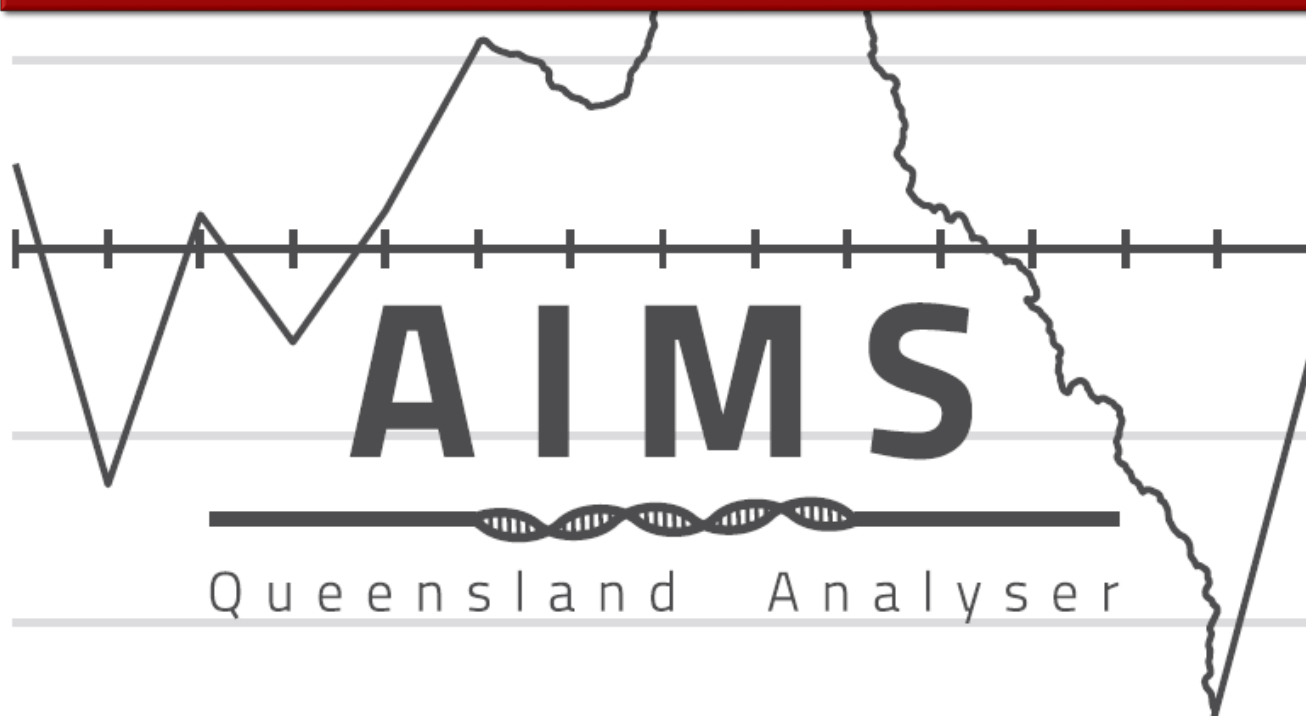


**The Official Newsletter of the Queensland Branch
of the Australian Institute of Medical and Clinical
Scientists**



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AIMS Qld Branch Committee Members 2021

Chair: Indu Singh

Vice-Chair: Anne-Marie Christensen

Treasurer: Patricia (Trish) Laube & Avinash Kunder

Secretary: Patricia (Trish) Laube & Avinash Kunder

Committee Member: Ali Baradaran

Committee Member: Rebecca Donkin

Committee Member: Allan Hicks

Committee Member: Jacqueline DeWirral

Committee Member: Deborah Orr (PaLs)

Student Members: Caitlin Devonport & Melinda McConnell (QUT)

Arthur Colquhoun & Andre Jones-Dorr (Griffith)

For all branch enquiries, please contact queenslandaims@gmail.com

Chair's Report

Welcome to the Queensland Analyser April 2021. We have had a few changes in the AIMS Queensland Branch Committee over last year. The committee would like to Welcome Rebecca Donkin as a new member. We also welcome Caitlin Devonport and Melinda McConnell as new QUT student representatives on the AIMS Queensland Branch.

For recent past activities, in February 2021, we saw about 100 people attend the combined Tropical division and AIMS QLD branch scientific meeting on COVID-19 by ZOOM online. It was a good online event and thanks go to Tropical Division president Donna Rudd and the Committee members for their support for this combined educational meeting.

This issue of the Analyser includes the summary of the events organized and our regular '5 minutes with' featuring Dr Rebecca Donkin, a senior lecturer, Medical Laboratory Science at Sunshine Coast University. It is our pleasure to share travel tales of Jacqueline DeWirral, sine last year COVID did not allow us to travel so we will see the world with Jacqui's eyes. We thank Trish Laube for updating us about APACE CPD program and our sponsors for their support. Finishing with some latest information about COVID-19 AstraZeneca vaccines mode of action and risk of thrombosis.

