Associate Professor James S Wilmott, BSc (Hons I) PhD.
Principle Investigator, Personalised Immunotherapy Program (PIP)
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SCIENTIFIC EXPERTISE SUMMARY

Associate Professor Wilmott is a highly motivated translational researcher with a proven track record of translating discoveries into clinical applications for precision oncology and informing clinical trial design. AProf Wilmott has extensive experience in translating clinical and multi-omic data into actionable insights to improve patient outcomes. He has over 11 years of experience leading international research programs and with a strong publication record with high-impact publications in leading scientific journals.

Scientific Expertise

- Genomic drivers of cancer development
- Genomic and immune associations with patient outcomes
- Immunotherapy response and resistance mechanisms
- Development of biomarker discovery for personalised medicine
- Molecular and quanitiative spatial pathology.
- Multi-omic integration

Research Focus:

- Biomarker discovery
- Identification of alternate therapeutic strategies
- Pioneering spatial pathology techniques
- Implementation of personalised biomarker testing and reporting into clinics.

Key Achievements

- **Leadership:** Management of the world's largest whole-genome sequencing program for cancer, yielding publications in Nature, Nature Communications, Cancer Discovery, and Cancer Cell. Driving the development of a world leading translational research laboratory and implementation program of percision use of immunotherpies into clinics.
- **Biomarker Discovery:** Generated the world-first comprehensive multi-omic datasets to predict response to immunotherapy and identify resistance mechanisms, resulting in a prestigious NSW Premier's Award for outstanding research (Cancer Cell 2019 and Cancer Cell 2022).
- **Immunotherapy Advancements:** Broadened the understanding of immune responses to immunotherapies beyond cytotoxic T cells, sparking new therapeutic development targeting NK-cell function (Clinical Cancer Research 2023 and Oncoimmunology 2019)
- **Spatial Pathology Techniques:** Pioneered state-of-the-art methods for analysing spatial relationships between immune and tumor cells, leading to high-impact publications and platform development for various cancers (Cancer Cell 2019, Cell Reports and Nature Com).
- **Clinical Trial Expertise:** Led analysis of large international oncology trials, published in Lancet Oncology, Nature, Cancer Cell, and Clinical Cancer Research. Built a strong international network to drive future collaborations (COMBI-MD and COMBI-BRV, OPACIN-NEO and ABC trials).

PROFESSIONAL, CLINICAL, AND RESEARCH EXPERIENCE

The University of Sydney **2022- Present**

Associate Professor- Head of the Personalised Immunotherapy Program- PIP-PREDICT NCT06536257

- Developed the protocol for the clinical observational study and secured long-term funding to bring precision immunotherapy to oncology clinics.
- Oversaw the multi-omic program, biomarker prediction review, genomic reports, and the final biomarker MDT with clinical teams of Clinical Pathologists, Oncologists from the Melanoma Institute Australia, Chris O'Brien Lifehouse, Daffodil Centre, and NHMRC Clinical Trials Centre to deliver precision immunotherapies nationally into Oncology clinics.
- Develop and manage collaborations with industry partners NSW Health Pathology, Bristol Myers Squibb, Australian Genomics Research Facility, Ramaciotti Center for Genomics, Nanostring, Akoya Biosciences, Qiagen and Illumina to deliver rapid biomarker testing in promt turn around times.
- Devised the data generation and preparation processes to ensure reliability and reproducibility of the program.
- Oversight of the multi-omic program, biomarker prediction review, genomic reports and the biomarker MDT with clinical teams; to satisfy the various (Oncology) Prof. Georgina Long/Matteo Carlino/Ines de Silva/Alex Menzies/Lee, (Pathology) Prof. Richard Scolyer, clinical trials staff and patient groups involved.

Melanoma Institute Australia **2013- Present**

Senior Scientist, Melanoma Translational Research Laboratory, Melanoma Institute Australia

- Developed one of the world's most productive and influential translational research teams within a decade (196 publications since 2013).
- Led and managed multiple research programs with significant funding, $12M as CI.
- Mentored a laboratory of more than 35 emerging scientists and clinician scientists, resulting in successful careers in medicine or research.
- Manage an extensive collaborative network numour national and international iniciatives.
- Develop and maintain an innovative scientific program that adapts to the changing landscape of patient care.

University of Sydney **Feb 2009 – Dec 2013**

Clinical Researcher - Doctor of Philosophy (Medicine) – Biomarkers and biology of BRAF Inhibitor Treated Metastatic Melanoma

- Developed expertise in pathology and genomic analysis of patient tumour biopsies.
- Attended clinical multidisciplinary meetings to gain an expertise in clinical care and to identify areas of need.
- Conducted translational research under the supervision of renowned professors of Oncology and Pathology.
- First-authored 8 publications, receiving the American Association for Cancer Research's "Most Highly Cited Paper" award and becoming a recognised expert in tumor pathology and immunology.
- Attract talented researchers and clinical teams to further build the team with exciting research programs and gaining funding.

CURRENT RESEARCH FOCUS

- Precision use of immunotherapies via PIP-PREDICT (NCT06536257): Developing novel strategies to tailor immunotherapy treatments to individual patients based on their tumour characteristics and microenvironment.
- Immunogenomic interactions: Leading efforts to understand the genomic landscape of different melanoma subtypes, impacts on immunogenicity and identify new therapeutic targets.
- Spatial immunobiology: Bridging the gap between basic research and clinical application of spatial biology to understand barriers and enablers to effective tumour eradication.

