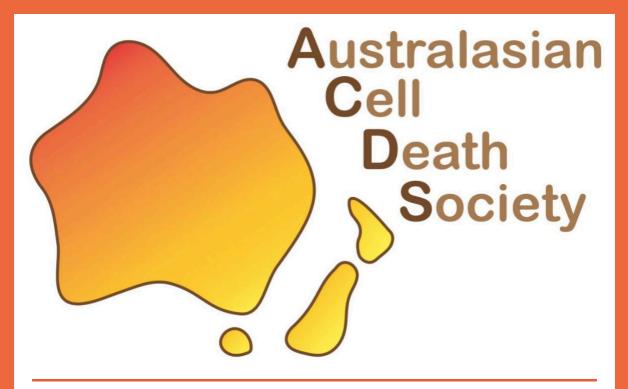
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Friday, 30 May 2025

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# **Professional Development Award Application Last Call!**

Don't forget to submit your application for the ACDS Professional Development Award for 2025!

We will be offering a \$2000 travel award for a PhD student or ECR to undertake national or international professional development-related activities!

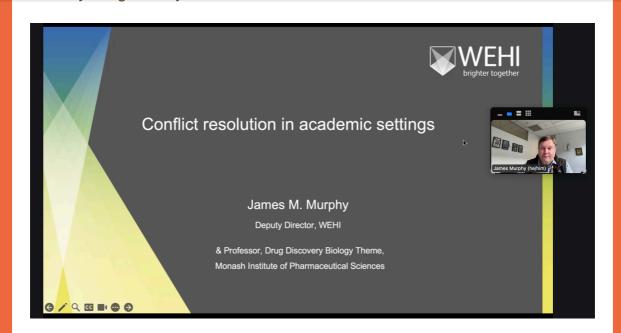
Applications will **close at 5 pm (AEST) on June 6th**, and successful applicants will be announced in early July.

For more information on the award and how to apply, please click <u>here</u>.

# **ACDS Mentorship Program - Rapid Fire Workshop Series**

In the last workshop, we had the opportunity to have a conversation with Prof. James Murphy from WEHI on working conflict resolution, especially when it comes to journal authorship assignments and dispute. We are extremely thankful for Prof. Murphy's time and advice. This insightful session provided

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The next Professional Development Workshop is on **August 13th**, with **Prof. Ivan Poon (La Trobe Institute for Molecular Science)** presenting on

Research Financing and Budgeting. To get to know Ivan and learn more about his research journey, check out his Featured Profile below!

- Workshop 3: Research Financing & Budgeting Prof. Ivan Poon, LIMS
- Wednesday, August 13th
- 2:00–2:30 AM AEDT

[This event is exclusive for members who have signed up for the Mentorship Programme]

# **Upcoming Events - Save the dates!**

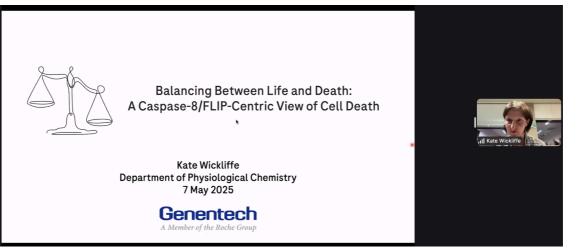
#### **ACDS Seminar Series**

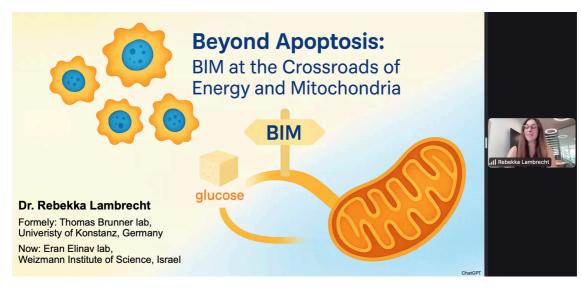
The next ACDS Seminar will be held on **July 2nd**, **11am AEST**. Stay tuned for more information

