

A stylized illustration of a city skyline. The buildings are rendered in dark blue and yellow, with a grid-like pattern of windows. In the foreground, there are silhouettes of palm trees and a person walking on a beach. The background is a gradient of green and yellow, suggesting a sunset or sunrise. The overall style is modern and graphic.

CRIKEY 2023

The **Critical care Research International:**
Knowledge, Evidence and beYond
March 8-10, 2023 | Gold Coast, Australia



The Critical Care Research Group at The Prince Charles Hospital acknowledges the Traditional Owners of the land on which our laboratories and offices are located, the Turrbal peoples.

We pay our respects to Elders past, present and emerging.

We acknowledge Aboriginal and Torres Strait Islander peoples across the State for they hold the wisdom and knowledge as the first researchers, scientists and healers.

ccrg.org.au



 tpch-ccrg@health.qld.gov.au

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WELCOME TO CRIKEY

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Welcome to Queensland

MESSAGE FROM JOHN FRASER

Welcome to the inaugural **C**ritical care **R**esearch **I**nternational: **K**nowledge, **E**vidence and **b**e**Y**ond.

"Ideas are the source of all things". So said Plato, the famous Scottish Philosopher. The COVID pandemic showed how ideas could morph into studies then treatments, which brought order to a chaotic and terrified world.

For several years, we shared ideas from our living rooms on tiny screens - at ungodly hours, but with colleagues old and new. With each meeting of forgotten mute buttons and dodgy connections, we yearned to grow and advance these friendships, these Ideas, face to face - as Plato and his colleagues had done.

So, whilst this Summit has been less than 6 months in the planning, it had been the unspoken desire for the 3 years of Zoom calls and Teams meetings.

Churchill, another great Scot, said "Never waste a good crisis". The collaboration seen in ICU, medicine and science was perhaps the greatest "win" of a terrible time. CRIKEY aims to formalise and build on these collaborations, because so much more can be done when we come together, ask questions, respectfully agree and disagree, whilst developing new concepts to improve our understanding of critical illness.

And it is this ethos that brings us together today.

A sincere thanks to all of you who made your way "Down Under" to attend this inaugural Summit, a "Think Tank" where we can have robust conversations, devise plans for future research projects, share a meal, share stories, and forge new partnerships. A hope would be that through these partnerships, we can grow and encourage new, young leaders to emerge - from East to West, Rich to Poor. Through their growth, we can ensure the patients of tomorrow will benefit from experts that are borne through such collaborations.

I arrived in Australia travelling in a second hand kilt via the Baltics, Russia Siberia, Mongolia and China from "Tropical Glasgow". Despite my ardent Scottish Nationalism, I could see the potential in Australia of combining clinical and research work for a keen, if not particularly gifted, junior doctor.

However, a "stand alone" gig as a junior researcher is fraught with difficulties – hence the Critical Care Research Group (CCRG) was born, where the research group would aim to mirror the ICU – with a multi-disciplinary, multi-national group – to work within hospitals, theatres and labs. International fellows would return home as a fully, or partially, fledged researcher with a network forged through shared work.

Arriving from Estonia to Hong Kong, Kenya to Italy, the USA to the UK, CCRG offers young clinicians, scientists, and engineers a unique opportunity to work with leading clinicians, hospitals and universities alongside a global team of experts in the largest preclinical ICU in the Southern Hemisphere. This, all on the doorstep of the country's largest cardiothoracic hospitals... where you can almost hear the roar of the beach and feel the beckoning of the sun.

I would like to thank the founding supporters of the Critical care Research International: Platinum Sponsor **Fisher & Paykel Healthcare**; Gold Sponsors **Fresenius** and **Mallinckrodt**; and Bronze Sponsor **Edwards Lifesciences**. Special thanks to Fisher & Paykel General Manager – United Kingdom & Ireland, **Sam Frame** for believing in the potential of such a global meeting and for being first to jump onboard, allowing us to "Think Big".

Bringing the world's best and brightest ICU researchers together was no easy feat – and would not have happened without the huge effort primarily of **Lauren Kelly** and **Hannah Marrinan**. They were ably assisted by the CCRG team and CRIKEY Committee – **Jacky Suen, Gianluigi Li Bassi, Jono Fanning** and **John-Patrick Millar**.

So, here's to an enjoyable and fruitful meeting. Leave nothing on the table. If ideas truly are the source of all things, then let this meeting be the source of those ideas.

