# IMMUNOLOGS

Murine lung section stained with Picrosirus red stain showing collagen (red) and muscle (yellow)

Credits: Dr Lim Hwee Yng (LSI Histology Core Facility and Advanced Imaging lab)

# **Programme Publications**

Goh, Y, <u>Tay SH</u>, Litt Yeo LL, Rathakrishnan R Neurology. (Jan 2023). "Bridging the Gap: Tailoring an Approach to Treatment in Febrile Infection-Related Epilepsy Syndrome." DOI: 10.1212/WNL.000000000207068.

Deng L, Wojciech L, Png CW, Kioh DYQ, Gu Y, Aung TT, Malleret B, Chan ECY, Peng G, <u>Zhang Y</u>, <u>Gascoigne NRJ</u>, Tan KSW. Theranostics. (Feb 2023). Colonization with two different Blastocystis subtypes in DSS-induced colitis mice is associated with strikingly different microbiome and pathological features. DOI: 10.7150/thno.81583.

Riggioni C, Phang KF, <u>Tay SH</u>, Van Bever H, Xu S, Oh S, Bueno A, Chua R, Goh SH, Chong KW, Tham EH, Santosa A. Pediatric Allergy and Immunology. (Feb 2023). National assessment strategy for adults and children with a history of vaccine allergy shows low utility of COVID-19 vaccine skin testing. DOI: 10.1111/pai.13923.

Long Y, Ang KS, Li M, Chong KLK, Sethi R, Zhong C, Xu H, Ong ZW, Sachaphibulkij K, Chen A, Zeng L, Fu H, Wu M, <u>Lim LHK</u>, Liu L, <u>Chen J</u>. Nature Communications (March 2023). "Spatially informed clustering, integration, and deconvolution of spatial transcriptomics with GraphST." DOI: 10.1038/s41467-023-36796-3

Tang J, Jia X, Li J, Dong J, Wang J, Li W, Zhu Y, Hu Y, Hou B, Lin C, Cong Y, Ren T, Yan C, Yang H, Lai Q, Zheng H, Bao Y, Gautam N, Wang HR, Xu B, Chen XL, Li Q, <u>Gascoigne NRJ</u>, Fu G. Cellular & Molecular Immunology.(Mar 2023). Themis suppresses the effector function of CD8+ T cells in acute viral infection. DOI: 10.1038/s41423-023-00997-z

## **Programme news**



Associate Professor Nguyen Nam Long has achieved tenure at NUS Yong Loo Lin School of Medicine! He has been at NUS Department of Biochemistry since 2015 and is interested in mechanistic characterizations of novel nutritionally regulated genes that involve in lipid, nutrient transport and metabolism.

Professor Nicholas Gascoigne has been awarded the Faculty Research Excellence Award 2023. His lab focuses on T cell biology, and in particular T cell activation after stimulation through the T cell receptor (TCR).





Associate Professor Zhang Yongliang has a new project titled "DUSP16 in tumor resistance to chemotherapy and in anti-tumor immunity." His lab focuses on the physiological function of a group of proteins known as dual-specificity phosphatases (DUSPs).

Congratulations to all and the ITRP wishes you every success in your research endeavours!!

# Getting to know...



Dr Amanda Chan a clinician in Neurology and is doing her PhD supervised by A/Prof Herbert Schwarz. She presented at Research in Progress in January, we interview her to find out how is it like doing a PhD in ITRP as a clinician.

Editor (I): Share with us the story how your background and why you got interested in neurology? Like your clinical and research journey thus far?

Amanda (A): I went to medical school in Hong Kong, and have always been interested in the Neurosciences. Neurology is a specialty that's different from other specialties in that it's like a roadmap of your body and you need to know how the different tracts run. It's not a popular specialty because it's hard, but there was (and still is) a lot that was unknown, and waiting to be discovered. When my family relocated to SG, I'd just finished my Neurology specialist training, came here and realised that there still is a lot that is unknown, especially in autoimmune neurology, which is evolving day by day. So I decided to embark on research. To be honest, it was tough, and the learning curve was steep, considering how I trained at a service-based hospital in HK where the focus was clinical service. Obstacles occur one after the other, which has made me doubt my decision multiple times, but supervision, mentorship and support at NUH and NUS are amazing, and everyone is so approachable, making the journey much smoother.

