



Victorian News

The Australian Society for Microbiology VIC Branch Newsletter

June 2020, Vol 530



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“Isolation edition”
Open for submissions

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2020 Calendar

Event	Date
Vet Micro Symposium	30 June 2020 (Online)
Microbial Art Prize	1 st June - 31 st July
Virtual Coffee Roulette	22 nd June – 25 th June
'Microbes on the Move' NZMS- ASM Joint Conference	23-26 November 2020 Rotorua New Zealand
EduCon	9 th July 2021

Events

Vet Micro Symposium (Online)

30th June 2020

6.30pm

We are excited to invite you to our first online symposium for 2020 "The Veterinary Microbiology Symposium". Come and join us for an evening of presentations by members of the microbiology community covering a variety of infectious disease topics in the veterinary field including:

- "Global eradication of bovine rinderpest virus and its relationship to measles and canine distemper viruses" by Colin Wilks (University of Melbourne)
- "Epidemiology and pathogenesis of *Serratia marcescens* in the Lord Howe Island Stick Insect (*Dryococelus australis*)" by Nick Doidge (Melbourne Zoo)
- "LAMP assays for emergency animal diseases – a case study of African Swine Fever in Timor-Leste" by Peter Mee (AgriBio)
- "Spot the culprit: Discovery of the cause of Spotty Liver Disease in chickens" by Thi Thu Hao Van (RMIT)

This will be a **free event** for ASM members and non-ASM members. Register here at <https://www.trybooking.com/BJWOD>. Registrations are essential. The Zoom link provided upon registration.

For further details, please contact **Jacqueline Heath** (jhea@unimelb.edu.au), **Mary Valcanis** (valcanis@unimelb.edu.au) or **Steve Petrovski** (steve.petrovski@latrobe.edu.au).

ASMCUR Virtual

8th - 9th July 2020

The American Society for Microbiology Conference for Undergraduate Educators (ASMCUE) has gone virtual. 2020 ASMCUE Virtual will explore: Punctuated Equilibrium: Undergraduate Biology Education During the Coronavirus Pandemic. This conference will deliver the content and activities you've come to expect from the in-person conference, in a socially distance approved format. Come and be part of the dynamic event as we discuss the most relevant topics to your new normal. For program highlights and more information [see here](#).

Microbial Art Prize "isolation edition"

1st June 2020 – 31st July 2020

Calling all artistic individuals. It is time for the 2020 Microbial Art Prize. This year we are switching things up and asking you to submit images representing **Micro at Home**. This could be your best bacteria-themed cookies, paintings, or the recreation of a host-pathogen interaction with lego - the more outside the box the better!

Imaged will be posted on the branch website, social media accounts and the monthly newsletter. Prizes will be awarded to the committee favourites.

Send all entries and enquires with the Subject Heading: Microbial Art Prize to Sarah Baines (baines@unimelb.edu.au) and Jake Lacey (jake.lacey@unimelb.edu.au).

To be considered for a prize, entries must be received by 31st July 202



EduCon is On!

9th July 2021

Micro(education) in the morning. A virtual conference brought to you by the Australian Society of Microbiology. Education in the SARS-2-CoV age. What have we learnt about online teaching and how can we improve our subject delivery and our resilience? For more information contact megan.lloyd@uwa.edu.au.



Micro (education) in the morning

A virtual conference - brought to you by the Australian Society for Microbiology

**SAVE THE DATE - THURSDAY JULY 9TH 2021
8 AM TO 12 MIDDAY, EST**

Education in the SARS-2-CoV age - what have we learnt about online teaching and how can we improve our subject delivery and our resilience?

For more information: megan.lloyd@uwa.edu.au



Postponed events

The following events are Postponed until further notice.



Virtual Coffee Roulette

22nd June – 25th June

Want to meet your fellow ASM members?

We know how hard it has been to connect with people in this time of isolation. That is why we have set up a virtual coffee roulette! This is a great chance to meet other members of ASM and get to know one another over a quick 30-minute break. We will connect you with a small group of your peers for a casual chat, a nice break with a cup of coffee (or glass of wine in hand if it's that time of the day), or even a chance to collaborate!