Go well,

John

KNOWLEDGE
EVIDENCE &
BEYOND

MEET THE COMMITTEE



John Fraser is Founder and Director of the Critical Care Research Group; Director of the Intensive Care Unit at St Andrew's War Memorial Hospital; Founder and Chief Medical Officer of De Motu Cordis Pty Ltd; and President of APELSo. John has five professorships across major Australian universities; has published over 550 peer-reviewed publications; and has received more than AUD41million in competitive grants. In 2018, John was awarded the Australian Society of Medical Research Clinical Research Award. He is the proud father of five great children: Ben, Dominic, Nicholas, Lucy, and Tommy.



Associate Professor Gianluigi Li Bassi is an intensivist and researcher, leading CCRG's Preclinical Innovative Medical & Engineering Laboratory (PRIMElab). Prior to his work at CCRG, A/Prof Li Bassi worked at the University of Milan, Italy; the National Institutes of Health, USA, where he was mentored by Dr Theodor Kolobow, the father of ECMO; and at the University of Barcelona, Spain, with Prof Antoni Torres. A/Prof Li Bassi has significantly contributed to the research fields of nosocomial respiratory infections and cardiopulmonary failure. He has published over 150 peer-reviewed papers, reviews and editorials on these subjects, and he wrote a chapter in the latest edition of *Principles and Practice of Mechanical Ventilation* edited by Prof Martin Tobin. He has been awarded several prestigious prizes, including the 2007 National Institutes of Health Fellows Award for Research Excellence; 2009 ESICM Alain Harf Award on Applied Respiratory Physiology and the 2013 ESICM Young Investigator Award.



Dr Jacky Suen is a molecular biologist specialising in critical care medicine, inflammation, and research translation. Dr Suen is the leading biologist at CCRG, with a focus on cardio-respiratory failures and ECMO. He is experienced in studying the underlying mechanisms of ECMO using ex vivo and large preclinical animal models. Currently, his projects include genetic biomarkers for multi-organ failure, novel biologics for the critically ill, and establishing a registry platform for Asia-Pacific.

Dr Jon Fanning is a dedicated clinician with almost 20 years of experience in clinical medicine including triple specialisation in anaesthesia (FANZCA), intensive care (FCICM) and internal medicine (FRACP). He is an Associate Professor at The University of Queensland, lead investigator for clinical trials at CCRG and is passionate about advancing clinical trials methodology and advocating for clinician-researchers.



Dr Jonathan Millar is a Clinical Lecturer in Intensive Care Medicine at the University of Edinburgh and an Honorary Specialist Registrar in Intensive Care Medicine. Having undertaken clinical training in Belfast, Glasgow, and Brisbane, his research interests include genome editing and the functional genomics of ARDS, unsupervised machine learning approaches to phenotyping, and large animal models of critical illness. He completed his doctoral thesis with Prof John Fraser and Prof Danny McAuley, studying the role of mesenchymal stem cells and ECMO in ARDS.



Hannah Marrinan joined CCRG in 2020 as Research Program Manager of the COVID-19 Critical Care Consortium (COVID Critical), before accepting a joint appointment, taking on the management of CCRG collectively. Prior to joining CCRG, Hannah worked in the higher education and health sectors in Australia and the United Kingdom following the completion of her postgraduate study which focused on public health policy and programs to improve health outcomes, particularly in under-resourced settings.



CRIQUEY CONTACT: WhatsApp +61 413 439 593
hannah.marrinan@health.qld.gov.au

Lauren Kelly is a communications, events, and audience engagement specialist with over 15 years' experience working across North America and Australia. Lauren has delivered audience engagement and public relations campaigns for Queensland Art Gallery | Gallery of Modern Art, Luxxbox Design Studio, Godinymayin Yijard Rivers Arts & Culture Centre (Katherine, Northern Territory) and Opera Queensland. She holds a Bachelor of Communication (Public Relations) from The University of Queensland.



CRIQUEY CONTACT: WhatsApp +61 401 400 904
lauren.kelly5@health.qld.gov.au

PROGRAMME

Tuesday, March 7

1230 Bus departs Four Points by Sheraton to visit the Medical Engineering Research Facility (MERF) at The Prince Charles Hospital.

1300-1430 **TOUR: CRIKEY delegates who are in Brisbane March 7 can access MERF before the Summit commences.**

REGISTER **HERE**
FOR EARLY ACCESS

Delegates will experience state-of-the-art preclinical experimental settings with large ovine model and will learn about CCRG's ground breaking studies informing future clinical practice.

Missed the bus? Make your own way to MERF, Staib Road, Chermside to join the tour anytime between 1300-1430. Buses will return all delegates to Four Points by Sheraton following the tour.