FELLOWSHIPS

2020-2025	Investigator grant, Personalised immunotherapies, NHMRC	$1,504,485
2021-2024	Young Investigator, Melanoma Research Alliance	$1,400,000
2016-2020	APP1111678 Early career fellowship, NHMRC	$314,644
2016-2019	ECF 15/ECF/1-57 Early career fellowship, Cancer Institute NSW	$429,481

APPOINTMENTS

2022- current	Associate Professor, The University of Sydney
2022- current	Principal Investigator, Personalised Immunotherapy Program
2013- current	Senior Scientist, Melanoma Translational Research Laboratory
2021-2025	Melanoma Research Alliance Young Investigator.
2020-2025	Investigator research fellow, NHMRC
2015-2019	Early career research fellow, NHMRC
2015-2018	Early career research fellow, CINSW
2013-2014	Lecturer, The University of Sydney
2013	PhD, The University of Sydney
2008	Bachelor of Science (Hons 1st class), The University of Sydney

BOARDS AND PANELS

2018-current	Melanoma Institute Australia, Faculty member
2018-current	Melanoma Institute Australia, Education committee member
2021- 2022	Centre of Research Excellence in Melanoma, Chair of genomics and biomarkers.
2021-current	International Neoadjuvant Melanoma Consortium, Senior scientific advisor.
2021-current	International InterMEL consortium, scientific advisor for biomarker interpretation
2024	Scientific advisory team, $479M Sydney Biomedical Accelerator, Genomics white paper.
2017-2023	Charles Perkins Centre, Research Advisory Board, representing over 150 researchers

PEER REVIEW AND CONFERENCE ORGANISATION

AProf Wilmott contributes to the international scientific community through peer review for funding bodies including the NHMRC (2018-2024), Cure Cancer Research (2022), Sydney Cancer Partners (2023 x2), and the Dutch Cancer Society (2023). He has also organised conferences, including Multi-omics (2022, 2024), the NSW Cancer Conference (2023), and the Australasian Society for Dermatology Research (2024).

AWARDS

2022 NSW Premier's Awards for Excellence in Translational Cancer Research, PMID: 30753825
2021 NSW Premiers Wildfire Highly Cited Publication Award
2021 Young Researcher of the Year- Society of Melanoma Research General Meeting
2020 NSW Premier's Awards for Excellence in Translational Cancer Research, PMID: 28467829.
2017 NSW Premier's Awards for Excellence in Translational Cancer Research
2016 NSW Premier's Awards for Excellence in Translational Cancer Research , PMID: 23026937.
2012 American Association for Cancer Research's "Most highly cited paper", PMID: 22156613.

PATENTS

- MIAdx: Scolyer, RA., Vergara, I.A., Colebatch, AJ., **Wilmott, JS.,** Long, GV., \Methods for identifying skin cancer, administering biopsies and treating skin cancer", provisional application approved.
- PIPdx: Trademarked and application under review\ Multi-omics platform and models to enable percision oncology and personalised immunotherpy biomarker reports, Trademarked and Under review.

FUNDING HIGHLIGHTS ($12M since 2015)

2024-2026	CINSW REG 2024 grant for the new PhenoImager HT 2.0	(CIC)	$674,927
2024-2026	SPHERE/Sydney Cancer Partners Strategic Enhancement Grant	(CIB)	$280,000
2022-2027	CINSW Translational Program Grant *"Personalised Immunotherapy Program – Precision immunotherapies for multiple solid tumours using a biomarker driven adaptive enrichment clinical trials platform."*	(PI)	$3,748,550
2021-2025	Young Investigator, Melanoma Research Alliance *"Effective therapies for patients with high risk in-transit disease"*	(PI)	$1,400,000
2022	NHMRC Equipment Grant *"Illumina NextSeq 1000 benchtop sequencer"*	(CIB)	$286,725
2021-2023	PIP-MATCH, Ramaciotti Foundations Health Investment Grant *"Precision ex vivo testing platform to match novel drug immunotherapy. combinations with advanced cancer patients (PIP-MATCH)."*		$150,000
2021	NHMRC Equipment Grant (*"BD Rhapsody™ Single-Cell Analysis System"*	CIC)	$143.630
2020-2024	Investigator grant, Personalised immunotherapies, NHMRC *"Personalised immunotherapies to match profiles with response"*	(CIA)	$1,504,485
2019-2022	RG19-15 CCNSW Project Grant- personalised immunotherapies, *"Personalised immunotherapies: A clinical feasibility clinical trial"*	(CIA)	$425,095
2019-2022	Ainsworth Foundation-Accurate diagnosis of Primary Melanoma	(CIA)	$837,000
2018-2021	APP1144829 NHMRC Project Grant	(CIE)	$613,848
2017-2020	APP1129422 CCNSW Project Grant	(CIB)	$449,174
	APP1123217 NHMRC Project Grant	(AI)	$1,456,823
2016-2019	APP1111678 NHMRC ECF fellowship	(CIA)	$314,644
	ECF 15/ECF/1-57 Cancer Institute NSW ECF fellowship	(CIA)	$429,481
2019	Ross Trust- Foundation funding children's health research	(CIA)	$30,000
2015	Sydney Local Area Health District Project Grant	(CIA)	$60,000

