



Victorian News

The Australian Society for Microbiology VIC Branch Newsletter

April 2018, Vol 510

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Submission Deadline: 4th of the Month

Find us on Facebook: <https://www.facebook.com/groups/250340155042466/>

Contact Details

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Victorian Branch
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ASM Vic Branch

Student Careers Night

- Event Report –

“Parmas and Presentations”

On Tuesday the 20th of March 2018, Dr Huysmans met with more than 20 PhD students and Early Career Researchers (ECR) at The Clyde Hotel in Carlton. Dr Huysmans began his presentation by explaining the figures around PhD graduates, indicating that as few as 10% of graduates remain in academia long term. Dr Huysmans then went on to tell his personal story. Half way through his PhD, Dr Huysmans realised that he did not want to pursue a research post-doctoral position after completing his PhD. After discussing this with his supervisor, they devised a plan to complete the research project and at the same time identify opportunities to build transferrable skills. This included participating in leadership and commercialisation courses; being involved in conference organisation, consolidating his project management and sales skills; and liaising with non-researchers who came to the lab, such as industry representatives and policy makers. After his PhD, Dr Huysmans landed a faculty-level job providing strategic and research support to researchers. This role gave him experience in project management, grant development, team management and business strategy. He then went on to begin his own business, Raven Consulting Group, which provides a variety of services in project management, grant and report writing, professional development.

After stopping to have dinner (the perennial favourite, a Parma), Dr Huysmans continued the presentation speaking about identifying your passion and desired career path, and the importance of having a backup plan. He then gave the PhD students advice on how to create habits to complete their PhDs efficiently, ie. Using tools to make the writing process easier such as searchable note taking programs and utilising the “Shut up and write” or “Pomodoro” techniques. This advice was relevant for anyone required to produce large documents or reports. He then continued with discussion about the similarities between research and the real world, and the transferrable skills that PhD graduates have that are valuable to research and life as a whole. Dr Huysmans also bestowed the importance of having an up-to-date LinkedIn profile and generating a personal “brand”, regardless of whether pursuing a career in academia or elsewhere.

The successful evening concluded with casual networking amongst the attendees. It was a fantastic evening and Dr Huysmans gave everyone present a lot to think about moving forward with their careers. The ASM Vic Branch would like to thank Dr Huysmans for his time and words of wisdom. To find out more about Dr Huysmans and Raven Consulting Group, visit the webpage at <http://www.ravencg.com.au>.

The ASM Vic Branch is committed to supporting all members of the ASM, with particular importance placed on providing support to students and early career microbiologists. This event is one of many that the ASM Vic Branch aims to hold this year for students and early career microbiologists. Find out about upcoming events by following the newsletter, webpage and Facebook page.



Dr Huysmans explaining the figures on PhD graduates and their career pathways.



Students and early career microbiologists enjoying their Parmas.



Attendees networking with Dr Huysmans.

Report contributed by Jacqueline Heath



ASM Vic Branch

Summer Student Research Awards

The summer of 2018 marked the very successful completion of the inaugural ASM VIC Branch Summer Student Research Awards. After a thorough application and peer-review process, three excellent applications were selected, which enabled the successful students to each complete 4-week laboratory research experiences at their selected University or Institute. Upon completion of the research experience, the students [Don Ketagoda, Monash University; Sonja Repetti, University of Melbourne; Lauren Zavan, La Trobe University] submitted a final report, with the abstracts from each published below, and received a \$1500 award plus a 1yr student membership to the ASM. ASM VIC Branch is very proud and excited that we could offer these Awards in 2018, and we look forward to doing so again in 2019. Look out for the advertisements and application instructions later in 2018!

The effect of *Clostridium difficile* infection on the thymus

Don Ketagoda¹ and Dena Lyras¹

¹ Monash Biomedicine Discovery institute, Department of Microbiology, Monash University
Victoria 3800 Australia