We are looking forward to seeing you all with your teams at AIMS-AACB annual Quiz at QUT Garden Points campus on 20th April 2021.

Finally thanks to whole AIMS Queensland Branch committee for their contribution and enthusiastic support.

Have a fruitful and enjoyable time reading this newsletter.

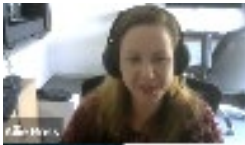
Indu Singh

i.singh@griffith.edu.au

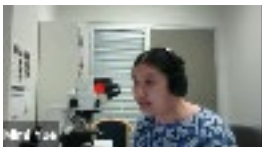
Recent Events

Tropical Division and AIMS combined scientific meeting by ZOOM on 6th Feb 2021 Report by Trish Laube

On Saturday the 6th of Feb, the AIMS Queensland and Tropical Branches held our combined online scientific meeting Titled "Covid-19". It was a great morning, and very well attended with over 100 registrants from all over Australia and even a few from overseas. We were extremely fortunate to have the opportunity to learn from our speakers, each expert in their own fields.

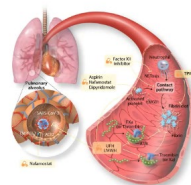


First up, Ailie Ross, a senior Haematology scientist from Townsville, presented on the Haematological Manifestations of Covid-19. She spoke to us about the morphological features of Covid-19, as seen in a Full Blood Count, and how this could be used as an aide to diagnosis in the absence of the availability RT-PCR technology.



Our second speaker was Dr Mimi Yue, a clinical and Laboratory Haematologist with Mater Health services presented on the coagulopathy of Covid-19. Dr Yue explained that the coagulopathy of Covid-19 is not the same as a classic consumptive coagulopathy, in which coagulation factors are consumed. In Covid-19 cases the fibrinogen levels are increased at presentation, although those that eventually succumb to Covid-19 tend to eventually show a more classic profile. We learnt about the pathways involved and

Targets for therapy



Target	Agent(s)
Contact pathway	FXII inhibitor
Thrombin generation	UFH LMWH Nafamostat *
Fibrin clot	TPA
Platelets	Aspirin Dipyridamole

*Also blocks TMPRSS2, may impede viral entry

how these differ from other coagulopathies.

We were talked through some of the different studies and trials of potential therapies



Next Donna Rudd presented on the clinical Biochemistry of SARS-CoV2. Donna talked us through the trends of blood biochemistry in patients with Covid-19, and the possibility of using biochemistry to predict those who will have more severe disease, and those who are more pre disposed to more severe disease due to other comorbidities.

Then after a short break, Fleur Francis presented 'Scaling up SARS-CoV-2 testing in Townsville'. Fleur Francis is Pathology Queensland's Supervising Scientist of the Molecular Microbiology and Serology departments at The Townsville Hospital.

Mackay Panther training

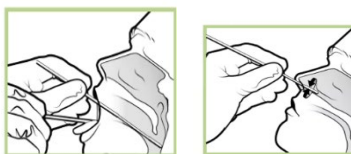


Townsville Hospital (TTH)

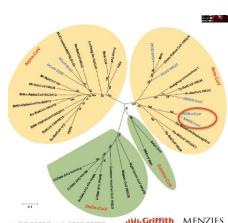


We were taken on the journey of Townsville Hospital Laboratory during the process of responding to the testing requirements of the Pandemic. Adopting new testing protocols is a very involved process, from developing the tests, to assessing tests quality and fitness of purpose and all of the checks that are involved with that, to the necessary additional staff training, and recording.

For our Fifth speaker we were glad to hear from Dr Chris Heather, who is the infectious diseases physician as well as the clinical microbiologist for Townsville University Hospital and is also the Covid clinical lead for Townsville Hospital and Health service. He presented on the Laboratory aspects of Corona virus testing, and highlighted the different types of assays available and how they work and what is considered prior to departmental method selection

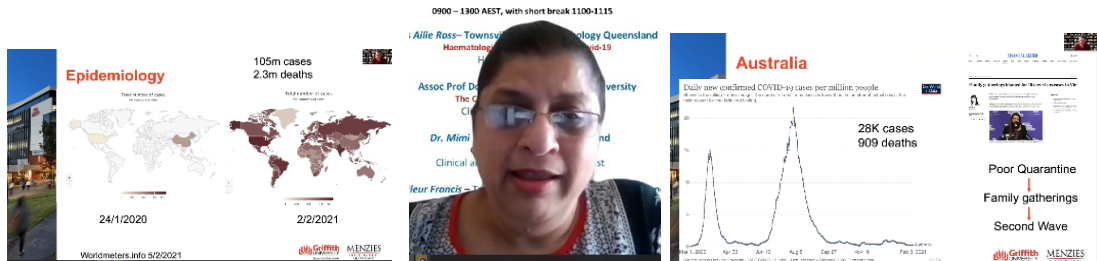


Chris explained specificity and sensitivity of current Covid-19 testing methods, and the presence of false positives, particularly in a population such as ours in Australia which have very low percentages of true positives and methods in place to ensure that only true positives are reported.