1800-2000 **SOCIAL:** Informal Welcome Barbeque at John's House
10 Mars Street, Wilston
Make your own way there. [View on map](#)



RSVP and queries: tpch-ccrg@health.qld.gov.au

0900 Buses depart Four Points by Sheraton.
Please check-out, settle any hotel incidentals and prepare to depart at 0900.

0930 **TOUR: Critical Care Research Group facilities at The Prince Charles Hospital, Chermside**

Delegation spilt into groups and rotate through different tours:

- ICU of the Future: CCRG's world first project redesigning intensive care for better patient outcomes
- MERF: Large preclinical ovine model of septic shock
- ICETlab: Innovative Cardiovascular Engineering and Technology Laboratory

1230 Lunch with Hospital Executive Team and The Prince Charles Hospital Foundation

1400 Coaches depart for the Gold Coast
Approx. 2 hour transit time

1530 Check-in: Hotel VOCO Gold Coast
31 Hamilton Avenue, Surfers Paradise
Gold Coast, Queensland
Phone: +61 7 5588 8333

IMPORTANT: If you have family joining you in Australia, they must meet at The Prince Charles Hospital, Clinical Sciences Building at 1345 to join transfer or make their own way to the Gold Coast.

1730 **SPECIAL EVENT: Meet in hotel lobby and walk to Welcome to Country and traditional smoking ceremony**

Smoking ceremonies are a First Nation's gesture of goodwill, bringing people together and warding off bad spirits.

This special cultural event will be performed by Luther Cora and the Yugambah Aboriginal Dancers, from Jellurgal Aboriginal Cultural Centre, the Gold Coast's only dedicated Aboriginal cultural centre.

1830 **SOCIAL & LEISURE TIME:**
Complimentary drink
Social House, Hotel VOCO Lobby



Thursday, March 9

0830 **WELCOME:** John Fraser
Location: Grand Ballroom, Level 2, SkyPoint
9 Hamilton Ave, Surfers Paradise QLD 4217

0840 **INTRODUCTION:** Professor Robert Bartlett

0900-1030 **How do we gather data in ECMO and Critical Care research: Research priorities and methodologies**

Chairs: John Fraser, A/Prof Jon Fanning

Prof Luciano Gattinoni	Current and future research priorities in ECMO and Critical Care
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Prof Jan Bělohávek	Challenges and learnings from recent ECMO RCTs
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Prof Danny McAuley	Platform adaptive trials in critical care
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Dr Martin Urner	Alternatives to randomised clinical trials
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Followed by panel discussion on research priorities in Critical Care

1030-1115 **MORNING TEA**

1115-1230 **How can we make global studies truly “international”**

Chairs: A/Prof Gianlugi Li Bassi, A/Prof David Thomson

Prof Antonio Pesenti	Lessons learned from running critical care research collaborations
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Prof John Laffey	Advantages and challenges of the LUNG SAFE study
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Dr Nchafatso Obonyo	Critical care data where critical care doesn't exist
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Dr Muhammed Elhadi What is required for hospitals in the Middle East and North Africa to be involved in international studies?

Followed by panel discussion on international studies

Prof Glenn Whitman Panel member

Prof Shingo Ichiba Panel member

Dr Hwa Jin Cho Panel member

Dr Pauline Ng Panel member

1230-1400 **LUNCH & LEISURE TIME**

1400-1530 **Mechanisms for safely and securely sharing data to enable continued research excellence: How to ensure lessons learnt through the pandemic are not lost**

Chair: Prof John Laffey

Prof Roberto Lorusso EuroELSO Experience: Challenges in the most critical patient

Prof Adrian Barnett Databases and the risks of managing 45 million data points

Prof Gabrielle Belz Challenges moving studies between institutions and states

Prof Heidi Dalton From EMR to Database

Dr Jean Marshall "Have they really seen it's airborne?"

Dr Urvi Shukla Sharing data outside of India

Followed by panel discussion on mechanisms for sharing data

Thursday, March 9

1530-1800

LEISURE TIME

1800

SPECIAL EVENT: Conference Dinner
with keynote address by Professor Robert Bartlett

Location: The Island Penthouse
3128 Surfers Paradise Blvd, Gold Coast



IMPORTANT: Allow time to catch an Uber or walk to The Island for the Conference Dinner. 5-8 mins walk from SkyPoint.