ABSTRACT: Thymic atrophy and a loss in double positive T cells is a phenomenon that has been shown to occur during infections with pathogens such as *Salmonella typhimurium*, Rhabdo virus and *Trypanosoma cruzi*, using mouse models. In *C. difficile* infection (CDI), previous work has demonstrated that thymic atrophy occurs in mice following infection with toxigenic *C. difficile* strains, resulting in a reduction in thymic size and a loss of definition between regions in the thymus known as the cortex and medulla. However, the observed reduction in thymic size has not been quantified and the effect on specific T cell populations during *C. difficile* infection has yet to be investigated. To address this, we utilised a mouse model of CDI, in which C57BL/6 mice were infected with wildtype (WT; TcdA⁺TcdB⁺) or mutant (TcdA⁻TcdB⁻) strains of *C. difficile* and compared to uninfected mice. In agreement with previous studies, which showed that disease is toxin-mediated, mice infected with WT bacteria exhibited increased weight loss

compared to uninfected mice and mice infected with the nontoxigenic strain, despite similar colonisation levels detected in mice infected with either strain. Histological analysis of the colon and caecum collected from these mice showed severe gut damage and inflammation in the tissues collected from WT infected mice in contrast to those collected from uninfected and TcdA⁻TcdB⁻ infected mice, confirming that disease had progressed in the mice as expected. Importantly, thymi collected from WT infected mice showed a significant size reduction when compared to uninfected mice and mice infected with the nontoxigenic strain. Furthermore, FACS analysis revealed that there was a loss of double positive T cells in mice infected with the WT *C. difficile* strain, which was not observed in mice infected with the nontoxigenic strain. Collectively, these data show that infection with *C. difficile* causes a significant reduction in thymic size and a loss of double positive T cells in mice, in a toxin dependent manner.

Identifying the genetic footprint of how microbial symbiosis became permanent: Searching for targeting signal in *Lepidodinium* genes implicated in enslaving secondary green plastids

Sonja Repetti¹ and Heroen Verbruggen¹

¹ School of BioSciences, University of Melbourne, Melbourne Victoria, Australia



ABSTRACT: Plastid endosymbiosis, where photosynthetic organelles arise through microbial symbiosis, is arguably the most important process underlying the success and diversification of microbial photosynthetic eukaryotes. While the significance of endosymbiosis is accepted, events key to establishing such symbioses are less well characterised. Secondary endosymbiosis events involving green algal plastid donors are an excellent model system for identifying genes crucial for plastid establishment because there are three well-identified independent evolutionary events giving rise to the euglenophytes, chlorarachniophytes and the dinoflagellate *Lepidodinium*. My project aimed to find genes encoding plastid-targeted proteins and originating in the green algal endosymbiont in *Lepidodinium*, and search for a conserved plastid-targeting motif. This motif could then be used to identify a core set of genes for comparison across these separate

evolutionary events. I identified 19 putatively plastid-targeted genes in *Lepidodinium*, but no conserved plastid-targeting motif was detected across these sequences. While this lack of conserved targeting motif is an interesting biological phenomenon inviting further investigation, it poses a significant challenge in determining which genes might be universally crucial to the host cell for "enslaving" its microbial endosymbiont.

Characterisation of *Helicobacter pylori* outer membrane vesicles

Lauren Zavan¹ and Maria Liaskos¹

¹ Department of Physiology, Anatomy and Microbiology School of Life Sciences, College of Science, Health and Engineering La Trobe University, Victoria 3086 Australia



ABSTRACT: All Gram-negative bacteria release outer membrane vesicles (OMVs) from their membrane as part of their normal growth. However, OMV biogenesis is not a well understood concept, and with differences in the methods of OMV production and subsequent analysis across research groups, this has resulted in inconsistencies within the OMV field. In this study, we demonstrate that the growth stage of *Helicobacter pylori* influenced the amount of OMVs produced in addition to their size and content. The progression of *H. pylori* growth resulted in a decrease in the size range of OMVs produced along with a reduction in the amount of their DNA, RNA and protein cargo. Collectively, our work suggests that bacterial growth stage is a previously unknown regulator of OMV number, size and content and that this may subsequently alter their biological functions.

Report contributed by Karena Waller

& Southern News VIC Branch AGM

Tuesday 22nd May 2018

Proudly sponsored by:

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S C I E N T I F I C

Call for Audience Members

Speakers to be confirmed Come along to hear interesting microbial discoveries from the hospitals! Speakers will each deliver a 12 minute presentation and receive 3 minutes of questions from the audience. A prize for the best presentation by a Medical Scientist (up to Grade 1 Year 4) will be awarded.

