	3	3	3
Clinical Immunology and Allergy	1	2	0	0	0	0
Dermatology	2	1	1	2	1	1
Endocrinology	3	1	4	6	1	3
Geriatric Medicine	0	0	0	0	0	0
Infectious Diseases	0	0	0	0	0	0
Medical Genomics	0	0	0	0	0	0
Neurology	2	4	0	0	2	0
Rehabilitation Medicine	0	0	0	0	0	0
Renal Medicine and Nephrology	0	0	1	0	0	0
Respiratory and Sleep Medicine	2	4	4	4	2	2
Rheumatology	0	0	1	1	1	0
Supportive Care and Palliative Medicine	0	0	1	0	0	0
TOTAL	20	26	33	34	35	23





RPA Division of Medicine Research Activity

Addiction Medicine, Pharmacology and Toxicology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
Addiction Medicine, Pharmacology and Toxicology (AMPT)	Paul Haber	9
	Andrew Dawson	
	Nick Buckley	
	Kate Conigrave	
	Darren Roberts	
	Alicia Foran	
	Anastasia Volovets	
	Joshua Watt	
	Nazila Jamshidi	

*Head of Department *Clinical Academic *Conjoint Position

Staffing Profile

- 9 Consultants
- 4 Advanced Trainees
- 3 Fellows
- 1 Basic Physician Trainee

Higher Degree Students

- 35 PhD
- 4 Masters

2024 Publications

- 59 Original Research Articles
- 1 Review Article
- 1 Invited Editorial
- 7 Educational Texts and Book Chapters





Total Grants

27 Total Active Grants

\$16,760,897 in New Funds awarded in 2024

\$42,724,662 in Existing/ongoing funds

\$59,485,559 in Total Grant Funds

Research Focus

In 2024, research at the Edith Collins Centre encompassed a diverse portfolio of projects focused on improving clinical and public health outcomes for individuals affected by alcohol and other drug disorders.

Clinical Trials

Key clinical trials in 2024 include

1. The use of N-acetylcysteine (NAC) to reduce alcohol use and craving
2. The MPATHY trial investigating MDMA-assisted therapy for co-occurring PTSD and alcohol use disorder
3. The CBD-CUD trial examining cannabidiol for cannabis use disorder and t
4. The use of depot buprenorphine for treating opioid dependence in custodial and post-release settings.

Number of Active Drug or Device Clinical Trials **3**

1. CBD for CUD
2. NAC for AUD
3. MDMA for PTSD/AUD

Total No. of patients recruited for trials in 2024

1. CBD for CUD – **26** recruited in 2024
2. NAC for AUD – **28** recruited in 2024
3. MDMA for PTSD/AUD – **13** recruited in 2024

Active Research Programs

In 2024, Edith Collins also led innovative work in First Nations addiction medicine, focusing on redefining treatment, understanding substance use, and improving screening and intervention practices. Key initiatives included:

- Include developing culturally grounded social-emotional well-being programmes for Aboriginal and Torres Strait Islander youth in custodial settings

Strengths-based research exploring post-release recovery among First Nations men in Sydney and Toronto

- Qualitative studies exploring access to and engagement with drug and alcohol services through the Clinical Outcomes and Quality Indicators (COQI) cohort.

In the same year, The Centre also led Strong and Deadly Futures, a culturally inclusive, school-based alcohol and drug prevention program designed to empower Aboriginal and Torres Strait Islander secondary students. Additionally, the Centre contributed to the development of national guidelines for the treatment of alcohol-related disorders.

Awards and Medals

- Finalist, Women's Agenda Leadership Awards 'Science Category' 2024
- Finalist, Science, Research & Development Award 2024, India Australia Business and Community Alliance (IABCA)

Presentations (National and International) 4

Invited Lectures 7

Original Research Presentations 17

Media Appearances

1. Seth, D., Schwantes-An, T. et al. (2024). Media release on publication highlighting genetic risks in liver diseases. Hepatology Communications. Estimated 30,000 views across seven online news channels. Available at: <https://medicalxpress.com/news/2024-08-genetic-tool-liver-disease-heavy.html>
2. Seth, D. (2024). Radio interviews on 2ST Shoalhaven and 2ST Coast, 30 August 2024.
3. Featured in MAGNIFY – WOC in STEM Magazine. Big STEM Sisters story, latest issue. Available at: <https://magnify.au/product/professor-devanshi-seth/>
4. Roberts, D. (2024). Skull tablets containing high doses of MDMA circulating in NSW. 9News. Available at: <https://www.9news.com.au/national/high-dose-mdma-tablets-circulating-in-nsw-health-warning-news/1aa2bfba-2b2f-4be5-9fc9-f26b285a82f6>
5. Roberts, D. (2024). Mushroom gummies warning issued by NSW Health.
6. Roberts, D. (2024). Australia recalls mushroom gummies after hospitalisations. BBC News. Available at: <https://www.bbc.com/news/articles/cp08nq8l01eo>
7. Roberts, D. (2024). Possible antidote to death cap mushroom toxin discovered. ABC Melbourne Mornings. Available at: <https://www.abc.net.au/listen/programs/melbourne-mornings/death-cap-mushrooms/102355890>



Professor Paul Haber
Head of Department
Presenting at IAM Accelerate



AW Morrow Gastroenterology and Liver Centre

Consultant Profile

RPA Medical Department	CONSULTANTS	#
AW MORROW GASTROENTEROLOGY AND LIVER CENTRE	Simone Strasser	17
	Geoff McCaughan	
	David Koorey	
	David Bowen	
	Ken Liu	
	Talal Valliani	
	Crispin Corte	
	Payal Saxena	
	Arthur Kaffes	
	Sean Griffin	
	Peter Lim	
	Emilia Prakoso	
	Gokul Tamilarasan	
	Anastasia Volovets	
	Kevin Choi	
	Madeline Gill	
	Rachael Jacob	

*Head of Department *Clinical Academic *IAM Role

Staffing Profile

- 17 Consultants
- 1 Basic Physician Trainee
- 3 RMOs/Interns
- 4 Advanced Trainees
- 3 Fellows

Higher Degree Students

- 15 PhD
- 1 Masters

2024 Publications

- 62 Original Research Articles

Total Grants

- 14 Total Active Grants
- \$8,076,564 in New Funds awarded in 2024
- \$15,688,765 in Existing/ongoing funds
- \$23,765,329 in Total Grant Funds

Number of ethics applications submitted in 2024

- 13 to HREC (lead site) and 3 to RGO only (participating site)

Research Focus

- 1) **Roles of the DPP4 protease gene family in liver diseases and cancer**

Led by Professor Mark Gorrell, this research has made major breakthroughs in the study of Type



II diabetes associated with liver disease, liver cancer and liver fibrosis. This work demonstrated the enzyme Fibroblast Activation Protein (FAP) associate with fat buildup in liver and liver scarring, and that blood levels of FAP rise with liver scarring severity. Additionally, the research has discovered that the DPP9 enzyme showed that it is essential for neonatal survival and is involved in liver cancer progression as well as COVID19 severity. Professor Gorrell's group continues to focus upon chronic liver disease pathogenesis and evaluating the targeting of DPP4 family enzymes for treating liver scarring and cancer.

2) **Development of novel blood fibrosis biomarker in Metabolic Associated Fatty Liver Disease (MAFLD)**

Research at the AW Morrow Gastroenterology and Liver Centre has identified that circulating levels of FAP correlate with fibrosis levels in human MAFLD. Incorporating FAP levels into current non-invasive tests has been shown to improve sensitivity and specificity.

3) **Clinical quality and variations of care in Hepatocellular Carcinoma (HCC)**

Under the leadership of Professor Simone Strasser, the RPA HCC team is a major contributor to two major research registries which are pivotal to findings. The national Upper Gastrointestinal Cancer Registry (UGICR), which is a clinical quality registry, aims to improve the outcomes and quality of care for patients recently diagnosed with HCC. The Accelerated Translational Research in Primary Liver Cancer (APRICA) program is a research initiative funded by the Cancer Institute NSW which aims to improve liver cancer outcomes in NSW and comprises of important studies in epidemiology of HCC, variations in care across the state and the role of palliative care in HCC management.

4) **Molecular and Cellular basis for human HCC**

As part of research undertaken in collaboration with Associate Professor Mainthan Palendira's human immunology laboratory, Immune Mass Cytometry and single cell sequencing are used to explore novel cellular interactions within human HCC tissues. This work has identified unique endothelial - macrophage and fibroblast microenvironments.

5) **Molecular and Cellular basis for intrahepatic cholangiocarcinoma (ICC)**

The AW Morrow Gastroenterology and Liver Centre's work with Dr JB Chen has produced a novel murine model of ICC that resembles human ICC. This research produces novel therapeutic targets which reduce ICC progression and have the potential for translation into human disease.

Clinical Trials

The Gastro and Liver Clinical Trials unit continues to participate and recruit patients to important clinical trials focused on the development of new therapeutic approaches to viral hepatitis, fatty liver disease, liver cancer, alcoholic hepatitis, Crohn's disease and ulcerative colitis.

Number of Active Drug or Device Clinical Trials 28

Total No. of patients recruited for trials in 2024 26

Did AW Morrow Gastroenterology & Liver Centre contribute to Biobanking activities Yes

Key achievements

Dr Rachael Jacob

- Awarded a prestigious NHMRC Postgraduate Scholarship in recognition of her research excellence





Professor Ken Liu

- Lead an international working group to develop global clinical guidelines for liver transplantation in patients with liver cancer
- Participated in two competitive research grants focusing on enhancing liver transplant outcomes: one investigating the role of prehabilitation and the other exploring strategies to expand the donor pool through extended organ perfusion
- In collaboration with Dr Lauren Tang and departmental colleagues, reported the incidence, epidemiology, and outcomes of acute allograft rejection following liver transplantation in Australia, highlighting its significant impact on patient survival.

Professor Mark Gorrell's Laboratory

- In partnership with South Western Sydney Local Health District, demonstrated the clinical utility of shearwave elastography and a novel blood test for the FAP enzyme in monitoring liver fibrosis associated with obesity
- Collaborated with Associate Professor Qi at the Centenary Institute to advance the understanding of lipid and energy dysregulation and blood vessel growth in a liver cancer model that is driven by poor diet
- Professor Gorrell's laboratory with UNSW colleagues led by Dr F Byrne used one of new liver cancer models to advance the understanding of how fructose drives liver cancer

Professor Simone Strasser

- Together with Dr Emily Nash, reported on a national study of drug-induced liver injury from selective androgen receptor modulators, anabolic-androgenic steroids and bodybuilding supplements highlighting an emerging issue in Australia and around the world
- Served as Co-Chair and working group member for the development of national consensus guidelines on Portal Hypertension and Metabolic Associated Fatty Liver Disease, contributing to improved clinical standards and pathways

Research Staff 10

- Dr Tatiana Tsoutsman
- Dr Lisa Lo
- Dr Fiona Guan
- Dr Wendy Swift
- Dr Helen Vidot
- Laura Clezy
- Jenny Wu
- Makaela Collins
- Navaratnam Subhaharan
- Kate Teevan

Senior Research Scientists (Centenary Institute) 9

- Professor Geoff McCaughan Centre for Cancer Innovations, McCaughan Laboratory. Research fields - chronic liver diseases and liver cancer
- Professor Mark D Gorrell Centre for Cancer Innovations, Gorrell Laboratory. Research fields - fatty liver disease, liver cancer, liver fibrosis and protease enzymes
- Associate Professor David Bowen Centre for Infection & Immunity, Bertolino and Bowen Laboratory. Research fields - Liver immunology, immunology and hepatology
- Associate Professor Patrick Bertolino Centre for Infection & Immunity head, Bertolino and Bowen Laboratory. Research fields - Liver immunology, immunology and hepatology
- Dr Jinbaio Bao Chen Centre for Cancer Innovations, McCaughan Laboratory senior scientist
- Dr Felix Marsh Wakefield Centre for Cancer Innovations, McCaughan Laboratory postdoc research officer





- Dr. Kieran English Centre for Infection & Immunity head, Bertolino and Bowen Laboratory postdoc research officer
- Dr B. Bobby Boumelhem Centre for Cancer Innovations, Gorrell Laboratory Postdoc research officer
- Mr. Lior Yoffe Centre for Infection & Immunity head, Bertolino and Bowen Laboratory undergraduate student