Dress: Cocktail



[Click here to advise dietary requirements](#)

Friday, March 10

0900-1030

ECMO trials and practice: Experience from referral centres in HIC to LMIC

Location: Grand Ballroom, Level 2, SkyPoint
9 Hamilton Ave, Surfers Paradise QLD 4217

Chairs: A/Prof Gianluigi Li Bassi, Dr Pauline Ng

Prof Giles Peek

International applicability of the CESAR Trial (remote)

Prof Leonardo Slazar

ECMO Trials feasibility in South America

A/Prof Simon Sin Wai Ching

Setting up new ECMO centres in Asia-Pacific

Prof Shingo Ichiba	A Japanese Experience: Small volume centres in highly diversified populations
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Dr Maximilian Malfertheiner	Pros and cons of small volume centres versus referral centres
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Followed by panel discussion on ECMO trials and practice

Prof Antonio Pesenti	Panel member
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Prof Roberto Lorusso	Panel member
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Prof Carol Hodgson	Panel member
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A/Prof David Thomson	Panel member
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Dr Akram M Zaaqoq	Panel member
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1030-1115 **MORNING TEA**

1115-1230 **Successful Research Dissemination in the 21st Century:
How to get research to those who need it the most**

Chairs: Prof Luciano Gattinoni, Prof Adrian Barnett

Prof Adrian Barnett	Beyond dissemination: Why most research is wrong
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Prof Bala Venkatesh	The role of pre-print: Is peer reviewing dead?
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Susan Allison (Editor, <i>Nature</i>)	Are traditional journals still relevant?
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Tegan Taylor (<i>ABC Radio National</i>)	What are editors looking for: Sharing research with general news media
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*Followed by panel discussion on
Successful Research Dissemination*

Friday, March 10

1230–1330

LUNCH & LEISURE TIME

1330–1455

Our responsibility as global citizens: Supporting the next generation of research excellence

Chairs: A/Prof Shaun Gregory, Dr Nicole White

Prof Jan Bělohlávek

From PhD to Profession: The role of a career mentor

Oystein Tronstad

An ECRs approach – what ‘we’ need to grow. Lived experience of an Allied Health professional and Project Manager undertaking a PhD

A/Prof Shaun Gregory
& Dr Nicole White

Innovative techniques used to support career development

Dr Nicole White

Developing a "personal brand" and raising one's profile as a researcher. How we can help and provide opportunities for emerging researchers.

Followed by panel discussion on supporting promoting excellence

Dr Hwa Jin Cho

Panel member

Dr Lucia Gandini

Panel member

Dr Maximilian Malferteiner

Panel member

Dr Nchafatso Obonyo

Panel member

Dr Martin Urner

Panel member

1455–1515

AFTERNOON REFRESHMENTS

1515-1545

SPECIAL EVENT: CRIKEY Debate Series commences

CRIKEY Debate Series

R.I.P. ECCO2R: Is it dead?

Adjudicator: Professor Carol Hodgson



D McAuley



J Fraser

1545-1800

LEISURE TIME

1800

SUNSET SOCIAL & Debate Series continues

New Location: Observation Deck, Level 78, SkyPoint

CRIKEY Debate Series continues

Pulmonary mechanics in COVID-19 ARDS:

Are we dealing with the same beast?

Adjudicator: Professor Robert Bartlett



A Pesenti



L Gattinoni

1900-1930

SPECIAL EVENT: John Fraser in-conversation with Mrs Wanda Bartlett and Professor Robert Bartlett

Until 2130

SOCIAL: Enjoy spectacular and uninterrupted views of the Gold Coast skyline and hinterland. *Canapes and drinks served until 2100.*

Keynote Speakers



Robert H. Bartlett, M.D. is Professor Emeritus, University of Michigan. He received his medical degree from the University of Michigan Medical School, cum laude in 1963. He served as an intern in Surgery at Peter Bent Brigham Hospital in Boston from 1963-1966. In 1969 he completed his general surgery residency including one year of residency in Thoracic Surgery. Dr. Bartlett was also a NIH Trainee in Academic Surgery at Harvard Medical School from 1966-1970. He was on the faculty at the University of California, Irvine, 1970-1980, and has been at the University of Michigan since 1980. Dr. Bartlett has been the recipient of many awards and honoured over the last thirty years. In 2002, he was awarded the Medallion for Scientific Achievement from the American Surgical Association. In 2003, Dr. Bartlett received the Ladd Medal of the American Academy of Pediatrics and the American College of Surgeons Jacobson Award. In addition, he was honoured with two inductions: the National Institutes of Health Great Clinical Teachers Series and the Institute of Medicine of the National Academy of Science.



Wanda Bartlett (nee Read) and Robert Bartlett met at Albion College in 1956. They were married in 1960. Wanda taught school while Bob was in medical school, raised their three children, then returned to teaching as a consultant in the Ann Arbor school system. In 1965 Wanda was hired to clean the heart-lung machine between cases at the Boston Children's Hospital, working with Jean, the perfusionist, and Dr Robert Gross. This friendship emboldened Bob to suggest using the heart-lung machine for days for heart failure, ultimately resulting in ECMO. Wanda is often called the "Mother of ECMO". She has become an expert in ECMO through decades of patients, consultations, meetings, and special ECMO friends throughout the world.