RESEARCH HIGHLIGHTS (237 publications, 44 as Senior/First, H-index of 77 and average FWCI of 7.11

- **CANCER CELL**, Gide TN…**Wilmott JS (Senior author).** Distinct immune cell populations define response to anti-PD-1 monotherapy and anti-PD-1/anti-CTLA-4 combined therapy. 2019
  Landmark study which developed transcriptomic and immune profiles of response to immunotherapies. This study provided the basis for the development of the Personalised Immunotherapy Platform which has been piloted as a feasibility study in over 280 melanoma patients as a prospective biomarker testing cohort study (RG19-15). **(636 citations since 2019).**
- **NATURE, Wilmott JS, Hayward N (Joint)**...Mann G, Scolyer RA. Whole-genome landscapes of major melanoma subtypes, 2017. *I comprehensively detailed the genomic alterations of 183 melanoma patients that confer sensitivity or resistance to approved therapeutics. This project demonstrates my ability to lead a high-profile collaborative research program*. **(1,066 citations since 2017).**
- **CELL,** The Cancer Genome Atlas Network. Genomic Classification of Cutaneous Melanoma. 2015. *I co-developed the immune scoring system and oversaw the expert pathological case review finding immune infiltration as the most prognostic factor of all the multi-omic analyses.* **(2,343 citations since 2015).**
- Int J Cancer, 2019: Whole genome sequencing of melanoma in Youth (PMID: 30178487)
- Nature Communications, 2019: Whole genome sequencing in mucosal melanoma (PMID: 31320640).
- Nature Communications, 2020: Whole genome sequencing in acral melanoma (PMID: 33067454)
- Nature Communications, 2020: Whole genome sequencing in uveal melanoma (PMID: 32415113)

- Cancer Cell, 2022: Multi-omic profiles of ICB response in metastatic melanoma (PMID: 34951955)
- Cancer Discovery 2022: Multi-omics of 570 Australian melanoma (PMID: 36098958)

PUBLICATION (SENIOR)

Gide T.N.; Quek C.; Menzies A.M.; Tasker A.T.; Shang P.; Holst J.; Madore J.; Lim S.Y.; Velickovic R.; Wongchenko M.; Yan Y.; Lo S.; Carlino M.S.; Guminski A.; Saw R.P.M.; Pang A.; McGuire H.M.; Palendira U.; Thompson J.F.; Rizos H.; Silva I.P.D.; Batten M.; Scolyer R.A.; Long G.V.; **WILMOTT J.S**, ***Distinct Immune Cell Populations Define Response to Anti-PD-1 Monotherapy and Anti-PD-1/Anti-CTLA-4 Combined Therapy,*** **2019,** *Cancer Cell,* 601, 10.1016/j.ccell.2019.01.003

Madore J.; Strbenac D.; Vilain R.; Menzies A.M.; Yang J.Y.H.; Thompson J.F.; Long G.V.; Mann G.J.; Scolyer R.A.; **WILMOTT J.S,** ***PD-L1 Negative Status is Associated with Lower Mutation Burden, Differential Expression of Immune-Related Genes, and Worse Survival in Stage III Melanoma*****, 2016**, *Clinical Cancer Research,* 90, 10.1158/1078-0432.CCR-15-1714

Lee H.; Quek C.; Silva I.; Tasker A.; Batten M.; Rizos H.; Lim S.Y.; Nur Gide T.; Shang P.; Attrill G.H.; Madore J.; Edwards J.; Carlino M.S.; Guminski A.; Saw R.P.M.; Thompson J.F.; Ferguson P.M.; Palendira U.; Menzies A.M.; Long G.V.; Scolyer R.A.; **WILMOTT J.S,** ***Integrated molecular and immunophenotypic analysis of NK cells in anti-PD-1 treated metastatic melanoma patients,*** **2019,** *OncoImmunology,* 65, 10.1080/2162402X.2018.1537581

Gide T.N.; Silva I.P.; Quek C.; Ahmed T.; Menzies A.M.; Carlino M.S.; Saw R.P.M.; Thompson J.F.; Batten M.; Long G.V.; Scolyer R.A.; **WILMOTT J.S**, ***Close proximity of immune and tumor cells underlies response to anti-PD-1 based therapies in metastatic melanoma patients,*** **2020,** *OncoImmunology,* 62, 10.1080/2162402X.2019.1659093

Colebatch A.J.; Ferguson P.; Newell F.; Kazakoff S.H.; Witkowski T.; Dobrovic A.; Johansson P.A.; Saw R.P.M.; Stretch J.R.; McArthur G.A.; Long G.V.; Thompson J.F.; Pearson J.V.; Mann G.J.; Hayward N.K.; Waddell N.; Scolyer R.A.; **WILMOTT J.S,** ***Molecular Genomic Profiling of Melanocytic Nevi*****, 2019,** *Journal of Investigative Dermatology,* 56, 10.1016/j.jid.2018.12.033

Rawson R.V.; Johansson P.A.; Hayward N.K.; Waddell N.; Patch A.-M.; Lo S.; Pearson J.V.; Thompson J.F.; Mann G.J.; Scolyer R.A.; **WILMOTT J.S**, ***Unexpected UVR and non-UVR mutation burden in some acral and cutaneous melanomas***, **2017,** *Laboratory Investigation*, 37, 10.1038/labinvest.2016.143