## I: What is your PhD project about?

A: Immunological mechanisms of small fiber neuropathy (SFN). We noticed that these patients with excruciating symptoms were responding very well to a last resort treatment of intravenous immunoglobulins and corticosteroids, suggesting an immunological mechanism at play. So far we've described some new autoantibodies that may be at work in the pathophysiology of SFN, and I would like to determine their role in SFN.

## I: What is something interesting about yourself?

A: I love to cook, and all my IG feed is filled with food and recipes. Since I was 8 years old I wanted to go to culinary school but my mother forbade me, as typical Asian families do not think this is a lucrative or practical career. I do have it in my retirement plan though - it's never too late to learn something new!



## I: What is one thing that you like to do outside of work?

A: To be honest, it seems that there are never enough hours in a day, balancing the job of a full time mother, part time neurologist, and part time graduate student. But during the rare off times I have, I'm an adrenaline junkie, and I like exercising and running after my 2 very energetic boys who are 7 and 10 years-old. I love running, hiking, tennis and muay thai! Exercise keeps my sanity in check.

Thank you Amanda for sharing and we wish her all the best in her research journey and for her clinical work! If you are interested to find out more about her research or would like to explore collaborations, please contact her at <a href="mailto:amanda.chan@u.nus.edu">amanda.chan@u.nus.edu</a>

# **Looking For A Job?**

#### 1) Seeking Research Assistant in the research group of Dr. A. Beghin at the Mechanobiology Institute, NUS

The Mechanobiology Institute, Singapore is a multidisciplinary institute committed to developing new paradigms for biomedical research by focusing on the quantitative analysis of dynamic functional processes. Through quantitative biophysical approaches, we address major problems in biomedical sciences including pathogenesis (from bacterial to cancer), tissue regeneration, and function.

#### Job description:

We are seeking a highly motivated individual to join us as a research assistant in the research group of Dr. Anne Beghin at the Mechanobiology Institute, National University of Singapore. The group, led by Dr. Beghin, focuses on the bioengineering of human organoids to mimic epithelium tissue (breast and lung, mainly).

Candidates are expected to have established prior experiences in human cells manipulation, with a strong background in primary cells handling and characterizations. The candidate will be working on stable cell lines as well as on primary cell cultures to establish optimal conditions for isolating and culturing cells. She/ he will use a variety of cutting edge-microscopy and microfabrication techniques to shape and characterize established cell cultures, and optimize the cell culture pipeline.

The candidate will be required to maintain personal and professional development, such as regularly participating in appropriate training activities, to meet the evolving demands of the job. Excellent verbal and written communication skills will also be required since writing scientific reports for both internal documentation and publication is a component of this position.

In sum, the candidate's main duties and responsibilities will include:

- · Stable cell lines maintenance (including passaging, routine media exchange, harvest, and sampling)
- Primary cells handling
- · Characterization of cell phenotypes (i.e. immunostaining, microscopy, molecular biology)
- Administrative work related to cell culture and wet lab work such as SOP writing, purchase and follow-up of stocks etc.
- Technical/Scientific report writing

#### Minimum Requirements:

- Bachelor's Degree in bioengieneering, cell biology, or equivalent graduate degree or higher
- Organized, meticulous, able to work independently as well as together in a team
- 2-3 references

#### To apply:

Interested applicants are to apply online at: https://careers.nus.edu.sg/job-invite/18592/. They should also upload their curriculum vitae, publication list (if applicable) and three reference letters. Locals (Singaporean/ PR) are highly encouraged to apply.

We regret that only shortlisted candidates will be notified.