#### ACDS x ECDO International Cell Death Seminar Series

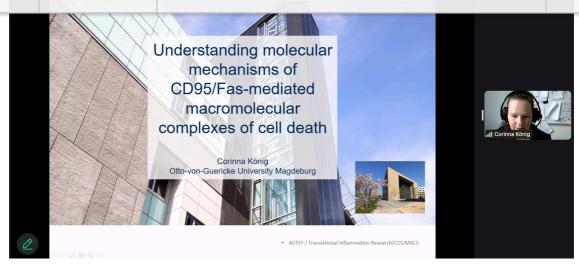
We had an incredible lineup of the speakers from Australia and across the globe presenting in the previous ACDS x ECDO International Cell Death Seminar. We thank Dr Kate Wickliffe (Genentech, USA), Dr Rebekka

and Corinna König (Otto von Guericke University, DE) for sharing with us their latest research and breakthrough!









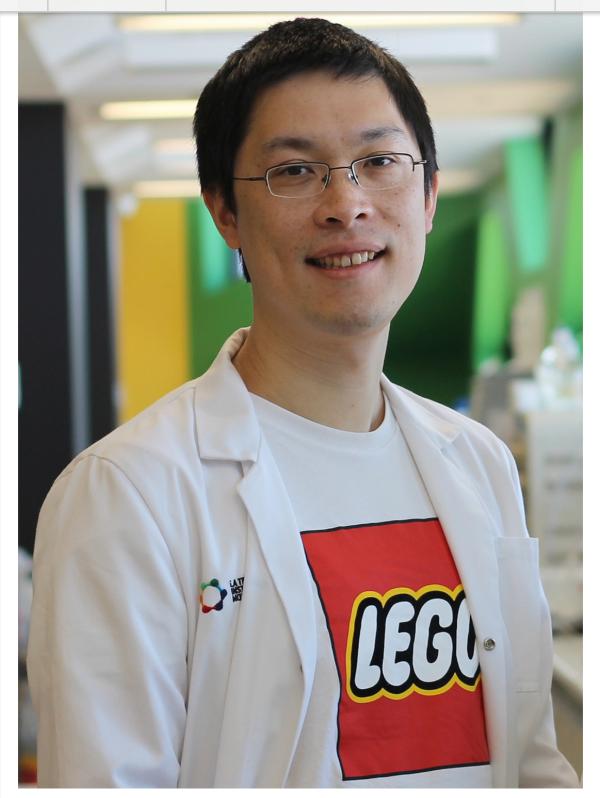
The next ACDS x ECDO International Cell Death Seminar will be on **September 3rd, 4.30pm AEST / 8:30am CEST**.

## **Special Workshop on Using AI in Medical Research**

We are organising a special workshop on the use of AI in Medical Research on **August 6th**. More information to come!

**Featured Scientist: Prof. Ivan Poon** 

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### **Getting to know Ivan**

I completed my Bachelor of Biomedical Science at Monash University (2004) with a focus on Biochemistry and trained with David Jans on nuclear transport. Through a number of unexpected events, I ended up at the John Curtin School of Medical Research at ANU and completed my PhD (2009) with Chris Parish and Mark Hulett working on degradative enzymes and necrotic cell clearance. The apoptotic cell clearance field was growing rapidly at that time and I was

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immediately after my PhD, I continued to work with Mark at La Trobe University (2009-2011) as it was so much fun in discovering how small peptides called defensins could bind distinct phospholipids on the plasma membrane to oligomerize and causes necrotic-like cell death (sounds familiar?). After attending the Gordon Conference on Cell Clearance in 2010, it was clear to me that I had to go back to the cell clearance field and subsequently joined Kodi Ravichandran (Ravi)'s laboratory (2012-2013) at the University of Virginia (UVA), where I accidentally discovered the first negative regulator of apoptotic cell fragmentation. Fascinated with how this disassembly process is regulated, I established my independent laboratory back at La Trobe University in 2014 with great support from Mark and Ravi. Ever since then and with the help of many trainees and collaborators, my lab investigates how and why dying cells undergo fragmentation in the context of infection, inflammation, and more recently cancer and even during viral infections in chickens!