Our final speaker for the morning was Professor Nigel McMillan, who is an internationally recognised expert on virology and cancer research, with particular interest in virological causes of cancer. He presented Covid -19 , a year in review and future outlook. We learnt about the viruses transmission, incubation periods, treatments, the available vaccines, and public health strategies in place to combat the spread. Professor McMillan spoke about the clinical features and co-morbidities, touching on ethnic disparity. I know I will never look at Brass instruments and the flute in particular the same way again!

I would like to extend a huge thank-you to all of our presenters, we appreciate you taking time out of your busy lives to come and talk to us on a weekend! Thank-you also to all of the scientists and technicians who attended the morning. It was lovely to see so many online from so many different regions. We are working towards having these presentations available online for those who missed the morning.



Upcoming Events



AIMS/AACB

QUIZ

NIGHT

Tuesday
20th April @ 6pm

\$5 each or
\$20 per team
(up to 6 people)

QUT BOTANIC BAR
GARDENS POINT

SPONSORED BY:

abacus dx

PRIZES AWAIT OUR WINNERS!

Please click the link below or paste it in your browser, it will take you to AIMS page and you can submit registration under Queensland Branch.

<https://www.aims.org.au/events/event/aimsaacb-quiz-night>

AIMS

Queensland Analyser



ESSENTIAL HAEMATOLOGY & IMMUNOHAEMATOLOGY/TRANSFUSION CONTINUING PROFESSIONAL DEVELOPMENT WORKSHOPS



Workshop convenors: Assoc Prof Indu Singh & Ms Alison Weston
One-week (40 hours) intensive refresher training course

Essential Haematology & Immunoematology: Theory & Practical
Registration Details Coming Soon

**Please submit expression of interest and queries to Assoc Prof Indu Singh by middle of May
2021**

i.singh@griffith.edu.au

Who can benefit: Scientists, technicians or other medical science graduates working in pathology related fields returning to work after a break, wanting to rotate around as multi-skilled scientists after a period of working in any specific discipline only. Anyone interested in refreshing his or her knowledge in essential Haematology and Immunoematology (Blood Banking). It will be useful to have some basic knowledge of Haematology and Transfusion to get most out of this refresher course.

When: 1st November 2021 – 5th November 2021

How long: 0830-1700 everyday (Morning Tea, Lunch and Parking provided)

Where: Griffith University Gold Coast Campus

Cost: Approximately \$1500 for all 5 days with discounts for attending 2 or 3 days only or where an organisation sending more than 2 attendees. AIMS members pay \$1300.

Course content: Two days will be dedicated to morphology and haemoglobin electrophoresis; one day will cover haemostasis and 2 days for immunoematology/ transfusion/ blood banking. Everyday first 2 hours lecture will provide the theoretical background including physiology, pathophysiology, and principles behind the material to be covered in hands on laboratory session on the day. All attendees will get a chance to perform all the tests under supervision of experienced practising scientists also involved in teaching Medical laboratory Science students at university.

Certification: Griffith University will provide a certificate of completion to all attendees who complete the workshops. AIMS will provide 10 CPD credit points towards APACE for each day attended.

Maximum Capacity: Only 20 attendees can be accommodated on each day due to need for individualized supervision during laboratory session.

AIMS

Queensland Analyser



Griffith University Medical Sciences Student Award Night

February 2021 saw the graduation ceremony of the Griffith University 2020 Bachelor of Medical Laboratory Science graduates celebrating their achievements at the Gold Coast Exhibition and Convention Centre. It was a fun evening attended by staff, industry partners, proud students, and family members. The DUX of 2020 MLS Graduating Class was Mr Lucas Catel, who obtained top marks for Clinical Biochemistry, Microbiology, Haematology, Transfusion Science and Histopathology. Other graduates recognised on the night for their excellent performance and high GPA included Lisa Finch (Clinical Placement) and Amelia Van Bruggen (Research project).





Since the arrival of COVID-19 overseas travel has felt like a thing of the past. But as vaccination programs gain traction across the globe, the chances of dusting off the old passport are getting better each day. While we wait for borders to re-open, we thought we'd relive some more *unrestricted* times; QLD Branch Committee Member **Jacqui DeWirral** recounts her COVID-free trip of a lifetime in 2019. Photos by Mitchell DeWirral.