Quek C.; Rawson R.V.; Ferguson P.M.; Shang P.; Silva I.; Saw R.P.M.; Shannon K.; Thompson J.F.; Hayward N.K.; Long G.V.; Mann G.J.; Scolyer R.A.; **WILMOTT J.S**, ***Recurrent hotspot SF3B1 mutations at codon 625 in vulvovaginal mucosal melanoma identified in a study of 27 Australian mucosal melanomas***, **2019**, *Oncotarget*, 36, 10.18632/oncotarget.26584

Lee H.; Da Silva I.P.; Palendira U.; Scolyer R.A.; Long G.V.; **WILMOTT J. S**, ***Targeting NK cells to enhance melanoma response to immunotherapies*****, 2021,** *Cancers*, 32, 10.3390/cancers13061363

Attrill G.H.; Owen C.N.; Ahmed T.; Vergara I.A.; Colebatch A.J.; Conway J.W.; Nahar K.J.; Thompson J.F.; Pires Da Silva I.; Carlino M.S.; Menzies A.M.; Lo S.; Palendira U.; Scolyer R.A.; Long G.V.; **WILMOTT J.S** ***Higher proportions of CD39+ tumor-resident cytotoxic T cells predict recurrence-free survival in patients with stage III melanoma treated with adjuvant immunotherapy***, **2022**, *Journal for ImmunoTherapy of Cancer*, 28, 10.1136/jitc-2022-004771

Edwards J.; Ferguson P.M.; Lo S.N.; da Silva I.P.; Colebatch A.J.; Lee H.; Saw R.P.M.; Thompson J.F.; Menzies A.M.; Long G.V.; Newell F.; Pearson J.V.; Waddell N.; Hayward N.K.; Johansson P.A.; Mann G.J.; Scolyer R.A.; Palendira U.; **WILMOTT J.S**, ***Tumor mutation burden and structural chromosomal aberrations are not associated with T-cell density or patient survival in acral, mucosal, and cutaneous melanomas***, **2020**, *Cancer Immunology Research*, 15, 10.1158/2326-6066.CIR-19-0835

Yaseen Z.; Gide T.N.; Conway J.W.; Potter A.J.; Quek C.; Hong A.M.; Long G.V.; Scolyer R.A.; **WILMOTT J.S**, ***Validation of an Accurate Automated Multiplex Immunofluorescence Method for Immuno-Profiling Melanoma,*** **2022**, *Frontiers in Molecular Biosciences,* 15, 10.3389/fmolb.2022.810858

Rawson R.V.; Shteinman E.R.; Ansar S.; Vergara I.A.; Thompson J.F.; Long G.V.; Scolyer R.A.; **WILMOTT J.S** ***Diagnostic utility of PRAME, p53 and 5-hmC immunostaining for distinguishing melanomas from naevi, neurofibromas, scars and other histological mimics***, **2022**, *Pathology*, 15, 10.1016/j.pathol.2022.05.012

Gide T.N.; Pires da Silva I.; Quek C.; Ferguson P.M.; Batten M.; Shang P.; Ahmed T.; Menzies A.M.; Carlino M.S.; Saw R.P.M.; Thompson J.F.; Scolyer R.A.; Long G.V.; **WILMOTT J.S,** ***Clinical and molecular heterogeneity in patients with innate resistance to anti-pd-1 +/− anti-ctla-4 immunotherapy in metastatic melanoma reveals distinct therapeutic targets,*** **2021,** *Cancers,* 14, 10.3390/cancers13133186

Lee H.; Ferguson A.L.; Quek C.; Vergara I.A.; Pires daSilva I.; Allen R.; Gide T.N.; Conway J.W.; Koufariotis L.T.; Hayward N.K.; Waddell N.; Carlino M.S.; Menzies A.M.; Saw R.P.M.; Shklovskaya E.; Rizos H.; Lo S.; Scolyer R.A.; Long G.V.; Palendira U.; **WILMOTT J.S**, ***Intratumoral CD16+ Macrophages Are Associated with Clinical Outcomes of Patients with Metastatic Melanoma Treated with Combination Anti-PD-1 and Anti-CTLA-4 Therapy***, **2023***, Clinical cancer research,* 14, 10.1158/1078-

0432.CCR-22-2657

Jackett L.A.; Colebatch A.J.; Rawson R.V.; Ferguson P.M.; Thompson J.F.; McCarthy S.W.; **WILMOTT J.S**; Scolyer R.A. Molecular ***Profiling of Noncoding Mutations Distinguishes Nevoid Melanomas from Mitotically Active Nevi in Pregnancy***, **2020,** *American Journal of Surgical Pathology*, 10, 10.1097/PAS.0000000000001406

Quek C.; Bai X.; Long G.V.; Scolyer R.A.; **WILMOTT J.S,** ***High-dimensional single-cell transcriptomics in melanoma and cancer immunotherapy,*** **2021,** *Genes,* 10, 10.3390/genes12101629

Attrill G.H.; Lee H.; Tasker A.T.; Adegoke N.A.; Ferguson A.L.; da Silva I.P.; Saw R.P.M.; Thompson J.F.; Palendira U.; Long G.V.; Ferguson P.M.; Scolyer R.A.; **WILMOTT J.S**, ***Detailed spatial immunophenotyping of primary melanomas reveals immune cell subpopulations associated with patient outcome***, **2022,** *Frontiers in Immunology*, 9, 10.3389/fimmu.2022.979993