Awards and Medals

Dr Felix Marsh-Wakefield

- The International Society for Analytical Cytology (ISAC) travel bursary to attend CYTO 2024 conference, Edinburgh, Scotland. 4-8 May 2024
- Best poster at the Australian Liver Cancer Forum, Perth, Australia, 23-25 October 2024
- Liver Cancer Collaborative Travel Award to attend the Australian Liver Cancer Forum, Perth, Australia, 23-25 October 2024
- Australasian Cytometry Society (ACS) travel award to attend the Australasian Cytometry Society Conference, Hobart, Australia. 20th-23rd Oct
- Centenary Travel Award to attend the Australasian Cytometry Society Conference, Hobart, Australia, 20-23 October 2024, and the Australian Liver Cancer Forum, Perth, Australia, 23-25 October 2024

Dr Bobby Boumelhem (Prof Gorrell's laboratory)

- 'When Art Meets Science' Image Awards – Centenary Institute: 2nd Place – Judged Category, 1st Place – People's Choice Award, and 1st Place – Staff Pick Award
- Image Award – NSW Cell and Developmental Biology Meeting at the Garvan Institute – 1st Place

Mr Ming Chang Zhang (Prof Gorrell's laboratory)

- A University of Sydney International Stipend and Tuition Scholarship for the PhD

Presentations (National and International)

22 National

31 International

Media Appearances

Professor Geoff McCaughan's Laboratory

- Dr Felix Marsh-Wakefield featured on 2GB's Health Living program to discuss their Hepatology Communications 2024 publication, which identified VEGF+ perivascular macrophages within hepatocellular tumours

Research Impact and Translation into clinical practice at RPA Hospital

In the large national retrospective study of patients with early-stage HCC, the finding that chemoembolisation is associated with similar survival outcomes as compared to upfront percutaneous ablation in those with single hepatocellular carcinoma (HCC) \leq 3cm is against current guidelines recommendations but supports AW Morrow's practice of making case-by-case decisions within their HCC-MDT.

Participation in major clinical trials in gastroenterology and hepatology leads to incorporation of new therapeutics and treatment pathways in clinical guidelines. It is expected that the clinical research studies funded by MRFF and NHMRC will lead to practice changing outcomes in the future.



**2024 Comment by Head of Department and IAM Clinical Sponsor,
Professor Simone Strasser**

“The AW Morrow Gastroenterology and Liver Centre has strong clinical and scientific research focus. Key research themes include Chronic Liver Disease, Liver Transplant, Hepatocellular Carcinoma, Inflammatory Bowel Disease and Endoscopy.

Our centre is participating in global clinical trials testing new treatments for patients with Chronic Hepatitis B infection, Primary Biliary Cholangitis, Non-alcoholic Steatohepatitis, alcohol-associated hepatitis, hepatic Encephalopathy and Hepatocellular Carcinoma.”

Website

<https://slhd.health.nsw.gov.au/rpa-hospital-research/aw-morrow-gastroenterology-liver-centre>



Professor Simone Strasser
Head of Department
IAM Clinical Sponsor



Cardiology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
CARDIOLOGY	Mark Adams	29
	David Celermajor	
	James Weaver	
	Martin Ng	
	Pankaj Jain	
	Caroline Medi	
	Sanjay Patel	
	Jordan Fulcher	
	Kim Chan	
	Ray Sy	
	Mark McGuire	
	Caroline Medi	
	Michael Kilborn	
	Lisa Simmons	
	Imre Hunyor	
	Clare Arnott	
	Belinda Gray	
	David Baker	
	Rachael Cordina	
	Raj Puranik	
	Mark Dennis	
	Elizabeth Robertson	
	Jo-Dee Lattimore	
	Ian Wilcox	
	Michelle McGrady	
	Anthony Keech	
	Richmond Jeremy	
	Sean Lal	
	John O'Sullivan	

*Head of Department *Clinical Academic *IAM Role

Staffing Profile

- 29 Consultants
- 2 Basic Physician Trainee
- 1 RMOs
- 1 Interns
- 8 Advanced Trainees
- 1 Unaccredited Trainee
- 1 Fellows

2024 Publications

- 115 Original Research Articles

Higher Degree Students

- 8 PhD
- 3 Masters





Active Grants

8 Mark Dennis

5 David Celermajer

5 John Sullivan



Research Focus

The RPA Department of Cardiology focuses on all aspects of heart disease, including congenital, genetic, valvular and myocardial, vascular and aortic; from basic science through clinical translational research to public health and clinical trials. The Department has a sustained track record of major grants, publications and other research contributions, across many research domains.

Awards and Presentations

Associate Professor Mark Dennis

- Winner: National Heart Foundation Future Leader Fellowship 2024-26
- Winner: Sydney Health Partners Clinical Trial of the Year 2024

Professor David Celermajer

- Research.com Medicine in Australia Leader Award

Professor John Sullivan

- 2024 Charit Hospital, Berlin. Plenary Speaker: "Cardiometabolic HFpEF: Pitfalls and Opportunities"
- 2024 Cork University Hospitals, Ireland. Plenary Speaker: "HFpEF: From mitochondria to running shoes"

Dr David Baker

- Advances in Congenital CMR - ACHD Symposium 2024
- Advances in ASD - ACHD Symposium 2024

Associate Professor Belinda Gray

- Understanding Sudden Cardiac Death. Invited Talk St George's University of London, Sep 2024 (**International**)
- Clinical cases in Arrhythmia in Athletes. Moderator. European Society of Cardiology Meeting, London Sep 2024 (**International**)
- Doping: cause of Sudden Cardiac Death in athletes? Moderator. European Society of Cardiology Meeting Sep 2024 (**International**)
- Hypertrophic Cardiomyopathy: influence of genes, age, sex and weight. Moderator. European Society of Cardiology Meeting. London Sep 2024 (**International**)
- EAPC/ACC Sports Cardiology Meeting. Chair, ECG screening in Athletes. London Sep 2024 (**International**)
- Understanding Genetic Testing in Sports Cardiology. Blacktown Hospital. June 2024 (**National**)
- Do's and Don'ts of Genetic Testing in Athletes. Care of the Athletic Heart. American College of Cardiology Washington USA. June 2024 (**International**)
- Genetic Testing in Athletes: current and future. Port Douglas Heart Meeting. June 2024 (**National**)
- HCM and Mavacamtem Symposium. International Clinical Cardiovascular Genetics Meeting Brisbane May 2024 (**National**)

- Genotype guided therapies in Inherited Arrhythmia Syndromes. International Clinical Cardiovascular Genetics Meeting Brisbane 2024 (National)
- Sports Eligibility for patients with Genetic Heart Disease. ESC Preventive Cardiology Scientific Sessions, Athens Greece. April 2024 (International)

Associate Professor Rachael Cordina

- Invited international speaker to World Congress of Cardiology
- CSANZ

Dr Kim Chan

- Invited international speaker to World Congress of Cardiology
- CSANZ



Professor David Celermajer
IAM Clinical Sponsor
Presenting at IAM Accelerate



Associate Professor Belinda Gray
IAM Research Lead



Cell and Molecular Therapies

Consultant Profile

RPA Medical Department	CONSULTANTS	#
CELL AND MOLECULAR THERAPIES	Stephen Larsen	2
	Zoe Marks	

Head of Department*

Staffing Profile

2 Consultants

2024 Publications

1 Original Research Articles

Total Grants

\$1,377,000 in New Funds awarded in 2024

\$10,973,597 in Existing/ongoing funds

\$12,350,597 in Total Grant Funds

Number of ethics applications submitted in 2024 3

Research Focus

The RPA Department of Cell and Molecular Therapies (CMT) seeks to correct the root cause of an illness at the molecular level.

Over the last 25 years, these novel therapies have moved beyond investigation into clinical application as Advanced Therapeutic Medicinal Products or ATMPs. Unlike conventional medicines, these “living drugs” target a patient’s own immune cells or genes with exacting precision to deliver long-lasting, or at times curative, “one-dose-and-you’re done” benefits.

CMT provides services to academic and industry partners for development, manufacture, clinical evaluation and implementation of cell and gene therapies. We take discovery research into clinical practice with robust cell manufacturing protocols to meet the Therapeutic Goods Administration (TGA) requirements for biologicals.

Key Research Objectives

- Provide compliant manufacturing and clinical trial services to health, academic and industry partners
- Support the development, manufacture, clinical evaluation and implementation of novel cell and gene therapies
- Provide improved treatment options for patients
- Educate and train clinical, scientific and regulatory

Number of non-clinical trials active research studies 2

Number of active drug or device clinical trials 2



Research Staff 21

- Associate Professor Stephen Larsen, Acting Head of Department
- Dr Sharon Sagnella, Research and Development Manager
- Dr Michelle Keir, Production Manager
- Dr Aimei Lee, Clinical Trials Manager
- Dr Ada Lee, Project Manager
- Ryan Raj, Hospital Scientist
- Luke Kleu, Hospital Scientist
- Sarah Nicholson, Hospital Scientist
- Joanna Gutierrez, Immune Effector Cell Hospital Scientist
- Lucy Yasenev, Research Scientist
- Fiona (Bao) Dang, Technical Officer
- Dr Zoe Marks, Medical Officer
- Sasan Mortazavi, Clinical Research Coordinator
- Miles Kenny, Clinical Research Coordinator
- Divya Suthar, Clinical Research Coordinator
- Rachael (RuiQiong) Zhao, Clinical Research Coordinator
- Janet Macpherson, Quality Manager
- Sharan Gopal, Quality Officer
- Jonathan Suriya, Quality Officer
- Mark Shannon, Operations Manager
- Luigia Manzoni, Deputy Operations Manager

2024 Presentations

- Sharan Sagnella, 25 years of *Clinical Delivery of Cell and Gene Therapy in an Australian Public Hospital*, Women in Advanced Therapies, Virtual 2024

Website

<https://slhd.health.nsw.gov.au/rpa-hospital-research/cell-molecular-therapies>



Clinical Haematology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
CLINICAL HAEMATOLOGY	Edward Abadir	11
	Christina Brown	
	Christian Bryant	
	Scott Dunkley	
	Phoebe Joy Ho	
	Harry Iland	
	Liane Khoo	
	Stephen Larsen	
	Derek McCulloch	
	Freda Passam	
	Vinay Vanguru	

**Head of Department *IAM Role*

Staffing Profile

- 11 Consultants
- 2 Basic Physician Trainee
- 1 RMO
- 1 Intern
- 5 Advanced Trainees
- 5 Fellows

Higher Degree Students

- 6 PhD
- 2 Masters

2024 Publications

- 40 Original Research Articles

Total Active Grants

- \$400,000 in New Funds awarded in 2024
- \$747,057 in Existing/ongoing funds
- \$1,147,057 in Total Grant Funds

Number of ethics applications submitted in 2024 18

Research Focus

The RPA Department of Clinical Haematology continues to grow with a wide portfolio of trials covering both malignant and non-malignant haematology. It has led early phase clinical trials through to randomised controlled studies. Clinical Haematology also currently leads a diverse range of clinical trials in haematologic malignancies, including multiple myeloma, non-Hodgkin lymphoma, acute lymphoblastic leukaemia, acute myeloid leukaemia and myeloproliferative neoplasms.



The Department performs clinical trials for red cell disorders, haemophilia and thrombosis. In addition, Clinical Haematology conducts preclinical, malignant and non-malignant haematological laboratory research with a focus on multiple myeloma, myeloid disorders and platelet disorders.