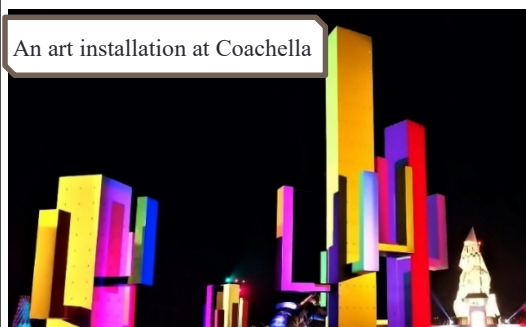


Haedong Yonggung Temple in Busan, South Korea.

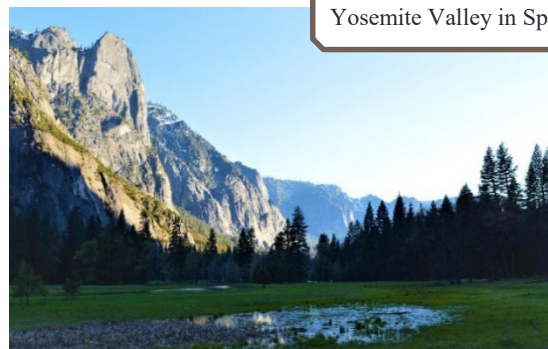
After his graduation in late 2018, my husband and I were taking stock of things. For the first time in ten years, neither of us were studying; we also were very lucky to have flexible jobs and plenty of banked leave. When a promo email advertised a sale on round-the-world tickets, we realised something else – we had itchy feet. So in 2019, we took the plunge; we took 6 months off from work to travel.

Our trip started in Japan; we arrived in Tokyo just in time to see the Cherry Blossoms bloom. After visiting the ski fields in Hakuba, we explored the sites and tastes of Kyoto, Hiroshima, and Osaka. From there we flew to South Korea, starting in the coastal city of Busan, then onto Seoul. From Seoul we took a tour of the DMZ; the Demilitarised Zone between North and South Korea. This was such a unique,

fascinating experience; highly recommended! From South Korea, we headed to USA. Flying into Los Angeles, our first stop was something that seems crazy these days; the music festival Coachella. Despite hot and dusty weather, we had a blast. From there we camped through Yosemite National Park, making our way to San Francisco. Then onto New York City, and after that, Cuba!



An art installation at Coachella



Yosemite Valley in Spring



L-R; A leather tannery in Fes, Morocco; The Colosseum in Rome, Italy; Cathedral of Vasily the Blessed, aka St. Basil's Cathedral, Moscow,

Cuba was one of the highlights of our trip; such a vibrant, welcoming place with beautiful beaches (*almost* as good as home). From Cuba we flew to Peru and spent a week exploring by bus. Outside the city of Arequipa we hit our first hiccup of the trip; our bus got a flat tyre in the middle of the desert at 2am! Thankfully the tour company took great care of us, but it was certainly an interesting night.

From Peru we continued to Bolivia where we took a four-wheel drive tour through the Chilean Andes. On the way we watched the sunset at Salar de Uyuni; a massive salt flat in Bolivia. This truly was other-worldly, and an unforgettable sight.

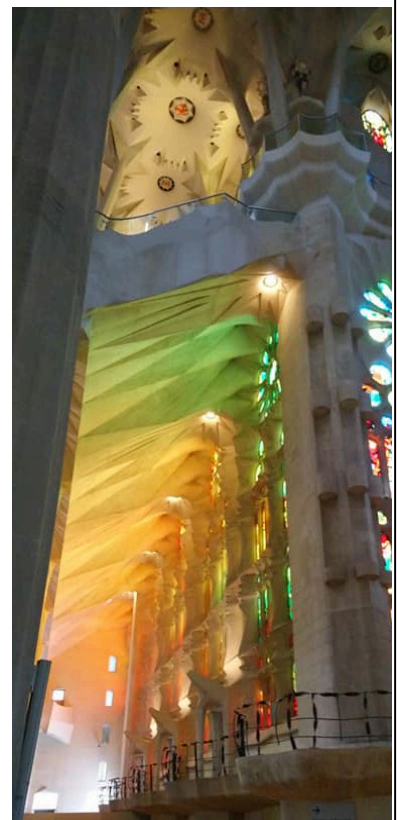
Next, we travelled to Chile and Argentina, spending time exploring Santiago and Buenos Aires. If you like fine wine and great steak, these cities are for you! There's also a wealth of history and natural wonders to explore.