#### What are your most significant publications?

There are only a handful of times in my career I could remembered clearly that the data stunned me. During my PhD, I was trying to identify what the serum protein histidine-rich glycoprotein (HRG) is binding to on necrotic cells. After 2 years of unfruitful pull-down experiments, I decided to use one of those newly available membrane lipid strips to test whether HRG could bind to lipids instead. To our surprise, HRG binds predominately to PtdIns(4)P (a type of phosphoinositide), suggesting other phospholipids besides phosphatidylserine could function as 'eat-me' signals on dead cells (PMID:20071662). These lipidprotein interaction studies surprisingly carried into my first post-doc, in which I was tasked to determine how plant defensin NaD1 could mediate cell necrosis. We subsequently discovered the ability of NaD1 to interact with a range of phospholipids, in particular PtdIns(4,5)P2, which causes NaD1 to oligomerize and facilitate membrane lysis (PMID:24692446). At the time, these unexpected observations led to many exciting hypotheses and subsequent studies (e.g. PMID:27647905; 36859344). The second set of data that surprised me was when I started to investigate how apoptotic cells undergo fragmentation. Imaging the fragmentation process by time-lapse microscopy lead to the discovery of thin membrane protrusions coined as 'apoptopodia' and 'beadedapoptopodia' (PMID: 24646995; 26074490) (I tried to call them 'Apoptotic String-like Structure' initially...).

What decisions made the biggest impact or have proved to be the most beneficial for your career, and what advice would you give to up-andcoming cell death researchers? Subscribe Past Issues Translate Tran

decided to go down the rabbit hole to investigate how apoptotic cells fragment into ApoBDs. Although many have dismissed this process for various reasons, my time-lapse microscopy data was so fascinating to me that drives me to investigate this further. I was even crazy enough to perform a drug screen by myself to try identifying regulators of this process and ran >1,600 flow cytometry samples one-by-one over 3 weeks. My advice is, if the data is compelling and you are passionate about the process, follow it!

### What motivates you to get into the lab?

It is so much fun to be in the lab doing experiments! I wish I can be a PhD student/post-doc again, so enjoy it while you can! I just want to identify all the molecular regulators of apoptotic cell disassembly and see whether modulating the disassembly process could be beneficial in certain disease settings.

## What is your favourite form of cell death and why?

Definitely apoptosis! Apoptotic cells can disassemble beautifully to generate large extracellular vesicles!

### What do you enjoy doing for fun or in your spare time?

With two kids at primary school age, there aren't much spare time.

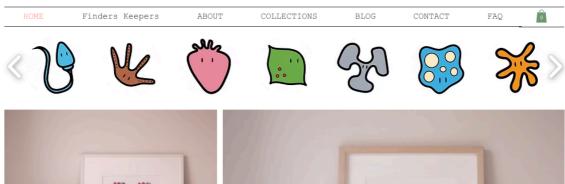
Nevertheless, I am obsessed with LEGO, manga, anime and designing things for 'Where Are My Cells?' (my science art passion:

www.wherearemycells.com)! [ACDS is very grateful to Ivan for his contribution to ACDS merch:D]

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When science meets art...







## **ACDS Member Publications**

\*Published a cell death paper recently? Let us know and we'll list it here\*

Molina-Lopez C, Hurtado-Navarro L, O'Neill LAJ, **Pelegrin P**. 4-octyl itaconate reduces human NLRP3 inflammasome constitutive activation with the cryopyrin-associated periodic syndrome p.R262W, p.D305N and p.T350M variants. Cell Mol Life Sci. 2025 May 23;82(1):209. doi: 10.1007/s00018-025-05699-5. PMID: 40410596; PMCID: PMC12102053.

Shemorry A, Besten WD, Mulvihill MM, Essenburg CJ, Blaquiere N, Kleinheinz T, Villemure E, Peale F, Deshmukh G, Maddalo D, Levy E, Yu K, Steensma MR, Tovar EA, Wolfrum E, Nagapudi K, Blake RA, Forrest WF, Staben ST, Graveel CR, **Fairbrother WJ**, Wertz IE. Engineering ER $\alpha$  degraders with pleiotropic ubiquitin ligase ligands maximizes therapeutic efficacy by coopting distinct effector ligases. Cell Chem Biol. 2025 May 15;32(5):694-709.e35. doi: 10.1016/j.chembiol.2025.04.008. PMID: 40378821.