Number of active research studies in Clinical Haematology 77

Number of active clinical trials in Department 77

Total No. of patients recruited for trials in 2024 49

Did Clinical Haematology contribute to Biobanking activities in 2024? Yes

Key achievements

- Professor Joy Ho was appointed Chair of the International Member's Committee, American Society of Haematology
- Professor Harry Iland named Supervisor for the Royal College of Pathologists Australia (RCPA) Haematology Genomics Certification Module Three

Awards and Medals

- Chief Investigators A and B Mark Lawrence and Freda Passam awarded NHMRC Ideas Grant for Discovery of a new modification in the platelet proteome
- A/Prof Tracy King, Haematology Society of Australia and New Zealand (HSANZ) Leadership in Haematology Award: Honouring an individual who demonstrated extraordinary commitment to leadership in Haematology
- Dr Yvonne Kong won the RCPA Kanematsu Award 2024
- Dr Yvonne Kong won the Charles Perkins Centre Early to Mid Career Research (EMCR) Travel Funding Awarded 2024
- Dr Yvonne Kong won the Thrombosis and Haemostasis society of Australia and New Zealand (THANZ) Travel Grant Receipt

Presentations (National and International)

- Professor Joy Ho: Plenary at International Myeloma Society meeting, Rio De Janeiro September 2024. *Treating of relapsed myeloma outside of T cell-directed therapies*
- Professor Joy Ho: Invited Speaker, Highlights of the American Society of Haematology in Asia-Pacific, Myeloma and Plasma cell dyscrasias
- Professor Harry Iland: Invited Speaker Clinical Plenary Session, APL Symposium, Rome, Australasian APL Trials
- Dr Freda Passam, State-of-the-Art Talk, ISTH 2024, Bangkok, Thailand. *Endothelial thromboinflammation in COVID-19* June 2024.
- A/Prof Tracy King, Jagger J, Rutherford C, Acret L, Tait M-A, Sipavicius J, McCaughan G, Stapleton S, White K, V. (Accepted ORAL) International Myeloma Society, 8th Nursing and Allied Health Symposium, Rio De Janeiro, Brazil, 25 September 2024. *Validation of the Steroid Symptom Questionnaire Multiple Myeloma (SSQ-MM) with concurrent symptom and quality of life measurement*
- A/Prof Tracy King (White K). MyeNurse: Invited speaker, Sydney Innovation and Research Symposium 5 July 2024. *A Person-Centred Clinical Research Model*
- A/Prof Tracy King, Invited Speaker. HSANZ NZ Annual Meeting. May 2024. 4. Hamilton, NZ. *Managing Myeloma in 2024*
- A/Prof Tracy King, Invited Speaker. HSANZ NZ Annual Meeting. May 2024. Hamilton NZ. *Best Supportive Care in Myeloma: Tips & Tools*



- A/Prof Tracy King: Invited Speaker, , UK Myeloma Society, Pharmacy Group - Education Day. *Validation of the steroid symptom questionnaire in multiple myeloma*
- A/Prof Tracy King: Invited Guest, Bloody Minded: Haematology Education (Podcast) Episode 31: *Advanced Myeloma Nursing with A/Prof Tracy King*

Research Impact – Translation/Implementation into clinical practice at RPA Hospital

Our work has led to novel treatments adopted as standard of care, ranging from novel chemotherapy regimes to new applications of chimeric antigen receptor T cell therapies in new disease indications. Our developmental work in minimal residual disease detection in myeloma by flow cytometry is now adopted, and we are the main laboratory performing this test in Australia. Further developments and applications through spectral cytometry are being developed.

2024 Comment RPA Head of Department and IAM Clinical Sponsor

Professor Joy Ho

As a multi-faceted department ranging from classical to malignant haematology, RPA Haematology remains at the forefront of clinical research in Australia, with our leadership and participation in clinical trials leading to major publications and changes in standards of care. Our translational and basic science work in myeloma – both cellular and genomic/molecular, myeloid disorders, bleeding & clotting disorders, and cellular therapies continue to excel with major presentations and publications.



Professor Joy Hoy
Head of Department
IAM Clinical Sponsor

Website

<https://slhd.health.nsw.gov.au/rpa-hospital-research/institute-of-haematology>



Clinical Immunology and Allergy

Consultant Profile

RPA Medical Department	CONSULTANTS	#
CLINICAL IMMUNOLOGY AND ALLERGY	Stephen Adelstein	8
	Roger Garsia	
	Frederick Lee	
	Nic Urriola	
	Alex Stoyanov	
	Shruti Swamy	
	Warwick Britton	
	Isabelle Bosi	
	Lisa Horgan	
Head of Department* IAM Role* Honorary*		

Staffing Profile

8 Consultants

1 Basic Physician Trainee

2 Advanced Trainees

Higher Degree Students

5 PhD

1 Masters

2024 Publications

20 Original Research Articles

Total Grants

\$24,128,445 Total Active Grants

\$3,000,000 in New Funds awarded in 2024

\$21,128,445 in Existing/ongoing funds

Number of ethics applications submitted in 2024 3

Research Focus

The Clinical Immunology and Allergy Department at RPA has an extensive research program across several areas including basic immunology sciences, autoimmune diseases and designing novel assays for diagnosis of immune-mediated disorders. In 2024, the department established a biobanking repository for serum and cells from patients with autoimmune and inflammatory diseases to assist in our future studies.

RPA Clinical Immunology and Allergy in conjunction with its sister department at Concord Hospital, has established the Sydney Translational Immunology and Allergy Centre, which has been recognised as an international Centre of Excellence of the Federation of Clinical Immunology Societies (FOCiS).



Number of non-clinical trials active research studies in your department **1**

Number of active drug or device clinical trials **2**

Total number of patients recruited for all trials in 2024 **39**

Key Achievements

1. Collaboration with Khon Kaen University (Arnone Nithchanon) to perform research on rare disease (Adult-onset immunodeficiency with anti-interferon-gamma antibodies (AOID with AIGA) resulting in a publication in Clinical and Experimental Immunology
2. Visit to the Ragon Institute of Harvard, MIT and Mass General Brigham to the laboratory of Professor Shiv Pillai and Dr Thomas Guy for research training and to foster a collaborative research relationship between RPA and the Ragon Institute
3. Department research and clinical activities has been approved to become the Sydney Translational Immunology and Allergy Centre

Awards and Medals

Dr Peter Bradhurst

- Awarded the inaugural *Research Scholarship in Immunology Diagnostics through the RPA Institute for Academic Medicine*
- Awarded \$25,000 the Post graduate Research Fellowship by the RCPA
- DS Nelson Trainee Prize: Runner up for best oral presentation at RCPA Pathology Update

Dr Anne Swain (PhD)

- Fellow of Dietitians Australia (FDA)

Dr Alex Stoyanov

- People's Choice Award, *RPA Institute for Academic Medicine annual Research at First Sight competition*

Research Staff

1. Alex Richardson, Research Manager

2024 Presentations

- **P Bradhurst**. (2024). A bioluminescent homogeneous immunoassay to detect anti-interferon gamma antibodies. Pathology, 56, S36.
- **G Xu**, Limaye S An approach to investigations and treatment of idiopathic granulomatous mastitis, poster ASCIA Annual Scientific meeting 2024
- **A Swain**, 2024 Allergy and Intolerance workshop update for dietitians – Coffs Harbour and regional dietitians
- L Sprogyte, M Park, L Nureen, N Tedla, **A Richardson**, N Di Girolamo, 2024, Development and characterization of a preclinical mouse model of alkali-induced limbal stem cell deficiency, Invest Ophthalmol Vis Sci, 65 (7), 5821-5821 (Presented at ARVO)
- **S Swamy** International presentation at ESID (European Society for Immunodeficiencies) – late breaking abstract: Deletion of EML4, a gene encoding a microtubule associated protein, in patients with pulmonary alveolar proteinosis-like interstitial lung disease
- **S Swamy** Paediatric Allergy Update, Oct. 2024 (Children's Hospital at Westmead): Infection related inflammatory syndromes - PIMS-TS, MIRM.



Dermatology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
DERMATOLOGY	Diona Damian	14
	Gilberto Moreno	
	Patricia Lowe	
	Andrew Chen	
	Geoffrey Lee	
	Gloria Fong	
	Angelica Tjokrowidjaja	
	Margit Polcz	
	Bruno Blaya	
	Charlotte Thomas	
	Ludi Ge	
	Thevaki Wain	
	Matthew Lin	
	Nita Agar	

Head of Department* IAM Role*

Staffing Profile

14 Consultants
4 Advanced Trainees
1 Unaccredited Trainee
0.5FTE RMO

Higher Degree Students

6 PhD
2 Masters

2024 Publications

3 Original Research Articles

Total Grants

\$567,683 Total Active Grants

Key Research Achievements

- Sydney Cancer Partners Pilot Grant project underway: perioperative propranolol and celecoxib to modify the tumour microenvironment and reduce recurrence in patients with nodal and cutaneous metastatic melanoma. (D Damian CIA; Prof Robyn Saw CIB). Data analysis underway for tumour immune microenvironment studies in primary melanomas
- Work using the novel technology of imaging mass cytometry is ongoing in keratinocyte cancers and melanomas arising in immune suppressed and immune competent individuals.
- Collaborations with The Charles Perkins Centre (CPC) and the RPA Department of Tissue Pathology and Diagnostic Oncology have enabled this work to be undertaken with PhD candidate Dr Catherine Zilberg supervised by Prof Damian, A/Prof Ruta Guta (Tissue Pathology and Diagnostic Oncology) and Dr Angela Ferguson (CPC)



- Ongoing work in human oral squamous cell carcinoma is examining the role and nature of epithelial plasticity in cancer development and progression. We have established monoclonal cell lines from individual tumours and demonstrated that they interact with respect to cell growth and drug resistance. This suggests that a novel mechanism involving symbiosis between clones might promote tumour malignancy and resistance to therapy.
- A Medical Research Futures Fund supported clinical trial of topical sirolimus to reduce skin cancer incidence in transplant patients has commenced at RPA Dermatology.
- Investigator initiated trials include intralesional triamcinolone for lower leg squamous cell carcinomas in elderly patients (recruitment now beyond halfway to target).
- The Department's psoriasis research program continued in 2024 with an evaluation of Drug survival of biologic treatments in patients with psoriasis. Investigators in this collaborative RPAH/Westmead project include A/Prof Patricia Lowe, MPhil candidate Samantha Ting, Prof Pablo Fernandez Penas and Dr Annika Smith.

Awards/Medals

- Professor Diona Damian was awarded the Australasian College of Dermatologists Silver Medal, for signal and valuable service to College and distinguished service to dermatology.
- Associate Professor J Guy Lyons received the 2024 Barry Preston Award, conferred by the Matrix Biology Society of Australia and New Zealand to recognise "an outstanding leader in the matrix biology field distinguished by a sustained record of achievement, commitment to mentoring junior researchers and exceptional communication skills."

Research Staff 4

1. Professor Diona Damian, Clinical Academic and Co-Head of Discipline, University of Sydney
2. Associate Professor Guy Lyons, Senior Hospital Scientist RPAH
3. Dr Geoffrey Lee, Staff Specialist Dermatology
4. Dr Katina Selvaraj, Senior Dermatology Research Fellow

Presentations in 2024

- Guy Lyons. Australasian Society for Dermatology Research, 2024 Annual Scientific Meeting. "Evolution of multiclonality in head and neck squamous cell carcinomas", N. Ketchaikosol, D. Bettega, V. Raviraj, R. Khanom, N. Delic, M. Lok, G.G. Neely, P.M. Hansbro, J.G. Lyons. 2024 Lorne Cancer Conference.
- "The evolution of malignancy in epithelial tissues", J. Guy Lyons. Matrix Biology Society of Australia and New Zealand, 2024 Annual Scientific Meeting.

2024 Comment RPA Head of Department and IAM Clinical Sponsor

Professor Diona Damian

"Throughout 2024, the RPA Department of Dermatology focused on translational projects that enabled better understanding of the immune mechanisms of skin cancer and inflammatory skin diseases, evaluated low cost, less invasive treatments and preventive agents for skin cancer and better understanding of the impact of skin disease on quality of life.

A key area of focus has been groups at extreme risk of skin cancer such as transplant recipients."



Endocrinology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
ENDOCRINOLOGY	Stephen Twigg	23
	Angela Lee	
	Anne Maree Kean	
	Arianne Sweeting	
	Arthur Conigrave	
	Ashish Gargya	
	Eddy Tabet	
	Glynis Ross	
	Ian Caterson	
	Jencia Wong	
	Katrin Kosbab-Jackson	
	Luigi Fontana	
	Namson Lau	
	Nimalie Perera	
	Pamela Jean Ho	
	Samantha Hocking	
	Albert Hsieh	
	Amelia Fernandes (HMVO)	
	Tania Markovic	
	Ted Wu	
	Timothy Middleton	
	Stephen Colagiuri	
	Xi May Zhen	

Head of Department* IAM Role* Clinical Academic*

Staffing Profile

23 Consultants

4 Advanced Trainees

Higher Degree Students

8 PhD

3 Masters

2024 Publications

53 Original Research Articles

Total Grants

Total Active Grants \$13,597,658

Ongoing Grants \$12,056,959

New Grants acquired 2024 \$1,540,699



Sydney
Local Health District



Research Focus Areas

Thematic research areas of current and developing focus in personalized markers and therapies are as follows.