Mao Y.; Gide T.N.; Adegoke N.A.; Quek C.; Maher N.; Potter A.; Patrick E.; Saw R.P.M.; Thompson J.F.; Spillane A.J.; Shannon K.F.; Carlino M.S.; Lo S.N.; Menzies A.M.; da Silva I.P.; Long G.V.; Scolyer R.A.; **WILMOTT J.S**, ***Cross-platform comparison of immune signatures in immunotherapy-treated patients with advanced melanoma using a rank-based scoring approach,*** **2023***, Journal of Translational Medicine*, 4, 10.1186/s12967-023-04092-9

Quek C.; Pratapa A.; Bai X.; Al-Eryani G.; Pires da Silva I.; Mayer A.; Bartonicek N.; Harvey K.; Maher N.G.; Conway J.W.; Kasalo R.J.; Ben Cheikh B.; Braubach O.; Palendira U.; Saw R.P.M.; Stretch J.R.; Shannon K.F.; Menzies A.M.; Scolyer R.A.; Long G.V.; Swarbrick A.; **WILMOTT J.S**, ***Single-cell spatial multiomics reveals tumor microenvironment vulnerabilities in cancer resistance to immunotherapy,*** **2024,** *Cell Reports,* 0, 10.1016/j.celrep.2024.114392

Edwards J.; Batten M.; Ferguson A.; Palendira U.; **WILMOTT J.S**; Long G.V.; Scolyer R.A., ***Novel immune targets in melanoma-Response,*** **2019**, *Clinical Cancer Research*, 0, 10.1158/1078-0432.CCR-19-1866

Gide T.N.; Mao Y.; Scolyer R.A.; Long G.V.; **WILMOTT J.S**, ***Tissue-Based Profiling Techniques to Achieve Precision Medicine in Cancer: Opportunities and Challenges in Melanoma,*** **2024,** *Clinical Cancer Research*, 0, 10.1158/1078-0432.CCR-24-1109

JOINT-SENIOR

Edwards J.; Tasker A.; da Silva I.P.; Quek C.; Batten M.; Ferguson A.; Allen R.; Allanson B.; Saw R.P.M.; Thompson J.F.; Menzies A.M.; Palendira U.; **WILMOTT J.S**; Long G.V.; Scolyer R.A., ***Prevalence and cellular distribution of novel immune checkpoint targets across longitudinal specimens in treatment-naïve melanoma patients: Implications for clinical trials,*** **2019**, *Clinical Cancer Research*, 26, 10.1158/1078-0432.CCR-18-4011

Gide T.N.; Allanson B.M.; Menzies A.M.; Ferguson P.M.; Madore J.; Saw R.P.M.; Thompson J.F.; Long G.V.; **WILMOTT J.S**; Scolyer R.A., ***Inter- and intrapatient heterogeneity of indoleamine 2,3-dioxygenase expression in primary and metastatic melanoma cells and the tumour microenvironment,*** **2019**, *Histopathology*, 17, 10.1111/his.13814

Attrill G.H.; Ferguson P.M.; Palendira U.; Long G.V.; **WILMOTT J.S**; Scolyer R.A., ***The tumour immune landscape and its implications in cutaneous melanoma,*** **2021,** *Pigment Cell and Melanoma Research*, 27, 10.1111/pcmr.12926

Simpson R.C.; Shanahan E.R.; Batten M.; Reijers I.L.M.; Read M.; Silva I.P.; Versluis J.M.; Ribeiro R.; Angelatos A.S.; Tan J.; Adhikari C.; Menzies A.M.; Saw R.P.M.; Gonzalez M.; Shannon K.F.; Spillane A.J.; Velickovic R.; Lazar A.J.; Damania A.V.; Mishra A.K.; Chelvanambi M.; Banerjee A.; Ajami N.J.; Wargo J.A.; Macia L.; Holmes A.J.; **WILMOTT J.S**; Blank C.U.; Scolyer R.A.; Long G.V., ***Diet-driven microbial ecology underpins associations between cancer immunotherapy outcomes and the gut microbiome*****,** **2022**, *Nature Medicine*, 102, 10.1038/s41591-022-01965-2

Bai X.; Attrill G.H.; Gide T.N.; Ferguson P.M.; Nahar K.J.; Shang P.; Vergara I.A.; Palendira U.; da Silva I.P.; Carlino M.S.; Menzies A.M.; Long G.V.; Scolyer R.A.; **WILMOTT J.S**; Quek C. ***Stroma-infiltrating T cell spatiotypes define immunotherapy outcomes in adolescent and young adult patients with melanoma*****,** **2024**, *Nature Communications*, 0, 10.1038/s41467-024-47301-9

PUBLICATION (FIRST)

WILMOTT J.S; Long G.V.; Howle J.R.; Haydu L.E.; Sharma R.N.; Thompson J.F.; Kefford R.F.; Hersey P.; Scolyer R.A., ***Selective BRAF inhibitors induce marked T-cell infiltration into human metastatic melanoma,*** **2012,** *Clinical Cancer Research,* 553, 10.1158/1078-0432.CCR-11-2479