All you have to do is:

- Register for the event
- Choose a session time that suits you
- Receive a Zoom meeting link
- Show up and have a good time

Sessions:

- Monday 22nd June, 12.30pm
- Tuesday 23rd June, 5.30pm
- Wednesday 24th June, 12.30pm
- Thursday 25th June, 5.30pm

Registration: <https://www.trybooking.com/BJWAR> . Registrations close 5pm, Friday 19th June. This is a free event for ASM full and student members. Zoom meeting link to be provided after registration via email.

Rules:

We ask that if you register for a session you commit to attending the meeting and we expect participants to be respectful and use appropriate language.

For further details, please contact **Lauren Zavan** (l.zavan@latrobe.edu.au) or **Jacqueline Heath** (jhea@unimelb.edu.au).

News and Views

ASM Vic Branch Website Down

Unfortunately, due to unforeseen circumstances our ASM Vic Branch Website is currently unavailable. We are working as hard as we can to resolve this issue and we apologise for any inconvenience caused. In the meantime our Facebook and Twitter accounts will be running as usual.

Call for ASM Vic Branch Committee members 2020 is now closed

We would like to thank everyone who submitted a nomination form for the ASM Victorian Branch Committee this year and to the MASMs and FASMs for their support of the candidates.

The committee is currently going through the nominations and we will be able to introduce our new committee members next month.

ASM Victoria Branch Survey

Closes 30th June.

During the current COVID-19 pandemic, the ASM Victorian Branch Committee would like to help our members to stay connected, whilst continuing to provide value to the membership and advance the science of microbiology in Victoria. We would love to know your thoughts on how we can continue to support all our members and plan the most useful online events and resources.

Please click on the link below to complete a short survey. Closes 30th June so get in while you can

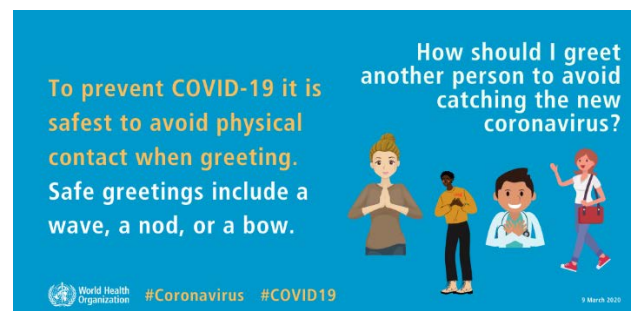
<https://www.surveymonkey.com/r/ASMVICBranch>.
Any questions, please email Jacqueline Heath (jhea@unimelb.edu.au)

Keeping up to date with COVID-19

During these unprecedented times it can be difficult to find the best information about Coronavirus (COVID - 19) and keep up to date with the ever-changing restrictions and medical advice. Here are some useful links to help you find the most relevant Coronavirus information for Victorians and where to get support.

- Victorian Government – For the most current announcements on Coronavirus for Victorians ([here](#))
- Australian Government – For the most current health advice ([here](#))
- DHHS Victoria - Information, updates, and advice about the outbreak of COVID-19 ([here](#))
- World Health Organization- Coronavirus disease (COVID-19) Pandemic ([here](#))
- Global Virus Network- SARS-CoV-2 Response Effort Highlights ([here](#))
- For help accessing support payments ([here](#))

24/7 Coronavirus health information line 1800 020 080



News and Views

Make Your Metrics Matter

By Danielle Ingle

We asked Dr Danielle Ingle to explain how to best keep track of your metrics for your resume and grant applications.

“First – a disclaimer – I am by no means claiming to be an expert at metrics. However, after finishing my PhD and applying for jobs and grants, these were some of the things I learnt along the way that hopefully prove useful to other later year PhD and early career researchers.”

Tracking research outputs

First – tick off the easy ones. I suspect many of you will already have these set up but if not, the following are quick to set up, public and increasingly often used as a first port of call for people interested in your research. Including links to your profiles on your CV for example is useful for all applications that require you to submit a CV.