2) Research Assistant (Electron Microscopy Unit)

#### Job Description:

The National University of Singapore invites applications for Research Assistant in the Electron Microscopy Unit, Yong Loo Lin School of Medicine. The Electron Microscopy Unit is a core facility in Yong Loo Lin School of Medicine. Our mission is to provide high quality EM solutions for biomedical researchers in the University and the rest of the scientific community. The Unit also engages in collaborative research projects, mainly with departments within the School of Medicine and A\*STAR research institutes. More information on the department is available at https://medicine.nus.edu.sg/core-facilities/electron-microscopy-unit-emu/. Appointments will be made on a 1-yearly contract basis, with the possibility of extension.

#### Purpose of the post

The Research Assistant (RA) will work closely with a team to ensure smooth day-to-day operation of the EM Unit, including maintenance of the laboratory premises and equipment. In addition, he/she is also required to handle trainings, assist users in their EM work, and involve in provision of EM services or collaborative research projects.

#### Main Duties and Responsibilities:

- 1. Provide services to users who need EM data for their research work
- 2. Involve in collaborative projects and project management
- 3. Provide training and assistance to users
- 4. Undertake the day to day running of the EM Unit eg. equipment maintenance and housekeeping
- 5.Develop advanced EM techniques such as Correlative Light and Electron Microscopy (CLEM), Focused Ion Beam (FIB), Cryo-TEM
  - 6. Provide administrative support eg. collect statistical data, organize annual workshops
  - 7. Maintain the highest standard of safety and record keeping in accordance with policies and procedures
  - 8. Assist with any other duties of a similar nature that are delegated by the PI

#### Qualifications

The applicant should:

- 1. Have a Bachelor degree in Life Sciences or related disciplines; preferably with some experience in research;
- 2.be able to work independently and in a team, willingness to learn, attention to detail; and
  - 3. have good organization skills, strong communication and interpersonal skills
- 4.preferably have hands-on experience in microscopy and/or non-microscopy related techniques such as animal work, cell-culture work, flow cytometry

Remuneration will be commensurate with the candidate's qualifications and experience. Only shortlisted candidates will be notified.

Applications for this position will remain open and interviews will commence earliest in June.



# **Immunology News**

## Singapore Society for Immunology (SgSI) Travel Awards

The Singaporean Society for Immunology (SgSI) is delighted to announce the travel fellowship call for 2023. Travel Award Amount:



SgSI will award the following amounts based on the conference venue: S\$2,000 (Asia & Oceania) S\$2,500 (Africa, Europe, North & South America)

Valid Travel Period: 20th May 2023- 20th May 2024

### Application Deadline: 30th April 2023

Successful applicants will be notified via email approximately 2-3 weeks after the application deadline.

#### Eligibility:

- 1. Applicant must be a current member of SgSI
- 2. Applicant must be currently residing in Singapore
- 3. Conference location must not be in Singapore and must be scheduled at least two weeks after the Application Deadline
- 4. Applicant must be doing a poster/oral presentation
- 5. Current call awardees will not be considered for the next call

Application Documents( Available Below):

SgSI Travel Award Application Form
Letter of support from supervisor or head of department

To apply, download the forms and email the completed forms to singaporesocietyforimmunology@gmail.com or oh.qy.megan@gmail.com Only complete applications will be considered.

Terms and Conditions

Successful applicants must:

1) Acknowledge SgSI for their financial support on your poster and/or oral presentation. You can use the SgSI logo.

2) Provide the following documents to SgSI within one month of attending the conference:

- \*Short meeting report outlining their experience and how beneficial it was (250 words)

- \*Photos of yourself at the conference presenting a poster/giving a talk

- Copy of your travel expense receipts (air ticket economy class only via the most direct route, registration, accommodation) that amount up to the maximum

award given (if total expenses are less than the award amount, SgSI will reimburse the actual expense incurred)

- Name (to be written on the cheque) and mailing address

\*This will be shared on SgSI's website.

SgSI will disburse the monies to the recipient within one month upon receipt of all documents.

Failure to comply with the terms and conditions may result in the Society not awarding your funding and denying future applications. Although the SgSI endeavours to ensure that travel awards are awarded to as many applicants as possible, there will be occasions where applications are unsuccessful.

For more information, visit SgSI's website: https://www.sgsi.org.sg/events/fellowship