This closed our South American leg and next we jetted off to Europe. We kicked off our next leg with the Monaco F1 Grand Prix. Sadly, we were not one of the millionaires that make up one third of local Monaco residents, so we found a pub on the hillside overlooking the track; it was still a fantastic day, and the atmosphere was electric.

Over the next three months we were incredibly lucky to travel throughout much of Europe, Morocco, Russia, Singapore, and Indonesia before returning home. We attended some incredible events, ate countless weird and wonderful dishes, saw stunning natural landscapes and historical sites, met fabulous people, made new friends, and learned so much about the world and ourselves in the process.

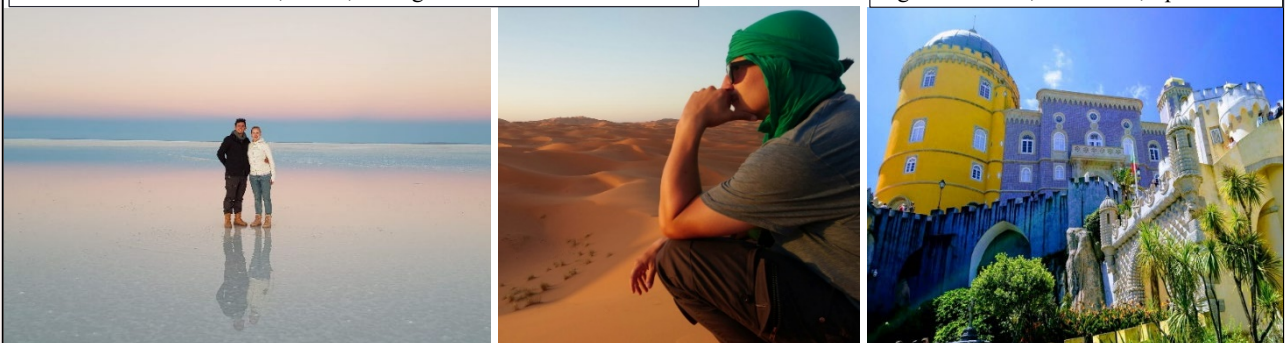
We picked up a Christmas decoration from each country we visited, so now each year we get to reminisce on the memories we made.

In a post-pandemic world, we realise what a privilege it was to move so freely from place to place, and how lucky we were to have such security in our jobs, our health, and our safety. In the past year, our travels have led us closer to home and to our families, which is a privilege in itself. For now, we are thankful to be happy and healthy! But when the world opens up again, we'll be ready 😊



Above: Stained glass windows in Basilica Sagrada Familia, Barcelona, Spain.

L-R: Sunsets at Salar de Uyuni, Bolivia, and Sahara Desert, Morocco; the National Palace of Pena, Sintra, Portugal.



'5 minutes with Rebecca Donkin'



Rebecca Donkin, PhD

1. Where do you work?

I work at the University of the Sunshine Coast. I am a Senior Lecturer and teach into three programs: Medical Laboratory Science, Biomedical Science and Medical Science. My research interests are in clinical pathology and medical education.

2. What do you like best about your current position?

I am fortunate to live and work in one of the most beautiful regional areas of Australia that has a perfect combination of metropolitan and beach lifestyle. My job provides me with immense satisfaction when students study pathology and develop their own engagement and excitement to learn.

3. Do you believe that there will be any lasting changes to the Pathology industry in the post Covid-19 world?

We constantly evolve and adapt to change, further challenges/obstacles/pandemics are inevitable. I think Covid-19 highlighted resilience and an aptitude to problem solve quickly and effectively, these skills are long lasting and will be required when we are challenged again.

4. What future development/s direction/s in the industry are you excited about?

Innovative technology to increase turnaround times and improve patient care.

5. If you could choose to have any superpower, what would it be and how would you use it?

Time traveller to skip over 2020!



The **APACE (Australasian Professional Acknowledgement of Continuing Education)** scheme is a voluntary programme that recognises continuing education, formal courses and a wide range of professional activities which contribute to your professional growth.

The healthcare industry is undergoing rapid change. We are expected to keep our knowledge and skills up to date to enable us to perform to the highest professional standard. The **APACE** scheme provides a method by which your professional activities are recognised.

APACE has been approved by the **New Zealand Medical Laboratory Science Board** as a re-certification programme for **New Zealand Medical Laboratory Scientists**.

APACE has been approved by the **Royal College of Pathologists Australia (RCPA)** as a continuing professional development recognition programme for Fellows of the Faculty of Science.

Why should I join the APACE Scheme?

APACE credit points can be claimed for all approved continuing education participated in over a 2-year period. It is simple and easy to do. Collect an attendance certificate or alternatively all AIMS run activities have an attendance sheet which is sent to head office as a record. A wide range of activities will contribute to points, ranging from employment to serving on professional committees.