Chairperson: Dr Denis Spelman

Where: AMREP Seminar Room, Education Precinct, Alfred Hospital,
55 Commercial Road, Melbourne VIC 3004

When: Tuesday 22nd May 2018

Time: 6.30pm to 9.00pm onwards –
Food/drinks from 6.30pm
VIC Branch AGM from 7.00pm
Presentations from 7.30pm

Cost: Free event for ASM Members (Student or Full Members)
\$40 - Non-ASM Member
\$15 - Student Non-ASM Member

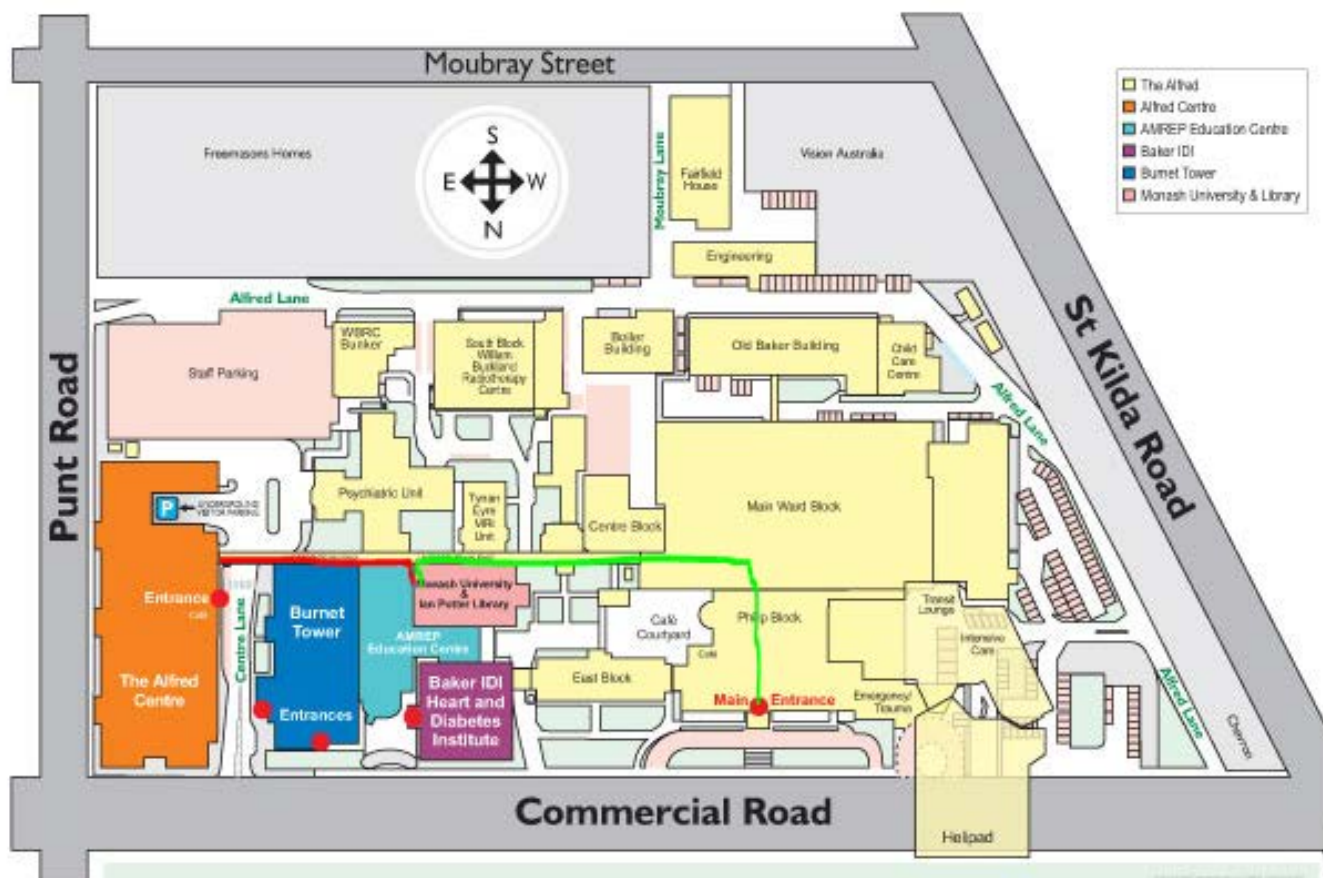
For catering purposes please **RSVP** for this event by 5pm Friday 18th May 2018 at
<https://www.trybooking.com/UYMG>

For further details contact Seema Kanade seema.kanade@dorevitch.com.au or
Jaelyne Birrell jaelyne.birrell@gmail.com

Please see next page for venue directions, transport and parking information.