Diabetes Centre

The RPA Diabetes Centre is devoted to diabetes research and care with a strong integration and translation of our research into clinical practice. The clinician researchers are united in their focus on improving outcomes for their patients. The research undertaken at the Diabetes Centre is broad in scope; in addition to industry sponsored clinical trials some of the investigator driven questions being investigated are:

- *How to improve outcomes for young adults with type 2 diabetes, a group at highest risk for diabetes complications.* Dr Tim Middleton, Dr M Constantino, M McGill together with Clinical Professor Jencia Wong and Prof S Twigg have shown the promise of a novel technology based rapid intensification protocol in preserving beta cell function in young adults. The efficacy of newer pharmacological agents will be further explored in future studies planned. Harnessing technology in the TEXT2U study in collaboration with Professor C Chow, they have also demonstrated the benefits of a semi-personalised SMS based intervention in improving empowerment and engagement young people with type 2 diabetes.
- *Factors linked to longevity in type 1 diabetes in the Kellion Victory Medalists program.* Professor Twigg is working with DA and the Endocrine research Laboratory to identify clinical, blood, urine and faeces factors linked to longevity, including in omics research.
- *How to improve outcomes for those living with diabetes related foot disease?* The Diabetes Centre High Risk Foot Service, has continued research lead by Ms. Vanessa Nube and Prof. Stephen Twigg, addressing predictive factors and wound fluid biomarkers for ulcer healing in diabetes (termed PredictU), novel imaging technology in assessments, and with our exercise colleague (Baker and Johnson), bespoke exercise in people with diabetes and a foot ulcer.
- *Can we improve outcomes for “early” GDM and the generational impact of in-utero exposure to hyperglycaemia?* A/Prof Glynis Ross, Dr Arianne Sweeting and Clinical Professor Jencia Wong and Anna Jane Harding continue their collaborative research into aspects of Antenatal Diabetes with a particular focus on Early Gestational Diabetes, Type 1 and Type 2 diabetes in pregnancy.
- *How do the newer diabetes agents perform in diabetes related liver and kidney disease disease?* Prof Twigg, Prof Wong, Dr Ted Wu and A/Prof. Margaret McGill with Ms Amanda Gauld continue research projects utilising real world data in linkage with administration databases to answer many clinical questions.
- *Can we individualise diabetes care using newer diabetes agents in Monogenic Diabetes/MODY diabetes?* Dr M Constantino and M McGill using experience from the Young Adult and Atypical Diabetes Service in collaboration with Dr A Mallawaarachchi (Sydney LHD) continue to describe CGM profiles by genotype to further inform treatment of this unique diabetes subtype.
- *Will the addition of CGM to a Rapid Access clinic aid patients care on discharge from hospital for insulin treated patients?* Dr Ted Wu will lead this pragmatic study in 2022-24
- Prof Wong in a collaboration led by Dr J Wu of the George institute is to further examine the impact of a food intervention on metabolic parameters in those living with food insecurity.

Diabetes Centre Research Projects 2024-2025

1. Type 1 diabetes overweight and obesity – twincretin and nutrition therapy, Prof. Wong, PhD student Dr Xi May Zhen and Prof. Twigg
2. Age and Age of Onset of Diabetes: Glucose lowering and weight loss efficacy of GLP1RA agents. A retrospective cohort study
3. Predictors of healing and prognostic factors in Diabetic Foot Ulcers in High-Risk Patients plus wound fluid MMP-9 as a biomarker





4. NOX 1 inhibition in Diabetic Nephropathy. A multicentre RCT
5. FAME 1 Eye study. A multicentre RCT of fenofibrate for retinopathy in T2DM
6. Diabetes Centre COVID 19 Cohort study - completing
7. Mortality and Renal outcomes in YT2DM and T1DM with overweight and obesity
8. Comparison of NODAT and pre-existing diabetes after renal and liver transplant
9. FLASH RADS: RCT of CGMS and Rapid Access Clinic on insulin treated patient discharged from hospital
10. FOOD FARMACY intervention in food insecure type 2 diabetes collaborative pilot study
11. Diabetes Distress and Telehealth: To assess the discordance of physician and patient reported diabetes distress in T1DM managed by telehealth
12. New Agents for Diabetes in MODY. A Narrative review and clinical audit
13. A semi-personalised Text based intervention for T1DM with overweight /obesity.
14. Prediction of Healing and Treatment of recalcitrant foot ulcers using Revita topical therapy (Predict U study)
15. Diabetes Foot Ulcer and upper body exercise study (DFUEX)
16. Diabetes Neuropathy study (DNS) in those with a foot ulcer history of upper and lower limb neuropathy, autonomic neuropathy, mood state and cognitive disorder.

Greg Brown Diabetes and Endocrinology Research Laboratories

Over the next 12 months, the team from the Greg Brown Diabetes & Endocrinology Research Laboratory plans to continue to generate key research data across animal models and human studies, in diabetes and liver disease, diabetes and foot ulcer care, and exercise and prediabetes interventions.

1. Diabetes and fatty liver disease research in NASH fibrosis novel mouse models for marker and intervention studies and supported translational studies from the clinic to the laboratory. Human studies in archived samples for potential markers of NASH fibrosis
2. Exercise studies in high fat fed and diabetic mice examining structure-function studies in rodent skeletal muscle changes and in NASH
3. Studies of chronic inflammation in diabetes with circulating monocyte profiles in humans and rodent models, linking to diabetes complications in tissues.
4. Studies of biomarkers in wound healing in rodent models and in human post-debridement foot ulcer fluid
5. Biomarkers in blood and wound fluid for ulcer healing outcomes in people with diabetes-related foot disease
6. Cell culture and rodent models in to prevent prostate cancer progression. This project is to develop an herb-based medicine strategy to inhibit prostate cancer progression.
7. CGMS variability studies

CPC RPA Clinic in Endocrinology

1. International collaborative studies of exercise in pre-diabetes (termed PACE-Gplus) to address circulating monocyte profiles, but microbiota, lipidomics, microRNA profiles with MAFLD and traditional diabetes complications.
2. Studies in early diabetes in pregnancy diagnosis and maternal and fetal outcomes, and early markers of GDM by proteomic profiling are occurring.

Endocrinology and Metabolism Centre

(i) TSH receptor antibody diagnostic testing

1. Head-to-head comparison of commercial TSH receptor antibody assays with previously collected serum samples (manual, cell based, automated)





2. In the process of acquiring more cell based Thyretain diagnostic kits
3. The diagnostic test will be NATA accredited in July 2024 and will be available to the NSW Health Pathology diagnostic laboratories
4. Evaluating fast turnover TSI assay and submit for NATA accreditation

(ii) Adrenal insufficiency alert project

1. Study protocol approved by ethics committee.
2. RedCap database entry questionnaire built
3. Review the current list of patients with adrenal insufficiency
4. Compare the patient outcome before and after introduction of the adrenal alert

(iii) Liver transplant severe osteoporosis quality assurance project

1. Identify liver transplant patient with osteoporosis when presented for initial BMD
2. Capturing the osteoporosis cases and implement timely treatment
3. BMD nurse commenced patient identification in the between 2018-2019 and the duration between BMD and clinic referral / review

(iv) Glucocorticoid usage in parenteral anti-resorptive therapy

1. Literature review
 2. Setup local protocol for parenteral anti-resorptive therapy
- (v) Clinical Audit of Diabetic Ketoacidosis Presentations to a major tertiary centre. Commenced in August 2023.
- (vi) Glucagon stimulation test audit in patients with Prader-Willi Syndrome

Metabolism and Obesity Service

Bariatric surgery

- Updating database for audit and retrospective analysis
- Looking at impact of pre weight loss on post weight loss in bariatric surgery patients
- Do patients with diabetes lose less weight post bariatric surgery than those who do not have diabetes?
-

Prader-Willi Syndrome cases

- Completing an audit
- Thyroid disease in people with PWS
- Training effect on muscle mass in PWS (Presto trial)
- Randomised, placebo-controlled study investigating the efficacy of Tesomet (Tesofensine and Metoprolol) in participants with Prader-Willi Syndrome
- A Phase 3, Randomized, Double-Blind, Placebo Controlled Study of RAD011 (Cannabidiol Oral Solution) for the Treatment of Patients with Prader Willi Syndrome

Exploring different treatment options for individuals with severe obesity (BMI > 50 and co-morbidities), including the use of severely energy restricted diets, pharmacotherapy and bariatric surgery

- Protocol and outcomes of changing to online Zoom VLED groups

Eating pathology in those with severe obesity including food addiction and binge eating

- Outcome of meeting criteria for food addiction in patients seeking treatment for weight loss



Psychological assessment process

- Evaluation of switching to a online psychological assessment
- Establishment of a Arabic psychological assessment process

COVID-19 - Lifestyle changes due to COVID-19 lockdowns in Australia

Cystic Fibrosis Endocrinology

Effects of physical activity and exercise on glycaemic control in CF (pre/post Trikafta, a potent gene modulator), also to explore impact on body composition of these potent drugs.

Clinical Audit into bone density results in clinic population, treatment strategies and outcomes

Cystic Fibrosis Diabetes complications database development and linkage.

Charles Perkins Centre RPA Clinic

In 2023, the RPA Clinic at Charles Perkins Centre (CPC) launched the CPC RPA 'Health for Life' Program and CPC RPA 'Lifestyle Medicine' Clinical Service. The CPC RPA Health for Life Program is designed to promote a healthy lifestyle and support the residents of New South Wales (NSW) in their journey to live and age well. This program is led by a team of researchers and healthcare professionals, including doctors, dietitians, exercise physiologists, and a chef with expertise in healthy cooking. Participants gain understanding and practical knowledge about evidence-based strategies for maintaining a healthy lifestyle and work towards enhancing their metabolic health and overall well-being. In 2024 and 20265 this program is maturing.

The CPC RPA Lifestyle Medicine Clinical Service specializes in a healthcare discipline that places primary importance on utilizing therapeutic lifestyle interventions to prevent, slow, manage, and in some cases even reverse chronic medical conditions. These conditions include abdominal obesity, prediabetes/type 2 diabetes, hypertension, dyslipidaemia, fatty liver disease, cardiovascular diseases, stroke, dementia, and some of the most common obesity-related cancers (breast, colon, prostate, endometrial cancer).

The clinic's team is equipped with the expertise, skills and capabilities necessary to implement evidence-based, personalized lifestyle changes as a foundational component of patient care. The goal extends beyond merely managing symptoms and administering pharmaceutical treatments for specific conditions. Instead, the team aspires to target the underlying causes of metabolic and molecular changes that contribute to a range of chronic conditions. By doing so, they aim to enhance the health and overall well-being of patients. Their final objective is to empower patients with the education and skills necessary to make healthy, sustainable, and safe lifestyle choices and healthier habits that positively impact their metabolic health and well-being.

Research Staff 34

Presentations in 2024

National 17

International 18

Awards/ Medals

- The Nenny Nairn Nurses in Action" Award at the 2024 ENSA / ESA combined meeting, Jeslie Avril Calingasan & Rupinder Kaur, for the presentation of "Prader-Willi Syndrome – Getting the best from the glucagon test".
- ANZOS best clinical poster 2025; Victoria Andrews Title: Assessing prevalence of significant fatty liver disease in a tertiary obesity service"



Research Summary

The RPA Department of Endocrinology undertakes a broad range of research enquiry into a breadth of endocrine diseases. It focuses on delivering excellence in research quality, with outcomes that always point towards improving patient care for people with lived experience of endocrine conditions. Endocrinology also run clinical trials, clinical cohort and other investigator driven studies, audits, case series and case studies, plus preclinical cell based and animal research that provide information to aid research translation in endocrine conditions.

The Department networks extensively with many research bodies, including the University of Sydney Faculties and Schools, Departments in RPA and SLHD plus IAS, Source, and IAM, Sydney Health Partners Obesity and Diabetes CAG, and non for profit national and international endocrine scientific organisations.

The Department of Endocrinology, with Head of Department Prof. Stephen Twigg, is comprised of:

- 1.The Diabetes Centre (addressing how different areas can help people with diabetes manage their condition and improve their quality of life)
- 2.Metabolism and Obesity Service (MOS)
- 3.Endocrinology and Metabolism Centre (EMC)
- 4.The CPC RPA Clinic (Endocrinology Node)
- 5.The Greg Brown Diabetes & Endocrinology Research Laboratory

2024 Comment RPA Head of Department and IAM Clinical Sponsor

Professor Stephen Twigg

“The Department is considering establishing an Endocrine-related Academic Metabolic Translational Research Centre across RPA and University of Sydney.