WILMOTT J.S; Tembe V.; Howle J.R.; Sharma R.; Thompson J.F.; Rizos H.; Lo R.S.; Kefford R.F.; Scolyer R.A.; Long G.V., ***Intratumoral molecular heterogeneity in a BRAF-mutant, BRAF inhibitor-resistant melanoma: A case illustrating the challenges for personalized medicine,*** **2012,** *Molecular Cancer Therapeutics*, 80, 10.1158/1535-7163.MCT-12-0530

WILMOTT J.S; Haydu L.E.; Menzies A.M.; Lum T.; Hyman J.; Thompson J.F.; Hersey P.; Kefford R.F.; Scolyer R.A.; Long G.V., ***Dynamics of chemokine, cytokine, and growth factor serum levels in BRAF-mutant melanoma patients during BRAF inhibitor treatment,*** **2014**, *Journal of Immunology,* 65 10.4049/jimmunol.1302616

WILMOTT J.S; Menzies A.M.; Haydu L.E.; Capper D.; Preusser M.; Zhang Y.E.; Thompson J.F.; Kefford R.F.; Von Deimling A.; Scolyer R.A.; Long G.V. BRAF V600E protein expression and outcome from BRAF inhibitor treatment in BRAF V600E metastatic melanoma 2013 British Journal of Cancer 56 10.1038/bjc.2013.29

WILMOTT J.S; Zhang X.D.; Hersey P.; Scolyer R.A., ***The emerging important role of microRNAs in the pathogenesis, diagnosis and treatment of human cancers,* 2011**, *Pathology,* 43, 10.1097/PAT.0b013e32834a7358

WILMOTT J.S; Johansson P.A.; Newell F.; Waddell N.; Ferguson P.; Quek C.; Patch A.-M.; Nones K.; Shang P.; Pritchard A.L.; Kazakoff S.; Holmes O.; Leonard C.; Wood S.; Xu Q.; Saw R.P.M.; Spillane A.J.; Stretch J.R.; Shannon K.F.; Kefford R.F.; Menzies A.M.; Long G.V.; Thompson J.F.; Pearson J.V.; Mann G.J.; Hayward N.K.; Scolyer R.A., ***Whole genome sequencing of melanomas in adolescent and young adults reveals distinct mutation landscapes and the potential role of germline variants in disease susceptibility, 2019***, *International Journal of Cancer*, 40, 10.1002/ijc.31791

Wilmott J.S; Haydu L.; Bagot M.; Zhang Y.; Jakrot V.; Mccarthy S.; Lugassy C.; Thompson J.; Scolyer R.; Barnhill R**.,** ***Angiotropism is an independent predictor of microscopic satellites in primary cutaneous melanoma,* 2012**, *Histopathology*, 37, 10.1111/j.1365-2559.2012.04279.x

WILMOTT J.S; Colebatch A.J.; Kakavand H.; Shang P.; Carlino M.S.; Thompson J.F.; Long G.V.; Scolyer R.A.; Hersey P., ***Expression of the class 1 histone deacetylases HDAC8 and 3 are associated with improved survival of patients with metastatic melanoma***, **2015**, *Modern Pathology*, 35, 10.1038/modpathol.2015.34

WILMOTT J.S; Scolyer R.S.; Long G.V.; Hersey P., **Combined targeted therapy and immunotherapy in the treatment of advanced melanoma**, **2012**, *OncoImmunology*, 26, 10.4161/onci.19865

WILMOTT J.S; Tawbi H.; Engh J.A.; Amankulor N.M.; Shivalingam B.; Banerjee H.; Vergara I.A.; Lee H.; Johansson P.A.; Ferguson P.M.; Saiag P.; Robert C.; Grob J.-J.; Butterfield L.H.; Scolyer R.A.; Kirkwood J.M.; Long G.V.; Davies M.A., ***Clinical Features Associated with Outcomes and Biomarker Analysis of Dabrafenib plus Trametinib Treatment in Patients with BRAF-Mutant Melanoma Brain Metastases***, **2023**, *Clinical Cancer Research*, 12, 10.1158/1078-0432.CCR-22-2581

WILMOTT J.S; Field M.A.; Johansson P.A.; Kakavand H.; Shang P.; De Paoli-Iseppi R.; Vilain R.E.; Pupo G.M.; Tembe V.; Jakrot V.; Shang C.A.; Cebon J.; Shackleton M.; Fitzgerald A.; Thompson J.F.; Hayward N.K.; Mann G.J.; Scolyer R.A. Tumour procurement, DNA extraction, coverage analysis and optimisation of mutation-detection algorithms for human melanoma genomes 2015 Pathology 8 10.1097/PAT.0000000000000324

WILMOTT J.S; Rizos H.; Scolyer R.A.; Long G.V., ***The "tricky business" of identifying mechanisms of resistance to anti-PD-1***, **2017**, *Clinical Cancer Research*, 5, 10.1158/1078-0432.CCR-17-0669

JOINT-FIRST
Long G.V.; **WILMOTT J.S**; Haydu L.E.; Tembe V.; Sharma R.; Rizos H.; Thompson J.F.; Howle J.; Scolyer R.A.; Kefford R.F., ***Effects of BRAF inhibitors on human melanoma tissue before treatment, early during treatment, and on progression***, **2013**, *Pigment Cell and Melanoma Research*, 35, 10.1111/pcmr.12098