AMREP (Alfred Medical Research & Education Precinct) is located at the site of The Alfred Hospital on Commercial Road in Melbourne. The AMREP Education Centre is shown in light blue on the map below situated between the Burnet Tower and Baker IDI Heart and Diabetes Institute.

Entry to AMREP is via the covered walkway leading from the visitor's carpark (route in red) or through the main hospital entrance (route in green). The venue will need to be accessed via these routes rather than from Commercial Rd directly. Entry to the visitor's carpark is via Centre Lane off Commercial Rd.



<https://www.amrep.org.au/contacts/how-to-find-us/#>

For transport options to the Alfred, please visit:

<http://www.amrep.org.au/contacts/public-transport/>

For information on parking at or near the Alfred (including parking fees), please visit:

<https://www.alfredhealth.org.au/the-alfred/patients-families-friends/before-you-arrive/parking-at-the-alfred/>

AGM of the ASM VICTORIAN BRANCH COMMITTEE

The Victorian Branch will be holding its Annual General Meeting on Tuesday 22nd May 2018 at the Alfred Hospital in conjunction with Southern News, and is calling for nominations or re-nominations to the committee. The commitment includes attending a regular meeting once a month and assisting with the organization of Branch activities.

If you are interested in becoming involved, contact Karena Waller (Chair) at klwaller@unimelb.edu.au or asmvicbranch@gmail.com

Karena Waller
Victorian Branch Chair

I wish to nominate for the ASM Victorian Branch Committee

NAME: _____

CONTACT DETAILS: _____

SIGNATURE: _____

Proposed by

NAME _____ (MASM or FASM)
SIGNATURE _____

Seconded by

NAME _____ (MASM or FASM)
SIGNATURE _____

Please scan and email to: Karena Waller (ASM VIC Branch) at: klwaller@unimelb.edu.au

START PLANNING NOW!

ASM Victorian Branch

Microbial Art Prize

Calling all artistic individuals! The 2018 Microbial Art Prize will be up for grabs mid-year. Start planning now if you want to be in to win and have your eye-catching scientific image displayed at ASM events.

Image Details:

All types of scientific images are welcome

- Images - must have a microbiological theme
- should be high resolution and suitable for printing on a 1x2m banner
 - must be accompanied with a description of what the image illustrates and how it was generated

Prize:

The 2018 Microbial Art Prize winner will have their image printed on ASM banners to be displayed at events and used in ASM promotional material.
Plus more!

Competition Entry Conditions:

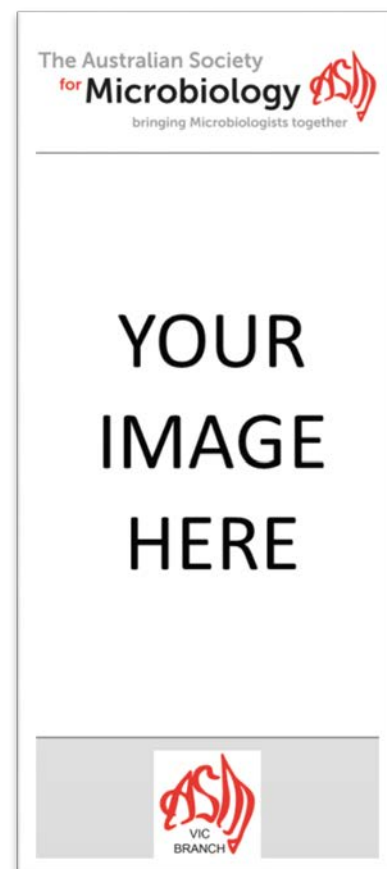
- Maximum 2 entries per person
 - Submitter must be the owner of the image
 - Submitter must be a member of ASM
- A complete entry consists of:
- (1) Image, (2) a description of the image (<100 words), and
 - (3) the submitter's details (name, position, institution)

Winners will be selected by the ASM Vic Branch committee

Competition date will be released closer to the time

Please send all entries (and questions) to: **Sarah Baines** bainess@unimelb.edu.au