In 2024, the RPA Department of Endocrinology, with the help of the IAM, created a new Senior Health Services Manager role as Clinical Trials Director to consolidate governance leadership for department clinical trials. This role is held by Associate Professor Nicholas Fuller who now facilitates clinical trials research initiatives across RPA Endocrinology.”



Professor Stephen Twigg
Head of Department
IAM Clinical Sponsor



Professor Jencia Wong
IAM Research Lead



Geriatric Medicine

Consultant Profile

RPA Medical Department	CONSULTANTS	#
GERIATRIC MEDICINE	Jennifer Benbow	16
	Heike Burnet	
	Leemin Chan	
	Cristina Cristoloveanu	
	Liesl Ischia	
	Mark Latt	
	Scott Murray	
	Natasha Sequeira	
	Rihan Shahab	
	Rosemary Sheehy	
	Eve McClure	
	Andreas Suryawan	
	Samantha Thirunavukarasu	
	Daniel Simpkins	
	George Szonyi	
	Melanie Wroth	

Head of Department* IAM Role*

Staffing Profile

- 16 Consultants
- 4 Advanced Trainees
- 3 Basic Physician Trainees
- 5 JMOs

2024 Publications

- 3 Original Research Articles

Research Focus

The RPA Department of Geriatric Medicine is currently involved in several collaborative research projects across a variety of topics including trauma geriatrics, delirium and lewy body dementia, falls preventions and intranasal insulin for the prevention of delirium in surgical patients. There is ongoing research in the SipTilSend hip fracture population and collaboration with the Surgical Outcomes Research Centre (SOuRCe) in investigation of frailty in older patients undergoing surgery.

Website

https://www.slhd.nsw.gov.au/research/department_details.html?research=geriatric



Infectious Diseases

Consultant Profile

RPA Medical Department	CONSULTANTS	#
INFECTIOUS DISEASES AND MICROBIOLOGY	Rebecca Davis	11
	Sebastiaan Van Hal	
	Amrita Ronnachit	
	Simeon Crawford	
	Susan Harch	
	Tina Marinelli	
	Feras Mirdad	
	Andie Lee	
	Blake Nield	
	Jeffrey Masters	
	Nila Dharan	

Head of Department* IAM Role*

Staffing Profile

11 Consultants

3 Advanced Trainees

1 Basic Physician Trainee

1 RMO

Higher Degree Students

1 PhD

2024 Publications

32 Original Research Articles

Did RPA Infectious Diseases contribute to Bio-banking activities in 2024? Yes

Number of non-clinical trials active research studies in your department 12

Number of active drug or device clinical trials 3

Total number of patients recruited for all trials in 2024 62

Research Focus

The RPA Department of Infectious Diseases and Microbiology conducts research into various aspects of clinical infectious diseases and microbiology with a focus on:

- Multidrug-resistant bacteria and the healthcare-associated infections they cause
- Pathogen genomics
- Invasive bacterial infections, such as infections in the blood stream, deep tissues, and bones or joints
- Respiratory infections in hospitalised patients
- Infections in immunocompromised individuals



Sydney
Local Health District



Multidrug-resistant bacteria and the healthcare-associated infections they cause are one of the most significant future threats to human health both in Australia and globally. Effective antibiotics are essential for the safe provision of life-saving interventions such as solid organ and bone marrow transplantation, cancer chemotherapy and surgery. These interventions are now under threat due to rapidly expanding antimicrobial resistance and a lack of novel antimicrobial drug classes.

Using **pathogen genomics and state-of-the-art molecular epidemiological methods**, research in the Department focuses on understanding how these multidrug-resistant bacteria spread across the community and the hospital and how they adapt to specific niches. This research is accomplished by patient screening, surveillance and use of whole genome sequencing for high-consequence and high-prevalence micro-organisms.

RPA Infectious Diseases and Microbiology participates in national surveillance programs for bacterial resistance, reporting to the Australian Group for Antimicrobial Resistance (AGAR), OrgTrx and CARalerts. The Department has led the state in developing highly specialised and locally optimised in-house bioinformatics pipelines and automated reporting systems. This has facilitated studies which have provided important insights into the transmission dynamics of healthcare-associated pathogens, particularly vancomycin-resistant enterococcus (VRE) and carbapenem-resistant Enterobacterales (CPE), and more recently SARS-CoV-2. Research findings have been rapidly translated into the implementation of targeted measures to optimise control of these multi-drug resistant organisms as well as COVID-19.

In the area of **invasive bacterial infections**, the Department joined a national randomised clinical trial evaluating the management of Staphylococcus aureus blood stream infections and initiated an observational study evaluating outcomes in people who inject drugs and are hospitalised with invasive infections, which is led by one of the Infectious Diseases Staff Specialists. They also joined a randomised clinical trial evaluating the optimal management of prosthetic joint infections, which will be initiated at RPA in the next two months.

Two studies are planned to start in 2025, which evaluate **respiratory infections in hospitalised patients** through an international adaptive clinical trial platform called Strategies and Treatments for Respiratory Infections & Viral Emergencies (STRIVE): 1) an observational study of immunocompromised individuals hospitalised with severe respiratory infections; 2) a randomised clinical trial evaluating the use of steroids in severe respiratory infections.

The Department's research in **immunocompromised individuals** includes liver, renal and allogeneic transplant recipients, as well as people with HIV. They participate in mycology studies evaluating fungal resistance rates, which have enabled refinement of local antifungal prophylaxis strategies for the numerous immunocompromised individuals cared for at RPA Hospital.

Ongoing studies in transplant recipients include evaluations of surgical site infections and colonisation and invasive infections with multidrug resistant infections. HIV drug resistance surveillance is another area of interest of the Department, through involvement in the implementation of a state-wide HIV drug resistance database and participation in national surveillance reports. In 2024, they joined a national observational study in women with HIV led by researchers at UNSW, to obtain data on clinical, behavioural and social outcomes in women living with HIV in Australia.



Key achievements

RPA Infectious Diseases and Microbiology has hired an inaugural Research Study Coordinator dedicated to research in the Department of Infectious Diseases and Microbiology. This represents a major step forward, allowing the department capacity to take on additional research studies and dedicate more time to clinical research.

Awards and Medals

2024 RPA President's Prize for Laboratory of Data Research, awarded to Microbiology Advanced Trainee Siobhan Hurley

Research Staff

Research Study Coordinator for Department research activities including development of Research Standard Operating Procedures, ethics and governance submissions, and research study reporting.

Presentations in 2024

- Dr Tina Marinelli. Future Challenges and Opportunities for Transplant Infectious Diseases. Australasian Society for Infectious Diseases Annual Scientific Meeting. Wellington, New Zealand. March 2024
- Dr Tina Marinelli. Increased Virologic Risk Donors and HIV. Brisbane Transplant Infectious Diseases Symposium. Brisbane, Australia. May 2024
- Dr Tina Marinelli. Antifungal Prophylaxis in Lung Transplant Recipients. Infections in lung transplantation: A network to meet the challenge. Palermo, Italy. May 2024
- Dr Tina Marinelli. Infections Associated with Ex-Vivo Perfusion. Transplant society of Australia and New Zealand Annual Scientific Meeting. Melbourne, Australia. June 2024
- Dr Tina Marinelli. Viral infections in solid organ transplant. Transplant society of Australia and New Zealand, Frontiers and challenges in organ transplantation (FACT) day. Melbourne, Australia. June 2024
- Dr Tina Marinelli. International Society of Heart and Lung Transplantation Pathology Webinar. 'When the histopathologist needs the microbiologist'. June 2024
- Han WM (presenter), Bloch M, Baker DA, Roth N, Hoy JF, Woolley I, Finlayson R, Costello J, Dawson MA, Dawson S-J, Polizzotto MN, Petoumenos K, Yeh P, Dharan NJ for the ARCHIVE Study Group. Clonal Hematopoiesis and HIV Infection are Associated with Geriatric Outcomes: the ARCHIVE Study. Conference on Retroviruses and Opportunistic Infections, March 6, 2024, Denver Colorado, United States of America.

Comment by IAM Research Lead for 2024, Dr Nila Dharan

"In 2024, the RPA Infectious Diseases and Microbiology Department continued to build on our research capacity by hiring our first Research Study Coordinator, expanding our breadth of research through large multi-site international studies, pursuing new Industry partnerships and applying for new funding opportunities. These steps have increased our research capacity and our dedicated time to complete clinical research that will carry forward from 2024 into the future."

Website

<https://www.slhd.nsw.gov.au/rpa/InfDiseases/default.html>



Medical Genomics

Consultant Profile

RPA Medical Department	CONSULTANTS	#
MEDICAL GENOMICS	Ronald Trent	6
	Lisa Worgan	
	Felicity Collins	
	Jay Ramanathan	
	Amali Mallawaarachchi	
	Anthony Cheong	

Head of Department* IAM Role*

Staffing Profile

6 Consultants

1 Advanced Trainee

2024 Publications

18 Original Research Articles

2 Book Chapters

Higher Degree Students

PhD – 1

Total Active Grants \$22,983,367

Active Clinical Trials 12

Research Summary

The Institute of Precision Medicine and Bioinformatics (IPM&B) is deeply committed to advancing healthcare by tailoring medical care to individual patients through precision medicine and innovative bioinformatics. The team is actively engaged in various research projects, including clinical trials aimed at improving treatments for heart disease and metabolic disorders, utilizing data collected from our outpatient clinics.

They collaborate closely with experts from other leading institutions, such as Concord Hospital and the Children's Hospital at Westmead. These partnerships have led to significant achievements, including case studies, conference presentations, and groundbreaking projects like the genomic screening of newborns. Additionally, their work contributes to securing major research grants, enabling further progress in healthcare innovation.

At IPM&B, there is a strong focus on using advanced tools and technologies, such as long-read DNA sequencing, to refine diagnosis and develop personalised treatments. Beyond their research, IPM&B is proud to mentor the next generation of scientists and share their findings through publications and events.

Key achievements

1 Leadership in Genomics Initiatives: Continuing work as Co-Chair of the NSW Health Ministry's Genomics Steering Committee, driving the implementation of the NSW Genomics 5-Year Plan



- 2 Development of the SLHD Precision Medicine Strategic Plan 2025–2030: Contributing to the development of the SLHD Precision Medicine Strategic Plan 2025–2030, which outlines vital pathways to advance precision medicine throughout SLHD. This strategic plan provides a framework for the Department of Medical Genomics and the IPM&B's focus on genomics, education, and collaborations, ensuring alignment with district-wide objectives
- 3 Digital Integration for Research: Contributing as Co-Chair of the genomics working group for the rollout of the Single Digital Patient Record (SDPR), ensuring research access to integrated patient data.
- 4 Membership of SDPR Pathology Integration Steering Committee: To ensure pathology results from external and NSW Health Pathology testing are accessible for research
- 5 Capacity Building in Genomics: Develop new partnerships such as genomics research expertise and collaborations with Macquarie University's Faculty of Medicine to secure competitive research grants.
- 6 Collaboration with the Garvan Institute: Ongoing work on the Board (Director) of the Garvan Institute of Medical Research's Board to foster opportunities for medical research in NSW
- 7 Successful Grant Acquisition: Securing in the near future an MRFF grant for implementing long-read sequencing in clinical settings, advancing genomic research and clinical applications
- 8 Clinical Trials and Patient Recruitment: Conducting pharmaceutical-sponsored clinical trials, primarily targeting vascular/metabolic disorders, with recruitment through outpatient lipid clinics and referrals.
- 9 Collaborating with neurology colleagues at Concord Hospital: This has resulted in a short time frame in two case reports, a conference presentation, and contributions to the MRFF grant.
- 10 Genomic Newborn Screening: Collaborating with the Children's Hospital Westmead on ongoing research projects in genomic newborn screening.

Research Staff

Principal Investigator (clinical trials; metabolic medicine) - A/Professor David Sullivan

Sub-Investigators

- Dr Nimalie Perera
- Dr Jay Ramanathan
- Dr Elizabeth Robertson
- Dr Sandhya Ramakrishna
- Dr Paul Bonnitcha

Study Coordinators

- Ms Nicole Lai
- Ms Kerry Kearins
- Ms Darcie Kavanagh

Allied assistance

- Madeline Calder

2024 Comment RPA Head of Department and Director of IPM&B, **Professor Ron Trent**

"The SLHD Institute of Precision Medicine & Bioinformatics is closely aligned with the NSW Health Pathology's Dept of Medical Genomics work at RPA, and the Molecular Medicine Laboratory in Concord. This partnership has brought together the clinical and laboratory components of precision medicine that enable the personalised profiles to be developed prior to the interventions or novel therapies used in precision medicine.