ORCID: is a persistent digital identifier that will move with you through your research career. You can provide this with manuscript submissions and update it with affiliations, employment history, papers and grants and verified peer review contributions.

Google Scholar: tracks publications by you and the citations are updated automatically pretty regularly. It also gives your H-index. (e.g. a H-index of 5 means you are an author of 5 papers that have been cited at least 5 or more times). The H-index is a useful metric for people who are in your research field, but it should be noted that the H-index can be influenced by the citation practices that may vary in different fields.

Publons: offers similar features to ORCID. It most commonly seems to be used as a way to verify peer review contributions which is considered important to demonstrating service to the field.

Second – get familiar with using metrics to benchmark yourself and your research output. Your organisation will likely have a lot of material e.g. on how to calculate your field-weighted citation index (FWCI) and obtain metrics on the journals you have published in. I booked an appointment with a librarian to go through how to calculate these and I would recommend this if

you've not delved into the world of benchmarking before.

FWCI: this was a new concept for me and useful for conveying the importance of your research to those that may not be familiar with your field. You can obtain FWCI e.g. through SciVal for individual papers and also for yourself as a researcher. These can be useful corroborating evidence when making grant applications.

Establish your online presence

As researchers we're increasingly having engage in science communications. There are multiple tools you can use (to whatever level you're comfortable with).

University/Institute profile: Ensure your research profile with your organisation is up to date. What you can add may vary by organisation, but most will require a photo, publications, contact details, and research interests. This can be particularly useful for attracting students (this was how I initially identified my primary PhD supervisor).

Twitter: is an obvious way to engage but you can use it in different ways. I got a Twitter account as a way to find out about the latest conferences, tools (super important for genomics) and publications. Several of my peers are much more active.

The Conversation: is an open access site that aims to have academics inject evidence into the public debate. You can set up a profile if you are a researcher at a university/research institute. This can be a great way to engage with the broader community and there are metrics on readership that are available to you as an author.

Blogs: establishing your own research blog is something that is increasingly common. Often this is done by lab heads but as an PhD student or ECR you may be asked to contribute to the lab blog. It can be useful to see what others are doing to keep in mind for future years.

Research Highlights

Do face masks work?

Can wearing a mask protect you against coronavirus? A [Study in Nature Medicine identified Reparatory virus sheading of coronaviruses, influenza and rhinoviruses in exhaled breath](#) and evaluated the efficacy of face masks. Interested in some further discussion check out the [World Health Organisation \(WHO\) videos](#) on this very topic.



Plasmid recombination during outbreaks

Plasmids are extra-chromosomal DNA elements that are one of the largest contributors to horizontal gene transfer and the movement of antimicrobial resistance between isolates of the same and different species. A recent study in PLOS One investigating the [plasmid dynamics of *Klebsiella pneumoniae* during an outbreak of carbapenemase-producing *Klebsiella pneumoniae*](#) have shown just how complex working with plasmids can be. Joep J. J. M. Stohr and Colleagues have shown loss of the carbapenemase encoding region and plasmid recombination occurred within isolates from two separate patients. The authors flag this an issue when investigating potential plasmid outbreaks as within-patient plasmid variation needs to be considered.

Using Large-scale networks analysis to capture plasmid diversity

There are currently two classification schemes for bacterial plasmids; the first is based on replicon types and the second on the mobility group (MOB). Despite being widely used and providing valuable information, these schemes only work with specific species. [A new study in Nature Communications has utilised large-](#)

[scale network analysis](#) on over 10,000 plasmids to quantify their genetic similarities, assign cliques and investigate their population structure.

Agriculture intensification and *C. jejuni* specialisation

Human activities have had a profound effect on the Earth's ecosystem and biodiversity. This is particularly due in agriculture and livestock species. Changes in husbandry and host ecology can have major effects on the microbiota, potentially increasing the risk of zoonotic pathogens moving into humans. Find out about the relationship between *Campylobacter jejuni* and cattle in [this article published in PNAS](#).

Finding the origin of colistin resistance genes from 64,628 genomes.