Please note that by submitting an entry you agree that if your image is selected the ASM Victorian Branch Committee reserves the right to use the image as promotional material at ASM-organised and ASM-sponsored events. The image may be edited at the discretion of the ASM Victorian Branch Committee. The submitter's name will always be included with the image when used.



asm2018
QUEENSLAND



1-4 July

Brisbane Convention
& Exhibition Centre

www.theasm.org.au

The Australian Society
for **Microbiology** 
bringing Microbiologists together

Come for the science

Bazely Oratlon

Prof. Dennis R. Burton - Scripps Research Institute

Rubbo Oratlon

Prof. Paul R. Young - University of Queensland

Plenary Speakers

Prof. Michael P. Jennings - Griffith University

Prof. Karl Kuchler - Medical University Vienna

Dr Susan E. Sharp - Kaiser Permanente

Dr Anja Spang - Royal Netherlands Inst. for Sea Research

A/Prof. Victor J. Torres - New York University

Prof. Fitnat H. Yildiz - University of California

Public Lecture

Prof. Nicholas Graves - AusHSI

Stay for the sand, surf & sunshine



key dates

19 Feb Registration / Abstracts open

20 April Earlybird / Oral Abstract
deadline

18 May Poster Abstract deadline



Registration is NOW OPEN

When: Wednesday 4 July 2018* (from 2.30pm - 5.30pm), AND Thursday 5 July 2018 (from 8.30am - 4.00pm)

Venue: Mantra South Bank (Conference Meeting Room), 161 Grey Street, South Brisbane QLD

Speakers Include: for the full Conference program, see the following pages



Dr Terrence Mulhern, University of Melbourne

Learn from your mistakes. How to use misconceptions to trigger student learning



Assoc Prof Tracey Bretag, University of South Australia

Contract cheating in Australian higher education: Results from a nation-wide survey of students and staff



Dr Raina Mason, Southern Cross University (Gold Coast)

'This assessment makes my brain hurt!' – accounting for cognitive load in assessment



Dr Karena Waller, University of Melbourne

*ASM David White Excellence in Teaching – 2017 Award Winner
Reaching out in Microbiology*



Assoc Prof Kelly Matthews, University of Queensland

Challenging and expanding our beliefs about the role of students in scholarly learning and teaching practices



Ms Lyris Snowden, University of the Sunshine Coast

The pros, cons and diversity of Work Integrated Learning (WIL): the experience of putting WIL into practice.

EduCon is proudly sponsored by:



Would you like to present a poster at EduCon?

A poster session will be held during lunch on Thursday 5 July 2018. If you would like to present your educational research at EduCon during this session, please contact Dr Karena Waller (klwaller@unimelb.edu.au) for abstract and application instructions.

Abstract submissions close: 5pm Friday 1 June 2018

Conference Registration:

Registration is required for all attendees, and is inclusive of all morning and afternoon teas, and lunch on Thursday 5 July 2018.

- ASM Members - \$120
- Non-ASM Members - \$170
- Student ASM Members - \$60
- Student non-ASM Members - \$120

EduCon 2018 Dinner:

This year's EduCon Conference Dinner will be a 3-course meal (set menu) held at a local chic, Queenslander-style gastro-pub, within walking distance of our conference venue.

- The Fox Hotel (Veranda Room), 71-73 Melbourne Street, South Brisbane QLD

Each dinner ticket costs \$57. Dinner tickets, including extra ones for partners, are to be pre-purchased at the time of registration.

Register to attend and purchase your dinner tickets at: <https://www.trybooking.com/UZOA>

Accommodation:

EduCon attendees can access a discounted room rate (10% off best available room rate) at Mantra South Bank for accommodation from Saturday 30 June 2018 till Thursday 5 July 2018 by booking using the attached instructions (see following pages).