Chairs, Speakers and Panellists

After completing an honours degree in Biochemistry at the University of Otago, New Zealand, **Susan Allison** (*Nature*) moved to Sydney to take up a PhD position at the Garvan Institute of Medical Research, before undertaking postdoctoral research at Lund University in Sweden. She joined *Nature Reviews Gastroenterology & Hepatology* as an Associate Editor in 2008 and was appointed Chief Editor of *Nature Reviews Nephrology* in 2009. In June 2020 Susan took on an expanded role as a Consulting Editor for *Nature*.



Professor Adrian Barnett is a professor of statistics who has worked for over 27 years in health and medical research. He was the president of the Statistical Society of Australia from 2018 to 2020. He has published two statistical textbooks and over 300 peer reviewed papers. His research has been featured in *The New York Times*, *Washington Post*, *Time*, *ABC* and *BBC*. His current research concerns improving statistical practice to reduce research waste.



Cardiologist **Professor Jan Bělohávek** is Associate Professor of Medicine, board certified in cardiology, angiology and critical care, licenced in invasive cardiology. Prof Bělohávek's clinical and research focus areas are refractory cardiac arrest, ECMO reperfusion, microcirculation, different ECMO settings and reperfusion. Investigator of the Prague OHCA study comparing hyperinvasive approach – ECPR to standard therapy in refractory cardiac arrest. Chair of the Czech Association of Acute Cardiology, Member of the EuroELSO steering committee, Chairman of the EuroELSO 2018 congress in Prague.



Professor Gabrielle Belz is Chair of Immunology, Frazer Institute University of Queensland, and trained in veterinary medicine and surgery. She has made major contributions to the field of immunology (>220 papers) for which she was awarded a Doctor of Veterinary Science and has received the Gottschalk Medal (AAS) and Howard Hughes Medical Institute Investigator Awards. Her interest is understanding how the fine tuning of the mucosal immune system of the gut and lung impact immune homeostasis and how the dysregulation of this system results in both local and systemic disease.



Chairs, Speakers and Panellists



Dr Hwa Jin is Associated Professor, Department of Pediatrics, Chonnam National University Medical School, South Korea and Senior Consultant Division of Pediatric intensive care and pediatric cardiology, Chonnam National University Children's Hospital. Since 2017 she has been part of the APELSO steering committee, Committee Chair, Korean Society of Pediatric Critical Care Medicine since 2016 and Associated editor, Acute and critical Care, Korean Society of Critical Care Medicine since 2018. Dr Hwa Jin Cho is involved in several research, adjunctive treatment, pathophysiology, immunology and device development related to ECLS.



Dr Heidi Dalton is an internationally known leader in ECLS, with over 150 publications. Her research focus is on elimination of bleeding and thrombosis during ECLS. She is the director of ECLS research/program development at INOVA in Virginia (USA) and she has also recently founded the ECLS Virtual Advisors Group. With over 100 years of ECLS experience, this team provides virtual patient management, education, program development and new design ideas for the future related to critical care and ECLS.



Dr Muhammad Elhadi is a medical doctor and researcher from Libya known for his leadership in COVID-19 research projects. He received his medical degree from the University of Tripoli and is dedicated to improving patient outcomes and advancing the fields of critical care and perioperative care. His areas of expertise include organ support, sepsis, nutrition, and surgical outcomes for critically ill patients and patients with cancer. With an extensive publication record, he is a frequent presenter at international conferences, sharing his research findings with the medical community.



Dr Lucia Gandini is an Intensive Care and Anesthesiology registrar at the University of Milan, Italy. She has recently completed a research fellowship with The Critical Care Research Group, where her research is focused on new anticoagulant strategies for patients undergoing ECMO. She has contributed to several pre-clinical models, which are testing how to improve the management of critical illnesses such as ARDS, cardiogenic and septic shock.

Chairs, Speakers and Panellists

Professor Luciano Gattinoni is currently working as Gastprofessor at the University of Göttingen (Germany). He has served for many years as Professor and Chairman of Anesthesiology and Intensive Care Medicine at The University of Milan and led the Department of Anaesthesia, Resuscitation, and Pain Therapy at Policlinico of Milan, Italy. He invented the “Extracorporeal CO2 Removal” and promoted the “baby lung” (1980’s) and mechanical power concepts (2016). His research focuses on the pathophysiology and treatment of acute respiratory failure, sepsis and acid base disorders. He has published more than 500 research articles in peer reviewed journals. He was awarded with the Life Time Achievement Award by the American Society of Anesthesiology, the American Society of Critical Care Medicine and the European Society of Intensive Care and the French Society of Intensive Care.