These interactions have resulted in multiple research grants and publications. Since precision medicine has now been announced as one of the strategic goals for the SLHD 2025-2030 Strategic Plan, it can be expected that 2026 will continue to be a busy and productive year to ensure research results are quickly translated into precision medicine models of care. 2025 has also seen the start to the building of the Sydney Biomedical Accelerator (SBA) which is a joint SLHD and USYD research facility.

In the SBA there is being developed a Precision Medicine Research Facility which will enable innovative research findings to be undertaken within a NATA ISO15189 accredited research laboratory and so ready for immediate implementation within clinical care at SLHD."



Neurology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
NEUROLOGY	Armin Nikpour	17
	Michael Barnett	
	Rebekah Ahmed	
	Craig Anderson	
	Heidi Beadhall	
	John Worthington	
	Judith Spies	
	Kaitlyn Parratt	
	Leo Davies	
	Michael Halmagyi	
	Miriam Welgampola	
	Stacey Jankelowitz	
	Stephen Winters	
	Timothy Ang	
	Toh Hock Wong	
	Chris Blair	
	Elie Matar	

Head of Department* Clinical Academic* IAM Role*

Staffing Profile

17 Consultants
2 Clinical Academics
2 Fellows
5 Advanced Trainees
1 BPT
1 Intern
1 RMO

2024 Publications

98 Original Research Articles

Higher Degree Students

PhD – 14
Masters – 2

Active Grants \$51,161,584

Existing Ongoing Grants \$29,309,435
New Grants awarded in 2024 \$21,852,149

Number of non-clinical trials active research studies in your department 5

Book Chapters

Matar E, Abubaker I, Yee B. REM sleep behavior disorder. Textbook of Sleep and Circadian Medicine, edited by Dr. Clete A. Kushida and Dr. Laura Weiss Roberts. American Psychiatric Association Publishing. 2024.



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Clinical Trials

Number of active drug or device clinical trials

Memory and Cognition **6**

Epilepsy **7**

MS **3**

Stroke **8**

Number of patients recruited for all trials in 2024

Memory and Cognition **11**

Epilepsy **3**

MS **37**

Stroke **16**

Research Summary

Associate Professor Rebekah Ahmed is an Associate Professor, at the Brain and Mind Centre, University of Sydney, and a Consultant Neurologist and Director of the Memory and Cognition Clinic at RPA Hospital and Neurologist at FOREFRONT, a clinical research group dedicated to Frontotemporal dementia and motor neurone disease at the University of Sydney. Her research focuses on metabolic and physiological changes in neurodegeneration, particularly Frontotemporal dementia and Motor Neurone Disease. She is an internationally recognised leader in the neurobiology of younger-onset dementia.

Professor Craig Anderson is Professor of Neurology and Epidemiology, Faculty of Medicine, UNSW Sydney, and is in part-time clinical practice as a neurologist at RPA Hospital. He has published widely on the clinical and epidemiological aspects of stroke, cardiovascular disease and aged care, and has led several large-scale investigator-initiated epidemiological and clinical trials that have had a major influence on clinical practice guidelines for stroke treatment and prevention.

Professor Michael Barnett MBBS (Hons), FRACP, FRCP, PhD is a neurologist specialising in the management of neuroimmunological disorders. He is the Director of the Multiple Sclerosis (MS) and Neuroimmunology Service at RPA, Director of the MS Clinical Trials Unit at Brain and Mind Centre, Co-director of the MS Australia Brain Bank, Lead of the Computational Neuroimaging Team BMC, and Research Director at Sydney Neuroimaging Analysis Centre (SNAC).

Professor Barnett leads a comprehensive MS and related disorders research program that spans laboratory, imaging, translational and clinical trials research. He maintains an active investigator-driven research program, based around the academic RPA MS service (the largest multidisciplinary MS clinic in NSW); and has published high impact neuroimaging research, relating primarily to the development of advanced and AI-based imaging biomarkers in MS and other neurological disorders.

Dr Chris Blair is a Senior Research Fellow in the Advanced Imaging Group at the Sydney Brain Centre, Ingham Institute for Applied Medical Research, Sydney Partnership for Health, Education, Research & Enterprise (SPHERE) Translational Research Fellow in Stroke Medicine, and a Senior Lecturer at the University of New South Wales (South-Western Sydney Clinical School). He is also a former Clinical Lecturer at the University of Sydney (Central Clinical School, RPA Hospital) and Postdoctoral Research Fellow at the Victor Chang Cardiac Research Institute. He is a practicing stroke neurologist in Sydney (RPA & Liverpool Hospitals).

Dr Blair is an early career researcher with expertise in the areas of large-scale clinical trials management and imaging analysis. He currently co-supervises three Honours students and two PhD candidates.





Associate Professor Armin (Mohamed) Nikpour is the Director of the Comprehensive Epilepsy Service at Royal Prince Alfred Hospital and University of Sydney. He is also a specialist in Positron Emission Tomography. A/Professor Nikpour is recognised for his expertise in epilepsy management, particularly imaging and surgical planning. His research involves the use of mathematical and engineering techniques to detect seizures and develop new methods for recording brain waves.

His other research interests include the detection and treatment of mood disorders and memory problems that often accompany epilepsy. He has also investigated novel radioligands for the imaging of the brain. As Head of the Epilepsy Unit, A/Professor Nikpour has developed close collaborations with other specialties including physics, engineering, psychology and neuropsychology.

Professor John Worthington - The Stroke Observatory is dry lab using routinely collected data to establish datasets, monitor quality and outcomes, translating research to improve bed-side and system wide services through feedback to clinicians, the Ministry, Health Pillars and other agencies. It has pioneered epidemiological/data analysis and reporting methods in stroke research.

Key achievements

Dr Heidi Beadnell

Research Grant Collaborations

- Chief Investigator on successful Trish MS Research Foundation Project Grant.
- Collaborator on successful NHMRC Ideas Grant, MS Australia Project Grant and MS Australia Incubator Grant.

Lead site Primary Investigator for the VISIONARY-MS Clinical Trial

- Global Phase II clinical trial investigating the remyelinating properties of gold nanoparticles.
- Lead site, largest recruiting site, primary investigator.
- Results were presented at two International Conferences in 2024 for the Long-term extension data:
- AAN 2024 – Presentation of published abstract
- ECTRIMS 2024 – Late Breaking Poster presentation by Marjan Sepassi.

MSBase Imaging Repository (MSBIR).

- Part of the leadership group that developed and runs the global MSBase Imaging Repository, which was deployed in 2021 to provide a curated, centralised imaging data source for MS and imaging researchers globally.
- Project Control Board member and the lead of clinical site integration [liaising with new and current contributing sites from around the world].

Automated quantitative brain MRI metrics in clinical MS decision making

- Prospective study.
- Chief Investigator for the project funded by a 2023 MS Australia Incubator Grant.

TRANSCEND Clinical Validation Study

- Leading the clinical validation study component of the TRANSCEND AI project, investigating the role of AI modelling in real-world clinical MS practice.
- Funded by a successful MRFF Neuroimaging-AI grant of >\$4 million (CI – Michael Barnett).

Professor Craig Anderson

Elected President-Elect of the World Stroke Organisation for 2025-2026, to take on the role of President for 2027-2028.





Associate Professor Rebekah Ahmed

Ongoing development of clinical trials in Dementia at RPAH. 5 clinical trials in Alzheimer's disease and Frontotemporal dementia, including gene therapy in FTD
Appointed as Block Chair for Neurology, University of Sydney for a further 5 years.

Dr Elie Matar

- Led a research team pursuing a program of research focused around sleep wake circuitry and progression of pathology in Lewy body disorders.
- Supervised two post-docs, five HDR students and 11 clinician-researchers, with several receiving awards or competitive scholarships.
- Successful grant as CI-A for Internal Grant Call for EMCR Ageing Grant to study and recruit delirium onset DLB
- Gave seven invited presentations at international and national conferences and symposia
- Held an advanced neuroimaging conference and machine learning workshop at the University of Sydney in November, attracting > 70 attendees from different disciplines with 5 international speakers
- Led the USYD-UCL TranSCEND (Transdiagnostic Subtyping and Classification Efforts in Neurodegenerative Disease) initiative – a transdiagnostic machine learning subtyping study as a joint collaboration between Dr Neil Oxtoby (UCL, Computer Science) and the University of Sydney leading to two publications in press
- created a neuroimaging module for the International Movement Disorders Society
- Appointed Academic Lead for the University of Sydney's Clinician Research Development Program
- Led and innovated in research-led teaching across neurology, sleep, and neurodegeneration in MD, HDR, and MOOC programs

Awards and Medals

Professor Craig Anderson

Australian Clinical Trials Alliance Trial of the Year Awards ceremony in Sydney, May 2024 – runner-up for Trial of the Year for my trial, INTERACT3 Chinese Academy of Medical Sciences (CAMS) placed INTERACT3 as one the most significant scientific progress of 2023 and in the top 10 medical achievements of the 21st century

Presentations

Dr Heidi Beadnell

American Academy of Neurology (AAN) Annual Meeting – Presentation (International)

- Barnett M, Beadnell H, Klistorner A, Sergott R, Greenberg B, Rynders A, Ho K, Sepassi M, Evan J, Evan J, McBride R, Hartford A, Hotchkin M. VISIONARY-MS Long-Term Extension: A Multicenter, Open-label, Long-Term Extension Study of CNM-Au8 in Patients With Stable Relapsing Multiple Sclerosis. AAN Congress 13-18 April 2024. Neurol 2024;102(12):S12-S13.

Australian and New Zealand Association of Neurologists (ANZAN) Annual Scientific Meeting – Poster Presentation (National)

- Tran L, Davies L, Beadnell H. Management of active multiple sclerosis after fingolimod cessation in the context of cryptococcal meningitis. ANZAN Annual Scientific Meeting 21-24 May 2024. Poster Presentation. Abstract 3093. BMJ Neurol Open 2024;6(Suppl 1):A31-A32.

European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) Congress – Late Breaking Poster Presentation (International)

- Barnett M, Beadnell H, Klistorner A, Sergott R, Greenberg BM, Rynders A, Ho K, Sepassi M, Evan J, Evan J, McBride R, Hartford A, Hotchkin M. VISIONARY-MS Long-Term Extension Results: A Multi-Centre, Open-label, Long-Term Extension Study of CNM-Au8 in Patients with Stable Relapsing Multiple Sclerosis (RMS) on top of background disease modifying therapy (DMT). ECTRIMS Congress 18-20 September 2024. Poster Presentation 919/Abstract 4285. Mult Scler 2024;30(3_Suppl):1209.