A new worrying colistin resistance mechanism mediated by the *mcr-1* gene has been reported worldwide. In a recent paper in Scientific Reports Khedher and colleagues performed a massive bioinformatics analysis of bacterial genomes to investigate the [origin of *mcr-1* variants](#).

Incursion of *Candida aureus* into Australia

The fungal pathogen *Candida aureus* is an emerging healthcare-associated pathogen. Recently four patients were identified with *C. aureus* in Victoria. Find out more in the [Research Letter published in Emerging Infectious Diseases](#).

CRISPR in medical mycology

[This review from January in PLOS Pathogens](#) highlights the use of state of the art of CRISPR–Cas9 applications in four major human fungal pathogen lineages: *Candida* spp., *Cryptococcus neoformans*, *Aspergillus fumigatus*, and Mucorales.

Full length crystal structure of a cytochrome p450

Nature Communications features another article this month with the presentation of a [full length crystal structure of a cytochrome p450](#) which will have implication for more synthetic microbiology and biocatalysts applications.

Emergence of prions selectively resistant to combination drug therapy

Prion diseases are invariably fatal and currently incurable, but oral drugs that can prolong incubation times in prion-infected mice have been developed. The use of two drugs in combination in scrapie-infected mice showed no advantage over each drug use alone, but rather the combination therapy induced the formation of a new prion strain that was specifically resistant to the combination therapy. Read more in [this PLOS Pathogens article](#).

Basin as source of *Serratia marcescens* infection in 5 babies.

[A rare bacteria has infected five babies](#) at an Adelaide hospital's neonatal unit, with health authorities now investigating the source of the outbreak.

Some thoughts on COVID-19

With COVID-19 taking up a lot of our attention and with much discussion around vaccine development, but what does it actually take to eradicate a Disease? Find out here [in this interesting article](#).

With the scientific community working hard to address the COVID-19 health crises. The video journal (JoVE) has made all its [coronavirus focused content and resources](#) freely available. This suit of videos includes corona specific protocols, diagnostics protocols and many others. We highly recommend you check it out. Even if COVID-19 is not your thing they have videos for almost everything.

And last but not least check out the latest piece from Nobel Laureate Peter Doherty "[Virtuous circulations in the COVID-19 universe](#)"

But what about bacteria and fungi during COVID-19?

We found an exciting [online resource](#) that has curated journal articles and preprints on the roles of secondary infections, antibiotic chemotherapy and antimicrobial resistance in the context of COVID-19.

Are you doing something with your null results?

Do you have a backlog of negative results and not sure what to do with it? There might be a few pieces of advice in this article from [BitSizeBio](#).

Share your recently published research with us.

Are you an ASM Vic Branch member? Have you published a paper or a preprint in the last month and want to get the word out?

Send it to us with a summary paragraph and let us share it with our Victorian members in our Newsletter. Send your submissions by the 5th of the Month to Jake Lacey (jake.lacey@unimelb.edu.au) with the subject heading **Research Highlights**



Be **READY** for #coronavirus

WHO is giving advice on how to protect ourselves & others:

Be **SAFE** from coronavirus infection

Be **SMART** & inform yourself about it

Be **KIND** & support one another

Learn more about #COVID19 & share with your loved ones: www.who.int/COVID-19

 UNITED NATIONS  World Health Organization

Contact and Society Details



Vic Branch Committee

Chair: Catherine Satzke
(catherine.satzke@mcri.edu.au)
Deputy Chair/Public Health: Mary Valcanis
(valcanis@unimelb.edu.au)
Secretary: Sarah Baines (bainess@unimelb.edu.au)
Treasurer: Chris Stubenrauch
(christopher.stubenrauch@monash.edu)
Immediate Past Chair: Karena Waller
(klwaller@unimelb.edu.au)
VSP Coordinator: Lauren Zavan
(l.zavan@latrobe.edu.au)
Communications and Marketing (incl. Newsletter Editor): Jake Lacey (jake.lacey@unimelb.edu.au), Louise Miles, (lo.miles@alfred.org.au)

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Committee Working Groups

One Health: Steve Petrovski, Jacqueline Heath,
Jake Lacey, Chris Stubenrauch, Mary Valcanis.