What are the benefits of being APACE accredited?

- APACE provides formal recognition of activities that may have been pursued without recognition elsewhere- contributes to a professional development portfolio.
- Apace certificate looks great in a Resume.
- Encourages individuals to maintain, improve and extend their knowledge and skills.
- CPD is about keeping up with current and new developments and practices.
- Encouraging staff participation ensures a competent workforce and enhanced service quality and reliability.
- CPD demonstrates personal commitment to ongoing continuing education and professional development to current and future employers.
- Knowledge gained through CPD may enable individuals to reframe complex problems and gain new insights.

How do I start collecting Points?

- APACE is open to and included in your membership fee for all AIMS members, and also open to AACB, ASM, ASTH, ANZSBT, and FSA (SIRT) for a small fee.
- The Activity Credit guide is located online, Login to the AIMS website and go to the members area to check for included activities and points values.
- Keep a record of all activities completed, including dates and a description of the activity.
- Activities are conveniently logged online, no need for hard copies.
- An APACE Certificate is issued when you notify head office that you have accrued 100CEU in a 2-year period.
- Limits on types of activities have been temporarily removed, in recognition of the difficulties in accessing activities during the pandemic. Limits will be reestablished when things return to normal.
- Then you are well on your way to your APACE Certificate! 😊

For more information and to enrol visit <http://www.aims.org.au/apace>

Note on Student Membership Application Forms

The one-page form is currently for full-time students only and has to be signed or emailed from institutional email address by the Course Coordinator or an officer of the university. The two-page form is for all other applicants. Both forms are available at <http://www.aims.org.au/membershipinformation/join>



Letter from APACE Committee to all Members

Dear Member,

At the last APACE Committee meeting the current situation in regard to the limited opportunities for CPD due to covid-19 restrictions was discussed. The borders have been closed and most international, national, state and SIG scientific meetings and workshops have been cancelled for 2020. Due to social distancing and staff working in isolated teams, many work places have cancelled Grand Rounds, film clubs, journal clubs and lunchtime educational sessions. For most members, being able to accrue the required 100 points in two years to gain APACE certification or re-certification has become very challenging, if not impossible.

Therefore, the APACE Committee has decided to extend the time frame to three years. Also, the limits for on-line learning, webinars, structured and journal reading will be removed. These changes will remain in place until CPD activities return to normal across the country.

A list of sites that provide on-line learning is available on the AIMS website. Any member who has undertaken on-line learning at other websites please do not hesitate to contact the AIMS National Office with details, so these can be added to the list.

The Committee is also undertaking a review of APACE activities and the credits assigned to each activity. Details of the changes will be announced when the review is completed. If any member would like to provide feedback or comments regarding this review, they can be forwarded to AIMS National Office.

Maureen Jacobsen MAIMS
Chair APACE committee

24 June 2020

COVID-19 AstraZeneca vaccine's mode of action and risk of Thrombosis

Indu Singh

Covid-19 disease is very strongly associated with blood clotting and that there had been hundreds, if not many thousands, of deaths caused by blood clotting because of covid-19. "The position with the Oxford-AstraZeneca vaccine is that there is no sign anywhere, including the UK where very large numbers of doses have now been given, that blood clot related illnesses are happening any more frequently than usual".

The European Medicines Agency (EMA) safety committee said that, as of 10 March, 30 cases of thromboembolic events had been reported among the five million people given the AstraZeneca vaccine in the European Economic Area.

More than 11 million doses of the AstraZeneca vaccine have now been administered across the UK and the number of thromboembolic events in vaccinated people was no higher than that seen in the general population.

A spokesperson for AstraZeneca said, "An analysis of our safety data of more than 10 million records has shown no evidence of an increased risk of pulmonary embolism or deep vein thrombosis in any defined age group, gender, batch or in any particular country with Covid-19 Vaccine AstraZeneca. In fact, the observed number of these types of events is significantly lower in those vaccinated than what would be expected among the general population."

It is not yet known whether there are any specific risk factors that might predispose an individual to this condition. Many of the cases reported were in adults aged under 55 years, and the majority were in women. It is also not yet clear if age and sex are risk factors, since the AstraZeneca vaccine was preferentially given to younger people in some countries, and since women make up a large proportion of the frontline healthcare workers that were prioritised for vaccination. [1]

Across Australia, more than 541,700 people have been vaccinated, most of them with AstraZeneca being produced in Australia by local manufacturer CSL.

On 2nd April Therapeutic Goods Administration (TGA) received one report of a case of thrombosis involving abdominal blood vessels and thrombocytopenia with symptom onset 7 days following COVID-19 Vaccine AstraZeneca in Victoria and an 82-year-old women's death in Queensland on 8th April. Based on that Australian Technical Advisory Group on Immunisation recommended no AstraZeneca vaccine for adults under 50 years. However, as there is increased risk of severe outcomes from COVID-19 in older adults, they will benefit from vaccination.