A/Professor Shaun Gregory is a cardiovascular engineer who specialises in developing engineering solutions to solve clinically-relevant problems. Shaun is the Founder and Director of the CardioRespiratory Engineering and Technology Laboratory (CREATElab) within the Mechanical and Aerospace Engineering Department at Monash University. He is also an NHMRC Investigator Fellow, Heart Foundation Future Leader Fellow, and is the Founder and Academic Director of the Heart Hackathon international student team competition which is changing the way young biomedical engineers are educated on a global scale.



Professor Carol Hodgson is Head of the Division of Clinical Trials and Cohort Studies in the School of Public Health and Preventive Medicine, and Deputy Director of the Australian and New Zealand Intensive Care Research Centre, Monash University, Australia. She has held NHMRC funding throughout her career, as PhD scholarship, Early Career Fellowship and currently with an Investigator Grant (2020–2024). She leads international multicentre trials for the Australian and New Zealand Intensive Care Society Clinical Trials Group.



Chairs, Speakers and Panellists



After graduating from Okayama University, **Professor Shingo Ichiba** obtained a doctorate at Okayama University Second Surgery. He studied at the University of Michigan Medical Center under Professor Robert H. Bartlett. ECMO Clinical Fellow at Glenfield General Hospital, ECMO Centre in UK (Since 1997). After returning to Japan, he worked at Okayama University Hospital Advanced Critical Care Center; Department of Intensive Care Medicine and Clinical Engineering, Nippon Medical School Hospital; and Tokyo Women's Medical University. He is working to advance standardisation of ECMO treatment in Japan and is currently Vice Chair of the Asia-Pacific ELSO.



Professor John Laffey is the Professor of Anaesthesia and Intensive Care Medicine at the School of Medicine of the University of Galway, Ireland, and a Consultant in Anaesthesia and Intensive Care Medicine at Galway University Hospitals. Professor Laffey's major translational research interest is centred on investigation of the pathophysiology of, and development of therapeutic strategies for Acute Respiratory Distress Syndrome (ARDS), and for Sepsis. He has a particular interest in cell-based therapies and regenerative medicine approaches.



Professor Roberto Lorusso graduated in 1987 as a medical doctor from The University of Milan, qualifying as a cardiovascular surgeon in 1993. He has held fellowships at The Universities of Alabama (Birmingham), Leuven (Belgium) and Maastricht (Netherlands). Awards include EACTS Young Investigator's Award in 1995 and Lillehei Award in 1998. He became Editor-in-Chief of the EACTS MultiMedia Manual of Cardio-Thoracic Surgery in 2016. Research areas of interest include mechanical circulatory support, acute cardiac failure and arrest, valve and coronary surgery, education and training.

Chairs, Speakers and Panellists

Dr Maximilian Malfertheiner is the Medical Director of the Lung Center Donaustauf, Germany. As a specialist for respiratory and intensive care medicine he is affiliated with the ECMO center of the University hospital Regensburg, Germany. Dr. Malfertheiner carried out a research fellowships at Yale University, New Haven, USA and with the CCRG at the Prince Charles Hospital in Brisbane, Australia. He is speaker of the work group on Innovation on ECMO and ECLS of the EuroELSO and member of the ELSO SOC.



Dr Jean Marshall is a Clinical Research Manager at Fisher & Paykel Healthcare. Her career has focused on the development of medical devices across diverse disciplines. At the start of the COVID-19 pandemic, Dr Marshall's research pivoted to investigate the impact respiratory therapies may have on airborne spread of disease. Her team of eight built on the emerging evidence of airborne transmission, developing their own gold standard methods to understand respiratory aerosols and, importantly, visualise respiratory plumes.



Professor Danny McAuley is a Consultant and Professor in Intensive Care Medicine at the Regional Intensive Care Unit at the Royal Victoria Hospital and Queen's University of Belfast. He undertook his training in Belfast, Birmingham, London and San Francisco. He is Programme Director for the MRC/NIHR Efficacy and Mechanism Evaluation (EME) programme. He has several research interests including Acute Respiratory Distress Syndrome and clinical trials.



Dr Pauline Yeung Ng is from the Critical Care Medicine Unit at The University of Hong Kong. After attaining specialist qualification in Critical Care, she completed a research fellowship at Massachusetts General Hospital in Boston. She specializes in outcomes research, by utilizing large databases to assess territory-wide outcomes after ICU care. Her research interests also include point-of-care hemodynamic assessment in the ICU. She is a keen ECMO educator and was the chief editor of the online "ECMO 101" course hosted on ELSO.org.