Long G.V.; **Wilmott J.S.;** Capper D.; Preusser M.; Zhang Y.E.; Thompson J.F.; Kefford R.F.; Von Deimling A.; Scolyer R.A, ***Immunohistochemistry is highly sensitive and specific for the detection of V600E BRAF mutation in melanoma,* 2013,** *American Journal of Surgical Pathology*, 262, 10.1097/PAS.0b013e31826485c0

Hayward N.K.; **Wilmott J.S.;** Waddell N.; Johansson P.A.; Field M.A.; Nones K.; Patch A.-M.; Kakavand H.; Alexandrov L.B.; Burke H.; Jakrot V.; Kazakoff S.; Holmes O.; Leonard C.; Sabarinathan R.; Mularoni L.; Wood S.; Xu Q.; Waddell N.; Tembe V.; Pupo G.M.; De Paoli-Iseppi R.; Vilain R.E.; Shang P.; Lau L.M.S.; Dagg R.A.; Schramm S.-J.; Pritchard A.; Dutton-Regester K.; Newell F.; Fitzgerald A.; Shang C.A.; Grimmond S.M.; Pickett H.A.; Yang J.Y.; Stretch J.R.; Behren A.; Kefford R.F.; Hersey P.; Long G.V.; Cebon J.; Shackleton M.; Spillane A.J.; Saw R.P.M.; López-Bigas N.; Pearson J.V.; Thompson J.F.; Scolyer R.A.; Mann G.J., ***Whole-genome landscapes of major melanoma subtypes***, **2017**, *Nature,* 1026 10.1038/nature22071

Newell F.; Kong Y.; **Wilmott J.S.;** Johansson P.A.; Ferguson P.M.; Cui C.; Li Z.; Kazakoff S.H.; Burke H.; Dodds T.J.; Patch A.-M.; Nones K.; Tembe V.; Shang P.; van der Weyden L.; Wong K.; Holmes O.; Lo S.; Leonard C.; Wood S.; Xu Q.; Rawson R.V.; Mukhopadhyay P.; Dummer R.; Levesque M.P.; Jönsson G.; Wang X.; Yeh I.; Wu H.; Joseph N.; Bastian B.C.; Long G.V.; Spillane A.J.; Shannon K.F.; Thompson J.F.; Saw R.P.M.; Adams D.J.; Si L.; Pearson J.V.; Hayward N.K.; Waddell N.; Mann G.J.; Guo J.; Scolyer R.A., ***Whole-genome landscape of mucosal melanoma reveals diverse drivers and therapeutic targets***, **2019**, *Nature Communications,* 212, 10.1038/s41467-019-11107-x

Newell F.; **Wilmott J.S.;** Johansson P.A.; Nones K.; Addala V.; Mukhopadhyay P.; Broit N.; Amato C.M.; Van Gulick R.; Kazakoff S.H.; Patch A.-M.; Koufariotis L.T.; Lakis V.; Leonard C.; Wood S.; Holmes O.; Xu Q.; Lewis K.; Medina T.; Gonzalez R.; Saw R.P.M.; Spillane A.J.; Stretch J.R.; Rawson R.V.; Ferguson P.M.; Dodds T.J.; Thompson J.F.; Long G.V.; Levesque M.P.; Robinson W.A.; Pearson J.V.; Mann G.J.; Scolyer R.A.; Waddell N.; Hayward N.K., **Whole-genome sequencing of acral melanoma reveals**

genomic complexity and diversity, 2020, *Nature Communications*, 115, 10.1038/s41467-020-18988-3

Newell F.; Johansson P.A.; Wilmott J.S.; Nones K.; Lakis V.; Pritchard A.L.; Lo S.N.; Rawson R.V.; Kazakoff S.H.; Colebatch A.J.; Koufariotis L.T.; Ferguson P.M.; Wood S.; Leonard C.; Law M.H.; Brooks K.M.; Broit N.; Palmer J.M.; Couts K.L.; Vergara I.A.; Long G.V.; Barbour A.P.; Nieweg O.E.; Shivalingam B.; Robinson W.A.; Stretch J.R.; Spillane A.J.; Saw R.P.M.; Shannon K.F.; Thompson J.F.; Mann G.J.; Pearson J.V.; Scolyer R.A.; Waddell N.; Hayward N.K., **Comparative Genomics Provides Etiologic and Biological Insight into Melanoma Subtypes, 2022**, *Cancer Discovery,* 39, 10.1158/2159-8290.CD-22-0603