Panda SK, Sanchez-Pajares IR, Rehman A, Del Vecchio V, Mele L, Chipurupalli S, **Robinson N**, Desiderio V. ER stress and/or ER-phagy in drug resistance? Three coincidences are proof. Cell Commun Signal. 2025 May 13;23(1):223. doi: 10.1186/s12964-025-02232-w. PMID: 40361118; PMCID: PMC12070796.

Derde L, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, Nichol AD, Arabi YM, Annane D,

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Leavis HL, Lewis RJ, Litton E, Marshall JC, Mayr FB, McAuley DF, McGlothlin A, McGuinness SP, McVerry BJ, Morpeth SC, Murthy S, Netea MG, Ogungbenro K, Orr K, Parke RL, Parker JC, Patanwala AE, Pettila V, Reyes LF, Saito H, Santos MS, Saunders CT, Seymour CW, Shankar-Hari M, Sligl WI, Turgeon AF, Turner AM, Tong SYC, Vaara S, Youngstein T, Zarychanski R, Green C, Higgins AM, McArthur CJ, Berry LR, Lorenzi E, Berry S, Webb SA, Angus DC, van de Veerdonk FL. Tocilizumab, sarilumab and anakinra in critically ill patients with COVID-19: a randomised, controlled, open-label, adaptive platform trial. Thorax. 2025 May 13:thorax-2024-222488. doi: 10.1136/thorax-2024-222488. Epub ahead of print. PMID: 40360262.

**Marchingo JM**, Spinelli L, Pathak S, Cantrell DA. PIM kinase control of CD8 T cell protein synthesis and cell trafficking. Elife. 2025 May 13;13:RP98622. doi: 10.7554/eLife.98622. PMID: 40359130; PMCID: PMC12074636.

**Dmello RS**, Palmieri M, Thilakasiri PS, Doughty L, Nero TL, Poh AR, To SQ, **Lee EF, Fairlie WD**, Mielke L, Parker MW, **Poon IKH**, Batlle E, Ernst M, Chand AL. Correction: Combination of bazedoxifene with chemotherapy and SMAC-mimetics for the treatment of colorectal cancer. Cell Death Dis. 2025 May 12;16(1):376. doi: 10.1038/s41419-025-07631-y. Erratum for: Cell Death Dis. 2024 Apr 10;15(4):255. doi: 10.1038/s41419-024-06631-8. PMID: 40355405; PMCID: PMC12069541.

Baba SK, Alblooshi SSE, Yaqoob R, Behl S, Al Saleem M, Rakha EA, **Malik F**, Singh M, Macha MA, Akhtar MK, Houry WA, Bhat AA, Al Menhali A, Zheng ZM, Mirza S. Human papilloma virus (HPV) mediated cancers: an insightful update. J Transl Med. 2025 Apr 29;23(1):483. doi: 10.1186/s12967-025-06470-x. PMID: 40301924; PMCID: PMC12039116.

Monson EA, **Loterio RK**, Roby JA, Adhikari A, Bull RA, Carr JM, Chatzileontiadou DSM, Cheng CX, Coulibaly F, Davis SK, Deerain JM, Douglas MW, Drummer HE, Eyre NS, Freppel W, Gowripalan A, Grant EJ, Gras S, Guthmiller JJ, Herrero LJ, Hesping E, Horsburgh BA, Hyde JL, Koutsakos M, Mackenzie JM, Mahar JE, McCoullough LC, McMillan CLD, Modhiran N, Parry RH, Purcell DFJ, Rawle DJ, Slonchak A, Speck PG, Tachedjian G, Tu T, Moseley GW, Fraser JE, **Tate MD**. Twelfth scientific biennial meeting of the Australasian Virology Society: AVS12 2024. J Virol. 2025 May 20;99(5):e0225524. doi: 10.1128/jvi.02255-24. Epub 2025 Apr 25. PMID: 40277357; PMCID: PMC12090773.

Hsu AT, O'Donoghue RJJ, Tsantikos E, **Gottschalk TA**, **Borger JG**, Gherardin NA, Xu C, Koay HF, Godfrey DI, Ernst M, Anderson GP, Hibbs ML. An unconventional T cell nexus drives HCK-mediated chronic obstructive pulmonary disease in mice. EBioMedicine. 2025 May;115:105707. doi: 10.1016/j.ebiom.2025.105707. Epub 2025 Apr 16. PMID: 40245497.