For all enquiries:

Contact Dr Karena Waller (klwaller@unimelb.edu.au)

Conference Agenda - 2018

Wednesday 4 July 2018	
2.30 – 3.00pm	Registration and Welcome Venue: Mantra South Bank (Conference Meeting Room), 161 Grey Street, South Brisbane QLD Light refreshments on arrival
3.00pm – 4.00pm	Session 1: <i>Contract cheating in Australian higher education: Results from a nation-wide survey of students and staff</i> Presenter: Assoc Prof Tracey Bretag, University of South Australia Chair: Dr Karena Waller, University of Melbourne
4.00pm – 5.00pm	Session 2: <i>Learn from your mistakes. How to use misconceptions to trigger student learning</i> Presenter: Dr Terrence Mulhern, University of Melbourne Chair: Ms Helen Cain, University of Melbourne
7.00pm – 9.00pm	EduCon Dinner: tickets to be purchased separately at time of conference registration Venue: The Fox Hotel (Veranda Room), 71-73 Melbourne Street, South Brisbane QLD
Thursday 5 July 2018	
8.30am – 9.00am	Registration and Welcome Venue: Mantra South Bank (Conference Meeting Room), 161 Grey Street, South Brisbane QLD Light refreshments on arrival
9.00am – 10.00am	Session 3: <i>'This assessment makes my brain hurt!' – accounting for cognitive load in assessment</i> Presenter: Dr Raina Mason, Southern Cross University (Gold Coast) Chair: Assoc Prof Priscilla Johanesen, Monash University
10.00am – 10.30am	Morning Tea
11.30am – 12.30pm	Session 4: <i>Reaching out in Microbiology</i> Presenter: Dr Karena Waller, University of Melbourne ASM David White Excellence in Teaching – 2017 Award Winner Chair: Dr Meredith Hughes, Monash University
12.30pm – 1.30pm	Session 5: <i>Challenging and expanding our beliefs about the role of students in scholarly learning and teaching practices</i> Presenter: Assoc Prof Kelly Matthews, University of Queensland Chair: Dr Jack Wang, University of Queensland
1.30pm – 2.30pm	Lunch and Poster Session / Networking Chair: Dr. Karena Waller, University of Melbourne
2.30pm – 3.30pm	Session 6: <i>The pros, cons and diversity of Work Integrated Learning (WIL): the experience of putting WIL into practice.</i> Presenter: Ms Lyris Snowden, University of the Sunshine Coast Chair: Dr Megan Lloyd, Edith Cowan University
3.30pm – 4.00pm	Close and Afternoon Tea Light refreshments before departure

EduCon is proudly sponsored by:





Mantra South Bank welcomes members and attendees of Australian Society of Microbiology Conference to enjoy 10% discount off accommodation at Mantra South Bank

Visit: <http://www.mantrahotels.com/> and follow the below simple steps:

1. Search for your hotel, dates of travel, number of guests & click on **SEARCH**
2. Once you have selected the room type you wish to book, click on **BOOK NOW**
3. In the payment screen, input Promo Code **ASM** in the Promotional Code box and click **APPLY**
4. Input contact and payment details and your room will be booked at the discounted rate.
5. You will receive an email confirmation once all details have been processed.

**** PLEASE NOTE: **** Promo codes are only valid for bookings made online; rooms are subject to availability & will require full prepayment. Bookings will also be subject to any minimum night stay restrictions as listed on the website. Online Terms and Conditions apply to these bookings.

For full terms & conditions please visit <http://www.mantrahotels.com/terms-and-conditions/>

Once booking is confirmed, it can be accessed via My Bookings on the same website by logging in using the **Reservation number on your confirmation** and the **Surname on the booking**.





How to join the Australian Society for Microbiology at a reduced rate!

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 <http://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:
Priscilla Johanesen, Treasurer VIC Branch priscilla.johanesen@monash.edu
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.

ASM Member Awards Apply Now

The ASM offers a variety of awards to its members. Take full advantage of your membership by applying now for one of the awards listed below with deadlines approaching. For more details and additional awards please refer to the National webpage <http://www.theasm.org.au/awards/>

The deadlines for all award applications are now **March 31st** of each year.

Visiting Speakers Program

Do you know of an outstanding speaker coming to Australia?

If so, consider them for the Visiting Speakers Program (VSP).

Further information about the VSP and the speaker recommendation form can be found at:

<http://www.theasm.org.au/events/visiting-speakers-program/>

Alternatively, contact Catherine Satzke (catherine.satzke@mcri.edu.au), who is the VSP Coordinator for the ASM VIC Branch.



ASM History SIG – Column

This year marks the centenary of the deadliest pandemic of recent years, the Spanish flu of 1918 that killed up to 100 million, some 5 percent of humanity at the time.¹

Particular Australian microbiologists have always been involved in research on the influenza virus and influenza vaccine production.