It is emphasised that no cause-and-effect relationship between COVID-19 vaccination and this case (or those reported internationally) has been established at this stage. Due to Rare cases of thrombosis associated with thrombocytopenia reported between 4 to 20 days following administration of COVID-19 Vaccine AstraZeneca overseas, current recommendations by TGA and EMA suggest that providers should be aware of warning signs of a severe condition associated with thrombosis and thrombocytopenia. This has presented as either central venous sinus thrombosis (CVST) or thrombosis in other sites, such as intra-abdominal venous systems. CVST may present as a new onset persistent headache not settling with analgesia, features of raised intracranial pressure (including acute severe headache, vomiting, confusion), focal neurological deficits, and/or seizures.

It is suggested that a full blood count (to look for thrombocytopenia), a D-dimer test, fibrinogen levels and radiological imaging must be performed and that the patients should NOT receive any heparin or platelet transfusions. If screening tests suggest HIT-like thromboses (low platelets $<100 \times 10^9/L$ together with elevated D-dimer 2 x upper limit of normal or reduced fibrinogen), a haematologist or haemostasis-thrombosis specialist should be consulted to advise on further investigations (including a HIT screen).

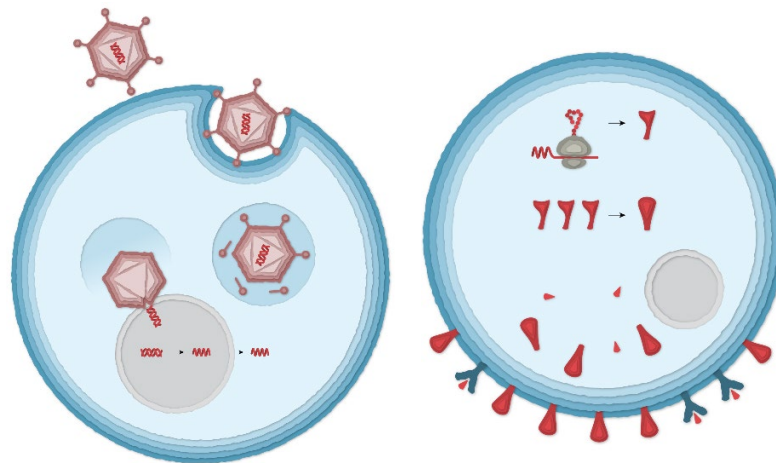
Public should be made aware of the warning signs to look for after vaccination including any new, severe, persistent headache or other significant symptoms, such as severe abdominal pain with an onset between 4 to 20 days after vaccination with COVID-19 Vaccine AstraZeneca. For CVST 'red flag' features include new onset of severe persistent headache that is not settling with analgesia. Patients may also present with features of raised intracranial pressure (acute severe headache, vomiting, confusion), focal neurological deficits and/or seizures.[2]

The COVID-19 virus is studded with spike proteins that it uses while entering the human cells. These spike proteins have been targeted for potential vaccines as well as treatments. The SARS-CoV genome is a kind of single strand RNA molecule that encodes four different structural proteins: nucleocapsid (N), envelope (E) protein, membrane (M) protein and lastly spike (S) glycoprotein.

COVID -19 vaccines are based mainly on mRNA and DNA technologies. Generally, mRNA induces cells to produce spike proteins which trigger antibody production. COVID-19 mRNA vaccines include BNT162b2 (Pfizer), mRNA-1273 vaccine (Moderna) and ChAdOx1 nCoV-19 vaccine / AZD1222 (AstraZeneca) is a DNA vaccine. This DNA vaccine uses replication-deficient chimpanzee adenovirus to provide a SARS-CoV-2 protein that subsequently induces immune response to protect the body.. By being vaccinated by ChAdOx1 nCoV-19 vaccine / AZD1222 (AstraZeneca) vaccine, it is expected that the body will be in a position to recognise and subsequently develop a form of the protected response to Spike protein that will assist halt the SARSCoV-2 virus from getting into human cells.[3]

The researchers added the gene for the coronavirus spike protein to another virus called an adenovirus. Adenoviruses are common viruses that typically cause colds or flu-like symptoms. The Oxford-AstraZeneca team used a modified version of a chimpanzee adenovirus, known as ChAdOx1. It can enter cells, but it cannot replicate inside them. After the vaccine is injected into a person's arm, the adenoviruses bump into cells and latch onto proteins on their surface. The cell engulfs the virus in a bubble and pulls it inside. Once inside, the adenovirus escapes from the bubble and travels to the nucleus. The adenovirus pushes its DNA into the host cell nucleus. The adenovirus is engineered so it cannot make copies of itself, but the gene for the coronavirus spike protein can be read by the cell and copied into a molecule called messenger RNA, or mRNA. The mRNA leaves the nucleus, and the cell's molecules read its sequence and begin assembling spike proteins.