Xiong L, Diwakarla S, Chatzis R, Artaiz O, Macowan M, Zhang S, Garnham A, **Morgan PK**, Mellett NA, Meikle PJ, Lancaster GI, Marsland BJ, Nutt SL, Seillet C. Acute exposure to high-fat diet impairs ILC3 functions and gut homeostasis. Immunity. 2025 May 13;58(5):1185-1200.e8. doi: 10.1016/j.immuni.2025.03.017. Epub 2025 Apr 14. PMID: 40233759.

Spaan AN, Boisson B, **Masters SL**. Primary disorders of polyubiquitination: Dual roles in autoinflammation and immunodeficiency. J Exp Med. 2025 May 5;222(5):e20241047. doi: 10.1084/jem.20241047. Epub 2025 Apr 15. PMID: 40232244; PMCID: PMC11998746.

**Yeap HW**, Goh GR, **Rosli SN**, Pung HS, **Giogha C**, **Eng VV**, **Pearson JS**, **Hartland EL**, **Chen KW**. A bacterial network of T3SS effectors counteracts host pro-inflammatory responses and cell death to promote infection. EMBO J. 2025 May;44(9):2424-2445. doi: 10.1038/s44318-025-00412-5. Epub 2025 Mar 24. PMID: 40128366; PMCID: PMC12048508.

Zhang P, Whipp EC, Skuli SJ, Gharghabi M, Saygin C, Sher SA, Carroll M, Pan X, Eisenmann ED, Lai TH, Harrington BK, Chan WK, Youssef Y, Chen B, Penson A, **Lewis AM**, Castro CR, Fox N, Cihan A, Le Luduec JB, DeWolf S, Kauffman T, Mims AS, Canfield D, Phillips H, Williams KE, Shaffer J, Lozanski A, Doong TJ, Lozanski G, Mao C, Walker CJ, Blachly JS, Daniyan AF, Alinari L, Baiocchi RA, Yang Y, Grieselhuber NR, Campbell MJ, Baker SD, Blaser BW, Abdel-Wahab O, Lapalombella R. TP53 mutations and TET2 deficiency cooperate to drive leukemogenesis and establish an immunosuppressive environment. J Clin Invest. 2025 Mar 20;135(10):e184021. doi: 10.1172/JCI184021. PMID: 40111422; PMCID: PMC12077897.

E, Palendira U, **Phan TG**, Menzies AM, Carlino MS, Quek C, Grimmond SM, Vissers JHA, Yeo D, Rasko JEJ, Khasraw M, Neyns B, Reardon DA, Ashley DM, Wheeler H, Back M, Scolyer RA, Drummond J, Wilmott JS, Rizos H. Neoadjuvant triplet immune checkpoint blockade in newly diagnosed glioblastoma. Nat Med. 2025 May;31(5):1557-1566. doi: 10.1038/s41591-025-03512-1. Epub 2025 Feb 27. PMID: 40016450; PMCID: PMC12092302.

Dejoux A, Zhu Q, Woolfe A, Godon O, Ellouze S, Mottet G, Castrillon C, **Gillis C**, Pecalvel C, Ganneau C, Iannascoli B, Lemoine F, Saul F, England P, Reber LL, Gouel-Chéron A, de Chaisemartin L, Haouz A, Millot GA, Bay S, Gérard A, Jönsson F, Chollet-Martin S, Bruhns P. Antibody-secreting cell repertoires hold high-affinity anti-rocuronium specificities that can induce anaphylaxis in vivo. J Allergy Clin Immunol. 2025 May;155(5):1557-1574. doi: 10.1016/j.jaci.2025.01.025. Epub 2025 Jan 30. PMID: 39892658.

**Shi B**, **Phan TK**, **Poon IKH**. Extracellular vesicles from the dead: the final message. Trends Cell Biol. 2025 May;35(5):439-452. doi: 10.1016/j.tcb.2024.09.005. Epub 2024 Oct 21. PMID: 39438206.















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