Chairs, Speakers and Panellists



Dr Nchafatso Obonyo is a Postdoctoral Researcher at CCRG. His research aims to advance understanding of microvascular endotheliopathy in critical illness, improve assessment of the microcirculation and investigate novel therapies aimed at preserving the glycocalyx lining the vascular endothelium. He has been involved in pre-clinical model development and is currently leading the pre-clinical study on septic shock resuscitation. His doctorate thesis on 'myocardial and microvascular physiology in septic shock and response to volume expansion treatment' was supervised by Professor Kathryn Maitland and Professor John Fraser.



Professor Giles Peek, FELS, is Professor at the University of Florida. He has been fascinated by ECMO since 1994. His thesis investigated the use of different biomaterials during extracorporeal life support. He served as PI of the CESAR trial, on the ELSO steering committee (1999–2019), as the inaugural chair of EuroELSO (2011–2014) and chairs the ECMO sub-study group for the Covid Critical Care Consortium. He is married with three children and three grandchildren. For relaxation he enjoys ascending and descending mountains.



Professor Antonio Pesenti is Professor of Anaesthesiology and Intensive Care Medicine at the University of Milan, Italy. He started his research career under the mentorship of Professor Theodor Kolobow, at the National Institutes of Health, USA and until last year he led the Department of Anaesthesia, Resuscitation, and Pain Therapy at Policlinico of Milan, Italy. He is the author and/or editor of numerous textbooks and of more than 400 published scientific and educational articles. He is one of the most distinguished researchers in the field of respiratory failure, mechanical ventilation and extra corporeal membrane oxygenation. His research has always been focused on understanding the pulmonary physiology and management of acute respiratory failure, with an emphasis on mechanical ventilation, ARDS imaging and ECMO. Most importantly, Prof Pesenti human and professional qualities make him an inspiring example for intensivists worldwide.



Dr SIN Wai Ching Simon is Director, Clinical Associate Professor, Critical Care Medicine Unit, School of Clinical Medicine, The University of Hong Kong. Director of Critical Care Centre, Gleneagles Hospital, Hong Kong. Dr Sin Wai Ching Simon's established the first ICU ECMO retrieval, a model later adopted by the Hospital Authority during the swine flu epidemic. He developed ECMO CPR service; APELCO Education Committee Co-Chairman and has built Hong Kong's reputation as a leading ECMO teaching centre in SE Asia.

Chairs, Speakers and Panellists

Past Chair, LATAM ELSO, **Dr Leonardo Salazar Rojas** is a Cardiothoracic Anesthesiologist and Intensivist from Colombia. He holds a Master in Biomedical Sciences and a Fellowship in heart transplant and Ventricular Assist Devices. Dr Salazar Rojas has led the development of the ECMO program at the Fundación Cardiovascular de Colombia since 2007, the only platinum centre of excellence in Latin America. He started a short term mechanical circulatory support program in 2010 and implanted the first Heartmate 2 in Latin America in 2014. The program has since implanted 30 long term LVAD and remains the only designated center of excellence in LVAD for Joint Commission International in Latin America.



Dr Clayton Semenzin has a background in mechanical engineering, completing his PhD with ICETlab and Griffith University. His thesis focussed on improving the design process developing centrifugal rotary blood pumps through the use of CFD modelling and a predictive statistical model. Research interests include blood pump design, computational fluid dynamics and developing custom test rigs for evaluating the performance of medical devices.



Dr Urvi Shukla is the Founder of Intensive Care at Symbiosis University Hospital and Research Centre, Pune. She has established ICUs in two other hospitals previously, as well as liver transplant unit. She is a clinician academician and dedicated to quality improvement in clinical care for terminally ill patients. She believes that technology and a well-organised ICU can make ICUs a safer place for patients. She works in a third world region but hopes that with right dedication, funding for a modern ICU is not difficult.



Tegan Taylor (*ABC Radio National*) is a health and science reporter for the ABC and co-host of the multi-award-winning Coronacast. She also co-hosts Radio National's Health Report and hosts the live event series and radio/podcast Ockham's Razor. She's won a Walkley Award and the Eureka Prize for Science Journalism and her work has appeared in the Best of Australian Science Writing. Tegan was previously a producer on the ABC's national digital news desk, a journalism lecturer at The University of Queensland and, long ago, a newspaper reporter.



Chairs, Speakers and Panellists



Dr David Thomson is a Critical Care sub-specialist and a consultant surgeon in the Transplant Unit at Groote Schuur Hospital and the University of Cape Town having completed his undergraduate training at the University of KwaZulu Natal. He is the director of the ECMO Program since 2016. His interests include critical care research, deceased donation, ECMO and medical education. He is a FAIMER graduate and runs the online course Organ Donation: From Death to Life on Coursera.org.