Work by Burnett [Sir Macfarlane Burnett: ASM member and foundation president of ASM, ASM member] and his colleagues at the Walter and Eliza Hall Institute on influenza virus vaccine has been well documented.²

The Commonwealth Serum Laboratory [CSL] has continued to be involved in the production of influenza virus vaccine.² Following endorsement of the use of inactivated vaccine by the US Army in 1943. CSL produced over a million doses of influenza virus vaccine for the armed forces in 1944. One of the early activities of the newly formed World Health Organization, in 1948, was to designate the National Institute of Medical Research in London as the WHO World Influenza Centre and to set up a world-wide network of WHO Influenza Reference Centres. In 1951 CSL was designated as the centre for the Australasian region with responsibility for maintaining a watching brief of the haemagglutinin and neuraminidase typing of influenza virus isolated in the region.²

References:

- 1 New Scientist 6 January 2018, No. 3159
- 2 History of Microbiology in Australia. Edited by F. Fenner. ASM publication

Column contributed by Di Lightfoot

ASM Memorabilia

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

Visiting Speakers Program

**Do you know of an outstanding speaker coming to
Australia?**

**If so, consider them for the Visiting Speakers
Program (VSP).**

**Further information about the VSP and the speaker
recommendation form can be found at:**

**[http://www.theasm.org.au/events/visiting-speakers-
program/](http://www.theasm.org.au/events/visiting-speakers-program/)**

**Alternatively, contact Catherine Satzke
(catherine.satzke@mcri.edu.au), who is the VSP
Coordinator for the ASM VIC Branch.**

MICRO NEWS and VIEWS

- The CDC Is Warning About Resistant "Nightmare Bacteria" Spreading Through The US
<https://www.sciencealert.com/completely-antibiotic-resistant-unusual-bacteria-future-issue-spreading-here-cdc-nightmare-bacteria>
- Yeast engineered to manufacture complex medicine
<https://www.sciencedaily.com/releases/2018/04/180402192627.htm>
- Researchers Might Have Figured Out Why Bacteria Only Causes Acne in Some People
<https://www.sciencealert.com/researchers-think-they-ve-finally-figured-out-why-bacteria-only-causes-acne-in-some-people>
- Ancient origins of viruses discovered
<https://www.sciencedaily.com/releases/2018/04/180404133510.htm>
- Scientists Have Mapped How a Virus Spreads Through an Airplane Cabin
<https://www.sciencealert.com/scientists-map-how-colds-flu-spread-through-aeroplanes>
- Biomimetic chemistry: DNA mimic outwits viral enzyme
<https://www.sciencedaily.com/releases/2018/04/180402110736.htm>
- This Horrifying Fungus Hijacks Cicadas Before Exploding From Their Butts
<https://www.sciencealert.com/parasitic-cicada-fungus-zombie-sexually-transmitted-massospora-cicadina>
- Topical antibiotic triggers unexpected antiviral response
<https://www.sciencedaily.com/releases/2018/04/180409112602.htm>
- The enemy within: Gut bacteria drive autoimmune disease
<https://www.sciencedaily.com/releases/2018/03/180308143102.htm>
- Greener and cheaper technique for biofuel production
<https://www.sciencedaily.com/releases/2018/04/180406100547.htm>
- Gut bacteria determine speed of tumor growth in pancreatic cancer
<https://www.sciencedaily.com/releases/2018/03/180322103236.htm>
- Transparent patch to detect dangerous food-borne threats
<https://www.sciencedaily.com/releases/2018/04/180406085500.htm>
- How a protein helps bacteria outsmart the human immune system
<https://www.sciencedaily.com/releases/2018/04/180402171044.htm>

MICRO NEWS and VIEWS

World Malaria Day 25th April 2018

WHO joins partner organizations in promoting this year's World Malaria Day theme, "Ready to beat malaria". This theme underscores the collective energy and commitment of the global malaria community in uniting around the common goal of a world free of malaria.



G Tapper / WHO

Ready to beat malaria

Urgent action is required to get the global fight against malaria back on track. That's why WHO is calling for greater investment and expanded coverage of proven tools that prevent, diagnose and treat malaria.