Some of the spike proteins produced by the cell form spikes that migrate to its surface and stick out their tips. The vaccinated cells also break up some of the proteins into fragments, which they present on their surface. These protruding spikes and spike protein fragments can then be recognized by the immune system.



The adenovirus also provokes the immune system by switching on the cell's alarm systems. The cell sends out warning signals to activate immune cells nearby. When a vaccinated cell dies, the debris contains spike proteins and protein fragments that can then be taken up by a type of immune cell called an antigen-presenting cell. These cell presents fragments of the spike protein on its surface. When other cells called helper T cells detect these fragments, the helper T cells can raise the alarm and help assemble other immune cells to fight the infection. Other immune cells, including B cells, may bump into the coronavirus spikes on the surface of vaccinated cells, or free-floating spike protein fragments. A few of the B cells may be able to lock onto the spike proteins. If these B cells are then activated by helper T cells, they start to proliferate and pour out antibodies that target the spike protein. The antibodies can latch onto coronavirus spikes, mark the virus for destruction and prevent infection by blocking the spikes from attaching to other cells. The antigen-presenting cells can also activate another type of immune cell called a killer T cell to seek out and destroy any corona virus infected cells that display the spike protein fragments on their surfaces.[4] In the opinion of the author of this document, some of the antibodies produced post vaccination may activate blood platelet or Immune thrombocytopenia in response to activated immune response could possibly initiate process leading to thromboses.

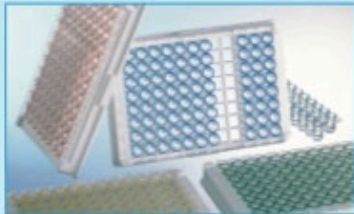
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3. Halim M, Halim A, Tjhin Y. COVID-19 Vaccination Efficacy and Safety Literature Review. J Clin Med Res. 2021;3(1):1- 10. DOI: [https://doi.org/10.37191/Mapsci-2582-4333-3\(1\)-058](https://doi.org/10.37191/Mapsci-2582-4333-3(1)-058)
4. <https://www.nytimes.com/interactive/2020/health/oxford-astrazeneca-covid-19-vaccine>.

The Power of Research



Microscopic Analysis



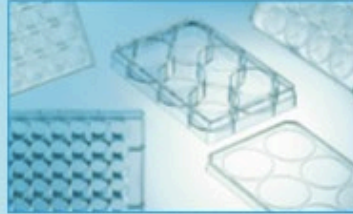
ELISA / Immunology



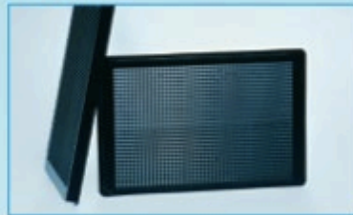
Fluorescence / Luminescence



3D Cell Culture



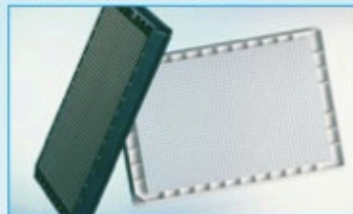
Cell Culture



1536 Well Plates



Protein Crystallisation



High Throughput Microplates

All Greiner
Bio-One plates
are certified RNase,
DNase, Human DNA free
and are non-pyrogenic

Exclusive Australian Distributor

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AIMS

Queensland Analyser





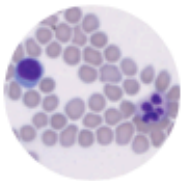
WORLD'S BEST STAINER
In Performance and Reliability

Aerospray® Slide Stainer/Cytocentrifuge

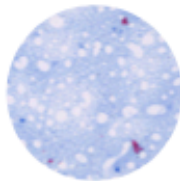


Automates the preparation and staining for:

Hematology



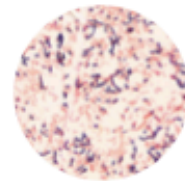
TB



Cytology



Gram



Advantages for Labs

- ◆ Eliminates cross-contamination
- ◆ Equipped with staining and cytocentrifugation capabilities
- ◆ Standardizes staining across multiple labs
- ◆ Provides consistent high-quality control
- ◆ Low maintenance
- ◆ Reduces the labor/cost per slide
- ◆ Enables laboratory compliance
- ◆ The perfect back-up for high automation labs



Nearly 30 Aerospray® patents
AEROSPRAYSTAINING.COM