Professor Craig Anderson

- Invited Speaker: Topic: “Blood pressure lowering in intracerebral hemorrhage”. Teleconference Lecture at Hospital Clinic, Barcelona. Online January 2024
- Invited Speaker: Topic: “Principles for Blood Pressure Titration in The Acute Phase of ICH”. Invited Symposium Session 083: Intracerebral Hemorrhage: Can we stop the bleeding and improve outcome?” American Heart Association, Online February 2024.
- Invited Speaker: Topic: “INTERACT3: Hypertension and Stroke”. Joint Philippine Society of Hypertension and Philippine Lipid and Atherosclerosis Society Annual Convention, February 2024.
- Invited Speaker: Topic “Acute Management of ICH and Role of Care Bundles”. MENASO Education Academy Cerebrovascular Grand Round Webinar, Dubai, online, March 2024.
- Invited Speaker: Topic” Intensive blood pressure lowering in the ambulance for acute stroke: INTERACT4 results”. The George Institute for Global Health Wednesday Seminar, May 2024.
- Invited Speaker: Topic: “Urgent management of intracerebral haemorrhage: time to step-up care for this serious stroke type”. Building Capacity Training Conference, Sydney , May 2024
- Invited Speaker: Topic “Continuous mONitoring of recovery iN acutE isChaemic sTroke (CONNECT)”. ASHRA Seminar June 2024
- Invited Speaker: Topic “Management of blood pressure in hyperacute and acute intracerebral hemorrhage: Insights from INTERACT 3 and 4 studies”.2nd Chilean Stroke Congress, Santiago, Chile, June 2024.
- Invited Speaker: Topic “stroke platform: how to make trials more efficient”. Sydney Neurology Grand Rounds, Sydney June 2024.
- Invited Presenter and Session Convenor:4th Asian Stroke Summer School 2024, July 2024
- Invited Speaker: Topic “The beginning of the end to nihilism in acute intracerebral haemorrhage: blood pressure and other management protocols” Concord Clinician’s Workshop, Sydney July 2024
- Host and Invited Speaker: Care Bundles and Pre-Hospital Care. ICH Management Forum, Sydney August 2024
- Invited Speaker: Topic “The Story of ICH Therapies – What works, what doesn’t” . Neurovascular Lecture Series 2024,Online Pakistan August 2024
- Invited Speaker: Topic “ Neurology”. Saint Vincents Hospital Australia Grand Rounds. Sydney, August 2024
- Invited Speaker: Topic “Hemorrhagic stroke: hyperacute management – Code ICH”.World Stroke Organisation Hemorrhagic Stroke Webinar, September 2024
- Chair & Invited Speaker: Topic “Non-inferiority trials in Stroke: What do they mean?”.16th World Stroke Congress, Abu Dhabi, UAE, October 2024
- Invited Speaker: Topic “Care Bundles in Acute ICH: Current evidence and implementation strategies”. 16th World Stroke Congress, Abu Dhabi, UAE, October 2024
- Invited Speaker: Topic “Where next for medical therapy to improve reperfusion outcomes”. Oriental Conference of Interventional Neurovasculology (OCIN), Shanghai, China, October 2024.
- Invited Speaker: Topic “Ultra-early blood-pressure lowering in patients with acute intracerebral hemorrhage”. Annual Meeting of the Taiwan Stroke Society, Taipei, Taiwan, November 2024.

Dr Elie Matar

- World Congress Geriatrics. Newcastle, Australia. November 2024. Invited speaker.
- Sleep Down Under – Australasian Sleep Association Scientific Conference. Gold Coast, Australia. October 2024. Invited speaker / faculty
- International Parkinson’s and Movement Disorders Congress. Philadelphia, US. Sept 2024. Invited speaker / faculty
- Masterclass Diseases of the Ageing Brain, Sydney, Australia, 2024. Invited speaker
- Lewy body UK conference. Newcastle Upon Tyne, UK. June 2024. Invited speaker.
- Australasian Association of Neurologists Annual Scientific Conference. Melbourne, Australia. May 2024. Invited speaker.
- ADPD 2024 (Alzheimer’s dementia and Parkinson’s disease). Lisbon, Portugal. Invited speaker





Palliative Care

Consultant Profile

RPA Medical Department	CONSULTANTS	#
PALLIATIVE CARE	Anthoulla Mohamudally	8
	Lynn Lim	
	Riona Pais	
	Corey Lau	
	Maria Cigolini	
	Alix Dumitrescu	
	In Sun Moon	
	Maryse Sophie Irvine	
Head of Department* IAM Role*		

Staffing Profile

8 Consultants
3 Advanced Trainees
1 BPT
1 RMO

2024 Publications

1 Original Research Articles

Number of non-clinical trials active research studies in your department 1

Number of active drug or device clinical trials 0

Total number of patients recruited for all trials in 2024 15

Research Summary

The department pursues a wide range of research, including:

- Best practice and service delivery innovation
- Novel symptom management and acute hospital care interventions
- Participation in national and international collaborations (e.g., PaCCs, ImPaCCT, Sydney Catalyst, PCOC)
- Advanced disease therapy and supportive care planning, projects include
 - Haematology supportive care and prognostic awareness in hematopoietic stem cell transplant and CAR-T therapy
 - Trauma-informed care advance care planning and grief – integrating approaches to enhance care. Collaborative research project across SLHD surveying bereaved families and carers
 - Implementation of the multidisciplinary Palliative Care in Advance Disease (PCAD) program
 - Multicentre phase II feasibility study MEDITATEPallCare
 - Novel treatments for uremic pruritus
 - International survey (AT research project): Prescribing practices in the management of malignant bowel obstruction in palliative care settings



- Chinese-Australian patients, carers and palliative care: a qualitative analysis of experiences, cultural aspects and barriers to human-centred care (AT research project)
- PALLIOH exploratory study of oral care pathways for patients receiving palliative care

Key achievements

Active involvement in clinical service-based research, pharmacovigilance, and symptom management studies.

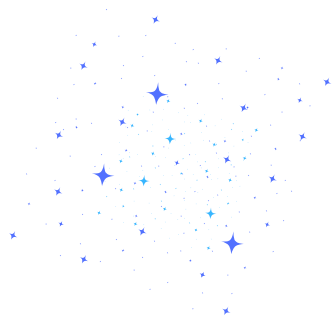
Presentations in 2024

- LFA Australian Rare Lung Disease Short Course – Dr A. Mohamudally, Invited panel member, 27 July 2024
- ANZSPM Biennial Workshop Respiratory Specialist Interest Group – Dr A. Mohamudally, Invited speaker, 5 Sept 2024
- Centre for Research and Excellence in Pulmonary Fibrosis – ELEVATE ILD Nurses National Conference – Dr A. Mohamudally, Invited speaker, 2 Nov 2024
- Sarcoma Symposium – Dr R. Pais, Invited speaker: “Supportive Care in Sarcoma Care”, 2024
- Practical Pain Management Webinar – Dr C. Lau, invited speaker (Mar 2023; widely circulated in 2024)

2024 Comment RPA Head of Department

Dr Anthoulla Mohumudally

RPA Department of Palliative and Supportive Care continues to increase its research activity in diverse areas. This includes collaboration across all the SLHD palliative care services and with multidisciplinary team members. We are involved in national multi-centre research and the collection of PCOC service outcome data contributing to “meta” studies. The Ministry of Health’s World Class End of Life Enhancement funding will increase our research capacity with recruitment of our own research nurse in 2025.





Rehabilitation Medicine

Consultant Profile

RPA Medical Department	CONSULTANTS	#
REHABILITATION MEDICINE	Ali Tahayori	7
	Patrick Arulanandam	
	Lisa Myers	
	Leon Smith	
	Jaya Ganeshkumar	
	Indu Nair	
	Darren Lee	
Head of Department* IAM Role*		

Staffing Profile

7 Consultants

Research Summary

Throughout 2024, RPA Rehabilitation Medicine had a number of research projects active. Some have been completed, results analysed, and awaits publication while some have been in preparatory phase and currently undergoing various stages of data collection, data analysis and/or publication.

Focus and Highlights

- PrESS (Proactive Rehabilitation Screening Tool) - multisite trial investigating use of a screening tool for early identification of patients who may require inpatient Rehabilitation. Dr Patrick Arulanandam is the RPA site principle investigator. Dr Jane Wu, is the principle investigator at St Vincent's Hospital.
- Dr Nair and Dr Arulanandam are Co-investigators in a study conducted by the Liver Transplant unit on Sarcopenia and Frailty in Chronic Liver Disease and Liver Transplantation: assessment pre- and post- liver transplant using prehabilitation and muscle biopsies. The project received HREC approval in May 2024.
- Dr Nair - Predicting disposition from hospital following acute subarachnoid haemorrhage; is it possible to identify which patients will require inpatient rehabilitation within 10 days of presentation? The project database is being set up on REDCap. Data collection is anticipated to commence shortly.

2024 Comment RPA Head of Department

Dr Ali Tahayori

"In 2024 we welcomed two new staff specialists, Drs Lisa Myers and Leon Smith, both with strong academic background and interest in research. Dr Smith has started a few research projects and Dr Myers has joined the working groups for some of the existing projects in the department. I am very excited for what is next to come."



Renal Medicine and Nephrology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
RENAL MEDICINE AND NEPHROLOGY	Steve Chadban	9
	Kate Wyburn	
	David Gracey	
	Leyla Aouad	
	Paul Snelling	
	Patrick Lam	
	Erin Vaughan	
	John Saunders	
	Tracey Ying	

Head of Department* IAM Role*

Staffing Profile

- 9 Consultants
- 2 Fellows
- 5 Advanced Trainees
- 1 Unaccredited Trainee
- 3 BPT
- 4 Interns

Higher Degree Students

- 5 PhD

2024 Publications

- 16 Original Research Articles

New Grants in 2024 \$1,320,000

1. Repurposing mTOR inhibitors to boost vaccine responses in the immunocompromised and elderly.
PT Coates (CIA), SJ Chadban (CIB), T Ying (CIH)
MRFF #2032117 2024-27.

Department Research Translation into clinical practice at RPA Hospital

Adoption of Plasmalyte (Balanced crystalloid) as standard of care peri-operative IV fluid therapy for kidney transplantation, following publication of BEST Fluids study in Lancet 2023. This has now been adopted by most transplant programmes globally.

Number of active drug or device clinical trials 8



Awards

- Best Poster Award – Transplantation Society of ANZ 2024

EVALUATING THE ACCURACY OF ANZDATA RECORDED CAUSE OF DEATH AMONGST TRANSPLANT RECIPIENTS

MELISSA LEVY, James sindone, Mark Dennis, Raj Puranik, Steve Chadban, Tracey Ying

2024 Comment RPA Head of Department and IAM Clinical Sponsor

Professor Steve Chadban

“We continue to remain active in research, seeking to embed research within our everyday practice. We have also sought to translate findings from our basic science lab at CPC into the clinic, with the results of the DIGEST pilot RCT of inulin to manipulate the gut microbiome in kidney transplant recipients, with results presented at the national TSANZ meeting in 2025 showing that inulin was well tolerated, improved the microbiome and was associated with improved indices of glycaemic control. Our results justify moving to a full RCT. Another highlight has been the ongoing success of our Clinical Trials Nursing programme, “ACE”, which was designed and is run by Ellen Yeo, our lead trials CNC. ACE has been a factor in improving engagement and retention of CTNs at RPA.”



Professor Steve Chadban
Head of Department
IAM Clinical Sponsor



Dr Alex Gillert (left)
RPA Renal Physician
Finalist 2024 IAM Research at First Sight



Professor Kate Wyburn
Head of the RPA Division of Medicine
IAM Clinical Sponsor and Renal Physician



Respiratory and Sleep Medicine

Consultant Profile

RPA Medical Department	CONSULTANTS	#
RESPIRATORY AND SLEEP MEDICINE	Paul Torzillo	26
	David Barnes	
	Stephen McNamara	
	Brendon Yee	
	Keith Wong	
	Tamera Corte	
	Edmund Lau	
	Lauren Troy	
	Greg Fox	
	Helen Jo	
	Sheila Sivam	
	Simone Visser	
	Alan Teoh	
	Sabine Zimmermann	
	Helen Reddel	
	Kwok Yan	
	Veronica Yozghatlian	
	Michael Dodd	
	Malcolm Ogborn	
	Emma Gray	
	Laura Glenn	
	Anna McLean	
	Aruvi Thiruvarduchelvan	
	Adelle Jee	
	Yasmin Al Hindawi	
	Ben Nguyen	

Head of Department* IAM Role* Clinical Academic*

Staffing Profile

26 Consultants

1 Clinical Academic

1 Fellow (ILD/Interventional Pulmonology)

5 Advanced Trainees

1 BPT

1 RMO

3 Interns

Higher Degree Students

12 PhD

2 Masters

2024 Publications

84 Original Research Articles



Sydney
Local Health District



Total Active Grants Funds \$11,432,744

Research Summary

Members of the RPA Respiratory and Sleep Medicine Department are involved in the full spectrum of research from discovery science to translation and implementation. Research is an integral component of clinical care and patients are referred from around the state to access clinical trials participation through quaternary-level specialist clinics. The multidisciplinary research teams include medical, nursing, allied health and respiratory scientist staff.

Research Focus

The Department's clinical research program spans many disease areas, including interstitial lung disease, pulmonary hypertension, cystic fibrosis, tuberculosis, interventional pulmonology, sleep medicine, respiratory failure, respiratory infections, lung cancer, bronchiectasis and asthma.