- The global response to malaria is at a crossroads. After an unprecedented period of success in malaria control, progress has stalled.
- The current pace is insufficient to achieve the 2020 milestones of the WHO Global Technical Strategy for Malaria 2016-2030 – specifically, targets calling for a 40% reduction in malaria case incidence and death rates.
- Countries with ongoing transmission are increasingly falling into one of 2 categories: those moving towards elimination and those with a high burden of the disease that have reported significant increases in malaria cases.

Malaria by numbers: global and regional malaria burden

In 2016, there were 216 million cases of malaria in 91 countries, 5 million more than the 211 million cases reported in 2015. This marks a return to 2012 levels.

- Malaria continues to claim a significant number of lives: in 2016, 445 000 people died from malaria globally, compared to 446 000 estimated deaths in 2015.
- Children under 5 are particularly susceptible to malaria. The disease claims the life of a child every 2 minutes.
- Fifteen countries – all but one in sub-Saharan Africa – carry 80% of the global malaria burden.

Renewed focus in Africa needed

The African Region continues to bear 90% of malaria cases and 91% of malaria deaths worldwide. Nigeria, the continent's most populous country, accounted for 27% of malaria cases and 24% of malaria deaths globally in 2016. Supporting the most heavily-affected African countries will be critical to get the global malaria response back on track, as stressed by WHO Director-General Dr Tedros Adhanom Ghebreyesus in last year's World malaria report. Over the coming months, WHO will provide intensified support for countries that carry the highest burden of malaria.

Funding: critical to beating back malaria

Funding for malaria control and elimination efforts has levelled off since 2010, with US\$ 2.7 billion invested in malaria programmes globally in 2016. This amount represents less than half (41%) of the estimated US\$ 6.5 billion needed annually by 2020 in order to reach the 2030 global malaria targets. Insufficient funding at both domestic and international levels has resulted in major gaps in coverage of insecticide-treated nets, medicines and other critical life-saving tools.

These gaps must urgently be closed. This is especially true for groups at a higher risk of contracting malaria, like mobile populations and people living in remote and hard-to-reach communities

Prospects for new interventions

Boosting investments in the development and deployment of a new generation of malaria tools is key to achieving the 2030 global malaria targets.

For vector control, new interventions that target outdoor-biting mosquitoes are being explored. New chemical formulations to mitigate the threat of insecticide resistance are under development, as are new strategies to improve the delivery of treated nets and indoor spraying.

Malaria vaccine RTS,S

Later this year, the world's first malaria vaccine will be rolled out in selected areas of Ghana, Kenya and Malawi. The RTS,S vaccine is the only vaccine, to date, to show partial protection against malaria among young children in large-scale clinical trials. This country-led programme will deliver the answers needed on a potential new tool that could be added to the existing WHO-recommended package of anti-malaria measures.

Widening the elimination net

As highlighted in the most recent World malaria report, more countries are advancing towards elimination: in 2016, 44 countries had less than 10 000 cases of malaria, compared to 37 countries in 2010. Since 2010, 6 countries have been certified malaria-free (Armenia, Maldives, Morocco, Kyrgyzstan, Sri Lanka and Turkmenistan), and several others are inching closer to obtaining this status. In June 2018, WHO will convene its second annual "Global forum of malaria-eliminating countries". The forum will bring together representatives of 21 countries on the path to becoming malaria-free, providing a platform to share lessons learned and outline the concrete steps needed to drive cases down to zero.

WHO at 70: 7 decades in the global malaria fight

This year's World Malaria Day coincides with the start of a year-long series of activities to commemorate the 70th anniversary of WHO.

The Global Malaria Programme will mark this special occasion with the publication of a series of malaria-focused interviews with leaders and advocates in the global response to malaria. The interviews will be published on 25 April on the WHO website.

Reproduced from the WHO <http://www.who.int/malaria/media/world-malaria-day-2018/en/>

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ASM VIC CALENDAR 2018

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- **ASM Vic Branch - Southern News and AGM – 22nd May 2018, Alfred Hospital VIC**
- **ASM Annual Scientific Meeting and Trade Exhibition – 1st to 4th July 2018, Brisbane Convention Center, Brisbane QLD**
- **ASM EduCon Microbiology Educators' Meeting – 4th & 5th July 2018, Mantra South Bank, Brisbane QLD**
- **Bi-State Conference 2018 (VIC / TAS) – 16th & 17th November 2018, Hobart TAS**



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