Medical Microbiology: Seema Kanade, Sarah
Baines, Maria Liaskos, Jake Lacey

Regional Engagement: Catherine Satzke, Steve
Petrovski

**Skills, Education, Engagement and
Communications:** Jacqueline Heath, Priscilla
Johanesen, Karena Waller, Seema Kanade, Lauren
Zavan.

Submissions: Deadlines for ASM Victorian News is
the 5th of the Month. All notices should be emailed to
Jake Lacey (jake.lacey@unimelb.edu.au).

Find us on:

Website: <http://victoria.theasm.org.au/>

Twitter: [@ASM_VicBranch](https://twitter.com/ASM_VicBranch)

Facebook: [The Australian Society for Microbiology
\(ASM\) - Victorian Branch](https://www.facebook.com/ASM-Victorian-Branch)



Becoming a Member: Did you know that non-members can join the Australian Society for Microbiology at a reduced rate? Well, you can! As a non-member, by paying the fee to attend an event hosted by ASM VIC Branch, you can use this amount to put towards an annual membership of the Australian Society for Microbiology.

To do so, please follow these instructions:

1. Register to attend the event hosted by ASM VIC Branch via the advertised trybooking link and pay the attendance fee.
2. Attend the event, and then within 2 weeks after the event, go to the ASM membership area at <https://www.theasm.org.au/membership>
3. Choose the appropriate membership for you and then click on: [Click here to join or update your details](#)
4. Click 'Begin here' and create a Currinda membership profile for yourself. Then, pay the membership full fee.
5. Following payment, download the paid receipt (showing your payment) and email it along with your postal address to: Christine Seers, Treasurer VIC Branch caseers@unimelb.edu.au
6. A cheque refunding the event fee will be posted to you.

Please note you must complete the above process within 2 weeks following an event to take advantage of this offer. After this time, the event fee cannot be used to pay membership fees.

Upgrade to a professional membership (MASM):

to be eligible for MASM, you must have: Completed an academic qualification in microbiology at degree level or alternative qualifications acceptable to the Council; and have satisfactorily completed two years of postgraduate work to advance the discipline of microbiology. If you meet these criteria, all you need to do it obtain a declaration form a referee who is a MASM or FASM finical member of the society, your curriculum vitae and academic record/copy of degree and submit online. For more information see. <https://www.theasm.org.au/professional-membership-masm>

Visiting speakers' program (VSP): Do you know of an outstanding speaker coming to Australia? If so, consider them for the Visiting Speakers Program (VSP). This program is now coordinated by the ASM Executive standing committee and the National Office in consultation with State branches. For more information, please contact Lauren Zavan (l.zavan@latrobe.edu.au), who is the VSP Coordinator for the ASM VIC Branch.

Organising events: The main objective of the Australian Society for Microbiology is to advance the science of microbiology in Australia. The ASM Victorian Branch is keen to support local initiatives, with the potential to advertise or co-organise events. If you are organising a microbiology-focussed event or have an idea for a type of event that would appeal to the broader microbiology, please contact us to discuss the ASM Vic Branch may be able to assist. Please contact Catherine Satzke (catherine.satzke@mcri.edu.au) for more information

Advertisements: Would you like to advertise your event, job vacancy or other news item in our newsletter? If so, please contact Jake Lacey (jake.lacey@unimelb.edu.au) Advertising rates are: Not-for-profit adverts: free of charge and For-profit adverts: \$50 per advert.

ASM History SIG: If any ASM members have significant ASM memorabilia that they would like to donate to the ASM archives or would like to suggest topics suitable for possible symposia at future ASM Annual Scientific Meetings, please send details of the memorabilia or suggested symposia topics to:

History SIG convener

c/o Australian Society for Microbiology Office,
9/397 Smith Street, Fitzroy VIC 3068

ASM National Office:

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asmvicbranch@gmail.com

A list of the other ASM branches can be found online at <http://www.theasm.org.au/>