Number of active clinical trials

Interstitial Lung Disease **18**

Pulmonary Hypertension/Cystic Fibrosis **7**

Key Achievements

Professor Tamera Corte

- Global lead in PF clinical trials and clinical/translational research, with leadership in multi-centre clinical trials, international expert working groups and guideline committees
- CIA – two successive Centre of Research Excellence for PF grants which underpin the infrastructure enabling and expediting PF research

Dr Shila Sivam

- American Academy of Sleep (AASM) 2024. Co-production and Psychometric Validation of a Patient Reported Outcome Measure of the impact narcolepsy has on the daily life of adult persons living with narcolepsy type 1 (USD\$98,125, 343-SR-24) – CI
- Sydney Health Partners, 2024. Sleep Health (established) Clinical Academic Group (\$140,000 over two years) -Co-Chair

Amanda Piper, RPA Respiratory Physiotherapy and Support Service

- Involved in the TSANZ working party to create an NIV course
- Supervised: Physiotherapist - Hayden Venville, (successfully completed Grad Cert in Health Research); Physiotherapy Honours student (winner, University Medal, University of Sydney)

Associate Professor Lauren Troy

- Established the Sydney Interventional Pulmonology and Innovations Centre (SIPIC), a clinical research collaboration between RPA and Concord Hospital
- Established the SLHD Interventional Pulmonology Data Registry
- Led the TSANZ working group for the "Hypersensitivity Pneumonitis Diagnosis and Management" Position Paper
- CRE-PF Kickstarter Grant: A Deep Learning Tool to Aid Precision Medicine in Pulmonary Fibrosis. 2024 (Investigator); \$200,000



Research Collaborations

Members of sub-specialty teams collaborate with national and international researchers through investigator-initiated research and industry sponsored clinical trials. Many in the department have international reputations for being leaders in their respective fields, with recognition through clinical guideline participation, scientific prizes, international conference presentations and competitive grant awards.

Book Chapters

- Mortimer N, Corte TJ, "Connective Tissue Diseases," for the 8th edition of Murray & Nadel's Textbook of Respiratory Medicine.

Presentations in 2024

- S Sivam, Co-Chair and Invited Speaker – Sleep Health Clinical Academic Group Membership Meeting: Annual Review and Research Priority Setting
- S Sivam, Invited Speaker – Sleep Downunder, Gold Coast: Transitional Care for the Paediatric Sleep Patient (Symposium); Problems encountered in Transitional Care of teenagers with Narcolepsy and associated conditions
- S Sivam, Invited Speaker – Sleep Downunder, Gold Coast: Neurology for Sleep Clinicians (Short Course) – What you need to know; Diagnosis and pathophysiology of central disorders of hypersomnolence: Update on the diagnostic criteria and evaluation of Narcolepsy and Idiopathic Hypersomnia
- S Sivam, Chair, Panel Discussion Member – Australasian Cystic Fibrosis Conference, Brisbane: Modulator Use Post Transplantation in Cystic Fibrosis
- S Sivam, Invited Speaker – It's not OSA – what next? General Physician (GPEx, ASA) Webinar. April 16.
- S Sivam, Symposium Co-Chair – Thoracic Society of Australia and New Zealand Annual Scientific Meeting. Emerging Challenges in the CF Clinic
- A Piper, Invited Speaker – Australasian Sleep Association meeting, Gold Coast: NIV transitional care issues: The adult perspective
- A Piper, Invited Speaker – Australasian Sleep Association meeting, Gold Coast: Year in review – hypoventilation
- T Corte, Invited speaker – American Thoracic Society Conference, San Diego: Clinical Debate. Progressive pulmonary fibrosis should not be used for future ILD clinical trial design
- T Corte, Invited speaker – American Thoracic Society Conference, San Diego: Combined Pulmonary Fibrosis and Emphysema: Clinical manifestations
- T Corte, Invited speaker – American Thoracic Society Conference, San Diego: Update on Recent Interstitial Lung Disease Guidelines
- T Corte, Invited Speaker – Australasian Rare Lung Disease Short Course, Sydney: Pulmonary Fibrosis: Where are we now?
- L Troy, Symposium Chair and Speaker – American Thoracic Society International Conference, San Diego: Bring your best biomarker
- L Troy, Speaker and Chair – TSANZ Webinar: Hypersensitivity Pneumonitis Diagnosis and Management
- L Troy, RACP Adult Medicine Division Leadership Workshop Panellist
- L Troy, Chair and Speaker – Industry-sponsored educational event: Drug Induced ILD: Cross-disciplinary perspectives
- L Troy, Invited Speaker – SLHD Innovations Week Opening Keynote Symposium: Inspiration and Navigation: Advances in Lung Disease Diagnosis and Management
- L Troy, Invited Speaker – Australian Rare Lung Diseases Short Course, Sydney: Hypersensitivity Pneumonitis Position Paper
- L Troy, Invited Speaker – TSANZ Annual Meeting Symposium, Gold Coast: Interventional Bronchoscopy Masterclass
- L Troy, Co-Chair and Invited Speaker – TSANZ Annual Meeting Post Graduate Course, Gold Coast: Cryobiopsy and Advanced Bronchoscopy Update
- L Troy, Invited Speaker – TSANZ Annual Meeting Innovations Session, Gold Coast: Rheumatoid arthritis-ILD



Rheumatology

Consultant Profile

RPA Medical Department	CONSULTANTS	#
RHEUMATOLOGY	Matthew Parker	10
	Bethan Richards	
	Peter Youssef	
	Neil McGill	
	Jan Vaile	
	Christopher Needs	
	Michael Spies	
	Shikta Day	
	Mandana Nikpour	
	Angela Fu	

Head of Department* IAM Role*

Staffing Profile

- 10 Consultants
- 3 Advanced Trainees
- 1 BPT
- 1 Interns

Higher Degree Students

- 5 PhD

2024 Publications

- 41 Original Research Articles
- 5 Clinical Trials Publications

New Grants in 2024

- Total Active Grants **\$11,209,605**
- Existing Ongoing Grants **\$7,759,568**
- New Grants Awarded in 2024 **\$3,450,037**

Department Research Translation into clinical practice at RPA Hospital

1. Certolizumab Pegol (Cimzia), a biological DMARD, is now available on PBS for the treatment of non-radiographic axial spondyloarthritis. This became available from June 2020. The Rheumatology Department was involved in a global phase 3 study from 2016-2020.
2. Tofacitinib (Xeljanz) use was extended to include treatment of patients with severe psoriatic arthritis. This became available on PBS from May 2019. The Rheumatology Department was involved in a global phase 3 trial from 2014-2016.
3. Upadacitinib (Rinvoq), a JAK inhibitor, is now available on PBS for the treatment of severe active rheumatoid arthritis. This became available from May 2020. The Rheumatology Department was involved in three global phase 3 studies from 2015-2020.





3. Upadacitinib (Rinvoq), a JAK inhibitor, is now available on PBS for the treatment of severe active rheumatoid arthritis. This became available from May 2020. The Rheumatology Department was involved in three global phase 3 studies from 2015-2020.

4. Development of an app that allows research to be embedded into routine clinical practice at low cost (STARS Back Pain app).

5. Contributed to the formulary change request for Denosumab. "Denosumab added to the NSW Medicines Formulary - Hip Fracture and Osteoporosis Care".

Number of ethics applications submitted by your department in 2024 4

Number of non-clinical trials active research studies in your department 5

Number of active clinical trials 4

Total number of patients recruited for all trials in 2024 18

Did your department contribute to biobanking activities in 2024? Yes

Awards/Medals

1. Dr Matthew Parker - Brian Eaton Memorial PhD Scholarship, Lung Foundation Australia and Thoracic Society of Australia and New Zealand 2020-2024 (National)
2. Prof. Mandana Nikpour - ARA Philip Robinson Memorial Award, NSW Australian Rheumatology Association Annual Scientific Meeting 2024 (National)
3. Dr. Kara Goon - Best AT Project, NSW Australian Rheumatology Association Annual Scientific Meeting 2024 (National)
4. Dr. Adam Carroll - Best Grand Round Presentation, NSW Australian Rheumatology Association Annual Scientific Meeting 2024 (National)
5. Dr Matthew Parker - ARA New Investigator Award, Annual Scientific Meeting 2024 (National)

Research Staff 12

- Dr Matthew Parker, Head of Department, Principal Investigator, PhD Candidate
- Dr Bethan Richards, Deputy Director of IMH, Research Investigator
- Professor Peter Youssef, IMH Director of Commercial Clinical Trials, Principal Investigator
- Professor Mandy Nikpour, Director Sydney MSK Flagship, Principal Investigator
- A/Prof Neil McGill, Chair of Royal College of Pathologists Synovial Fluid Quality Assurance Programme
- Dr Chris Needs, Co-Chair of the Agency for Clinical Innovation Musculoskeletal Health Network, Research Investigator
- Dr Michael Spies, Network Director of Physician Education and Training, Research Investigator
- Dr Abhishikta Dey, Research Investigator, PhD Candidate
- Sr Dorothy Fowler, Rheumatology Clinical Nurse Consultant
- Sr Rachel Thistlethwaite, Rheumatology Clinical Nurse Consultant
- Sr Cor Fillarca, Commercial Clinical Trials Research Nurse (left Oct 2024)
- Dr Genevieve Fong, Clinical Trials Study Coordinator

Presentations in 2024

1. Dr Parker - High levels of Vascular Cell Adhesion Molecule 1 (VCAM-1) associate with a "vasculopathic phenotype" in systemic sclerosis with higher mortality, ARA ASM 2024 (National)



Presentations in 2024

2. Dr Parker - Multi-disciplinary Care in CTD-ILD, ARA ASM 2024 (National)
3. Dr Parker - Member Presentation, Royal Australian College of Physicians (National)
4. Dr Kara Goon - The impact of rurality on health outcomes in a national systemic sclerosis cohort, ARA ASM 2024 (National)
5. Dr Natalie Li - Barriers and facilitator to exercise in people with idiopathic inflammatory myopathies: a qualitative study, ARA ASM 2024 (National)
6. Prof Mandana Nikpour - Evolving therapeutic landscape of SLE, ARA ASM 2024 (National)
7. Dr Abhishikta Dey - Disease modifying antirheumatic drugs (DMARDs) and contraception use in women of reproductive age in Australia, ARA ASM 2024 (National)
8. Prof Mandana Nikpour - Silica associated autoimmune disease, occupational Lung Disease Short Course, TSANZ Melbourne 2024 (International)



Dr Matt Parker
Head of Department and IAM Research Lead
Finalist, Research at First Sight 2024



Dr Michael Spies
Rheumatology Physician
Hosting IAM Research at First Sight 2024



Professor Peter Youssef
IAM Research Lead
Hosting IAM Accelerate



What's Next?

In 2025, the IAM will continue to work closely with the 17 RPA Medical Departments to advance research excellence and contribute to the professional development of its affiliate network. This will include launching the inaugural IAM Strategic Plan and website, developing new research scholarships, continuing to establish new research positions and launching a formal program for statistical support.

IAM Strategic Plan

The IAM Strategic Plan will guide the Institute's trajectory over the next five years, articulating its vision, purpose, values, guiding principles, strategic objectives, and core portfolios. The plan will define measurable key performance indicators (KPIs) and outline targeted, actionable interventions to drive impact. Its development has been a collaborative effort, shaped through consultation with RPA Medical Heads of Department, IAM Research Leads, Clinical Sponsors, Executive Leadership, and the IAM Advisory Council.

Jane Bleasel RPA Rheumatology Research Scholarships

In collaboration with the RPA Department of Rheumatology, the IAM will establish the Jane Bleasel Research Scholarships, honouring the legacy of Professor Jane Bleasel. These scholarships are designed to advance both clinical trials and non-clinical research across a broad spectrum of focus areas, including inflammatory arthropathies, idiopathic inflammatory myopathies, connective tissue diseases, osteoarthritis, back pain, affordable healthcare, staff wellbeing, and medical education.

RPA Respiratory Clinical Trials Business Manager

The IAM has partnered with the RPA Department of Respiratory and Sleep Medicine to establish the inaugural Clinical Trials Business Manager role. This position supports a comprehensive research portfolio encompassing interstitial lung disease, pulmonary hypertension, cystic fibrosis, tuberculosis, lung cancer, bronchiectasis, and asthma.

The Business Manager will be responsible for overseeing all aspects of trial administration, including financial database management via CTMS, account code reconciliation, payment tracking, SOP updates for trial finances, and resolution of sponsor payment delays.

IAM Statistical Support

Beginning in March 2025, the IAM will pilot two Statistical Research Lead positions to enhance research capability across the network. These roles will provide hands-on statistical expertise to address complex research questions and will lead two interactive workshops showcasing real-world data analysis and applied statistical methods.