Oystein Tronstad is a Physiotherapy Researcher and Manager of the CCRG clinical research team. He is a physiotherapy clinical lead at The Prince Charles Hospital with extensive critical care clinical and research experience. He continues to manage several clinical projects, including the 'ICU of the Future' project, a world first initiative of CCRG.



Dr Martin Urner is an Assistant Professor in the Interdepartmental Division of Critical Care Medicine and the Department of Anesthesiology and Pain Medicine at the University of Toronto. He received his medical degree from the University of Zurich Medical School and a Ph.D. in Clinical Epidemiology and Health Care Research from the University of Toronto. Dr. Urner works as a Staff Intensivist at the University Health Network/Toronto General Hospital. His research focuses on causal inference and observational data analysis.



Professor Bala Venkatesh is Director of Intensive Care, Wesley Hospital; Pre-Eminent specialist in Intensive Care Medicine, Princess Alexandra Hospital; Professor of Intensive Care Medicine, The University of Queensland and The University of New South Wales; and Professorial Fellow, The George Institute for Global Health. He is the Chairman of the Queensland Health Statewide Sepsis Steering Committee, and Fellow of the Australian Academy of Health and Medical Sciences. Served as President for the College of Intensive Care Medicine of Australia and New Zealand between 2014-2016.

Chairs, Speakers and Panellists

Dr Nicole White is a statistician from the Australian Centre for Health Services Research, Queensland University of Technology. She has over 10 years of experience collaborating with academics and clinician-researchers. Her research focuses on developing and applying robust statistical methods to support decision-making in health settings. Since late 2020, Nicole has led statistical analyses for the COVID-19 Critical Care Consortium and ISARIC. Outside of research, Nicole is regularly involved in science communication initiatives to promote career pathways in mathematics and statistics.



As a cardiac surgeon for close to 40 years, **Dr Glenn Whitman's** clinical life has dealt with cardiopulmonary bypass, and more recently, ECMO. He has spent his career in academic medicine, having continuously taught medical students, residents, and fellows. As Director of Cardiac Intensive Care Units for close to 20 years, currently at Johns Hopkins, his is focused on quality and performance improvement, devoted to understanding postoperative ICU care, its associated complications and prevention. As outcomes for high-cost care become increasingly scrutinised, improving the delivery of ECMO, clearly one of the most hi-tech and costly therapies, remains a key focus.



Professor Akram M. Zaaqoq is Associate Professor of Medicine, Critical Care Medicine Department, Georgetown University. He has broad clinical experience caring for critically ill surgical patients, including telemedicine management of such patient populations. Specifically, patients on mechanical circulatory support devices and ECMO. He is an active member of multiple professional societies, such as ELSO, the Society of Critical Care Medicine (SCCM), the American Society for Artificial Internal Organs (ASAIO), and the Society of Thoracic Surgeons (STS). His clinical research is related to temporary and durable mechanical circulatory support devices. He has an extensive contribution to the medical literature and clinical practice that extends beyond the United States to the global level.



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WELCOME TO QUEENSLAND

Australia's Critical Care Research Group is headquartered in Brisbane, the capital city of Queensland.

On the doorstep of the Great Barrier Reef and the world-famous Gold and Sunshine Coasts, Brisbane is a thriving multicultural city, with an innovation-led economy and an enviable outdoor lifestyle. A global hub of scientific and medtech innovation, mining and resources, technology, education, meetings, incentives, and cultural attractions, Brisbane is a natural home for business, work, and study.

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CCRG's offers unique research possibilities found in a combination of engineering, biology lab, preclinical models and patients, all on one campus.

Dr Maximilian Malfertheimer

Former CCRG Research Fellow
Intensive Care & Internal Medicine Specialist
University Hospital Regensburg (Germany)



TODAY'S RESEARCH TOMORROW'S TREATMENTS

The Critical Care Research Group brings together a diverse team of passionate scientists, engineers and clinical professionals, united by the common goal of improving treatment outcomes for the critically ill.

CCRG is a springboard to some of the most sought after research positions in the world. From world renowned universities to cutting edge science institutes, CCRG Alumni go on to hold senior positions and reach incredible advancements in many fields of medical research.

CCRG collaborators:

- Participate in clinical studies and preclinical trials
- Contribute to life-changing translational research aimed at making a real impact to the lives of critically ill patients
- Have access to a multi-disciplinary team, state-of-the-art facilities, and supportive team and management
- Have a streamlined pathway to a career in academia and research
- Have access to world-leading tertiary education providers including The University of Queensland, Queensland University of Technology, Monash University, Bond University, and Griffith University





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