INVITED PRESENTATIONS

2024 Multi-Omics Conference/SITC	2024	Brisbane
Society for Melanoma Research	2024	USA, New Orleans
Australasian Melanoma Conference AMC2024	2024	Sydney
Australian Society for Dermatology Research Annual Scientific Meeting	2024	Sydney
Akoya Bioscience Roadshow (Garvan)	2024	Sydney
AACR General Meeting- Invited speaker.	2023	USA, Orlando
Spatial Biology: Translating basic research into clinical insights. Speaker	2023	Singapore
WEHI Spatial Symposium	2023	Melbourne
Cancer Research Network HDR Symposium	2023	Sydney
Society of Melanoma Research General Meeting – Speaker	2022	Scotland
Australasian Society for Dermatology Research ASDR- Speaker	2022	Brisbane
Inaugural Spatial Meeting QIMR Berghofer- Organiser/Speaker	2022	Brisbane
Pathology update-Royal College of Pathologists of Australasia	2021	Sydney, Australia
General Meeting- American Association for Cancer Research-poster	2021	USA, Virtual
Novel imaging technologies- Keynote Speaker-University of Mexico	2021	USA, Texas
InterMEL consortium- Keynote Speaker	2021	USA, Texas
Yale Postdoc Association- Keynote Speaker	2021	USA, Connecticut
Akoya Bioscience General meeting- Keynote Speaker	2021	USA, California
UniMelb cancer research webinar- Guest Speaker	2021	Melbourne, Aus
Cancer for Research Excellence- Invited speaker	2021	Sydney, Australia
Research retreat, Melanoma Institute Australia- Keynote Speaker	2020	Sydney, Australia
Biomedical Sciences Research Methods Day Seminar	2020	Sydney, Australia
Surgical Immunology- Student research seminar	2020	Sydney, Australia
Epigenetics User Group Symposium – Invited Speaker	2020	Otago, NZ
InterMel consortium general meeting- Panel member	2019	Santa Fe, USA
Australian Precision Oncology Symposium- Invited speaker	2019	Adelaide, Aus
Cancer Council Consumer Forum-Discussion- Panel member	2019	Sydney, Australia
Molecular and Experimental Pathology Society of Australasia- Speaker	2019	Sydney, Australia
Cantoo Winter Gala fundraising Dinner- Guest speaker	2019	Sydney, Australia
Melanoma March National Fundraiser, Invited Speaker	2019	Wollongong, Aus
Cancer Institute NSW research fellow's forum, Invited Speaker	2018	Sydney, Australia
Melanoma March National Fundraiser, Invited Speaker	2017	Newcastle
Ultimate Melanoma Masterclass	2018	Sydney
Society for Melanoma Research Congress, Invited Speaker	2017	Brisbane, Australia

MENTORING

Postdoctoral students:

Dr Hansol Lee PhD 2022. Publication to arise from his thesis:

- Clinical Cancer Research, 2023: Effect of steroids on MAPKi treated patients (PMID: 36477181)
- Cancers, 2021: Review of NK-cell biology in the context of ICB treatment (PMID: 33802954)
- Oncoimmunology 2019: NK cells in anti-PD-1 treated metastatic melanoma patients (PMID: 30713793)
- Clinical Cancer Research, 2023: Macrophages in anti-PD-1 treated patients (PMID: 36790412)
- Final year medical student

Dr Grace Attrill PhD 2023. Publication to arise from her thesis:

- Nature Cancer, 2020: Molecular analysis of primary melanoma T cells identifies high risk melanoma.
- Pigment Cell and Melanoma Research, 2021: Review to TME in cutaneous melanoma (PMID: 32939993)
- Frontiers in Immunology, 2022: Spatial immunophenotyping of primary melanomas (PMID: 36003398)
- Journal for ImmunoTherapy of Cancer, 2022: CD39+ T-cells in adjuvant immunotherapy (PMID: 35688560)
- Prestigious Postdoc at NCI

Dr Rebecca Simpson PhD 2024:

- Nature Medicine 2022: Diet-driven microbial ecology underpins associations with ICB (PMID: 36138151)
- CINSW earl Career Fellowship awarded 2024

Dr Tuba Nur Gide 2019:

- High Impact publications: Cancer Cell, Clinical Cancer Research *2, Modern pathology, Histopathology and Oncoimmunology.
- Dr Gide now holds a prestigious
- CINSW ECR fellowship and is a CO-CI on the CINSW Translational Program Grant $3,748,550.

Dr Jarem Edwards as co-supervisor. Thesis awarded in 2021:

- Publications in Nature, Cancer Immunology Research and 3* Clinical Cancer Research.
- National Medical Liaison to BMS.

Undergraduate students

- Aubrey Wood was awarded hons 1st class and was the Dean's List of Excellence in Academic Performance. Aubrey is now studying medicine. (2021)
- Catherine Bai was awarded 1st class honours, received a NHMRC PhD scholarship and is now a PhD candidate under my supervision. (2021)
- Michael Xie, 1st class honours and University Medal. Studying Medicine (2022).

PROFESSIONAL ACTIVITIES

International Collaborations:

- Steering Committee Member: International Cancer Genome Consortium's Melanoma Project (facilitates data sharing)
- Member: International Neoadjuvant Melanoma Consortium (clinical trial design and guidelines)
- International Committee Member: InterMEL Project (improving primary melanoma prognosis)
- Core Leader & Biomarker Implementation Chair: Melanoma Centre of Research Excellence (identifying barriers for clinical implementation of biomarkers)

Peer Review & Editorial Activities:

- Peer Reviewer: NHMRC Investigator Grants (2020-2023), Cure Cancer Research Grants, Sydney Cancer Partners Translational Partners Fellowship Scheme
- Regular Reviewer: High-impact journals (Nature Communications, Cancer Discovery, Clinical Cancer Research, etc.)

Conference Organisation:

- Organising Committee Member: Inaugural Multi-Omics 2022 and Australia Melanoma Conference (AMC) 2021

PhD Thesis Reviews:

- Performed 4 reviews in 2024 for various universities (Western Sydney, Queensland, Monash, Melbourne)