

ASX: EIQ RELEASE

APRIL 26, 2022

## ECHO IQ ANNOUNCES FORMATION OF SCIENTIFIC ADVISORY BOARD WITH WORLD-LEADING CARDIOLOGY AND AI EXPERTS

### Highlights

- **Echo IQ has formed a Global Scientific Advisory Board with internationally recognised medical and scientific experts**
- **Board to advise Echo IQ on advanced techniques in cardiology, echocardiography and the application of AI to cutting-edge research and clinical practice**
- **Inaugural appointments from private practice, academic research and public health in the USA and UK**
- **Board creation an important milestone towards US commercialisation**

**Sydney, Australia:** AI and Medical Technology company Echo IQ (the Company) (ASX: EIQ) is pleased to announce the formation of the **Echo IQ Scientific Advisory Board** to support solutions innovation, clinical utilisation and market access.

The Scientific Advisory Board comprises a team of globally recognised experts in cardiovascular medicine, echocardiography, sonography, applied artificial intelligence and public health. Between them they have produced more than 1,200 peer-reviewed publications. The Board includes former Presidents and Chairs of the American College of Cardiology (ACC) and the American Society of Echocardiography (ASE) as well as TedMed speakers, NASA's lead scientist in ultrasound and a member of the surgical team that performed the world's first transcatheter aortic valve replacement using the transapical approach.

The Board will work closely with Echo IQ's leadership team to design and implement disruptive new cardiac-diagnostic technologies, powered by big data and artificial intelligence. The team will also advise and support Echo IQ on market and sector-related issues from regulatory frameworks and local health economics to clinical practice and commercialisation.

Commenting on the formation of the new Echo IQ Scientific Advisory Board, Executive Chair Andrew Grover said: *"The establishment of the Echo IQ Global Scientific Advisory Board marks an important milestone in the Company's development as we look to build out our cardiac-solutions capability addressing aortic stenosis and other forms of structural heart disease. Having some of the finest minds in our sector contributing to our product pipeline will mean we continue to develop truly transformative solutions. We know that addressing under and mis-diagnosis of treatable conditions has the power to provide many more people with life-enhancing and extending therapies."*

*I am especially pleased that the inaugural members of this board include truly world-renowned and respected practitioners of their science – a testament to the belief they share in the potential for Echo IQ's solutions to make a significant difference to health outcomes for many”.*

The Scientific Advisory Board will include the following members (listed in alphabetical order, with full biographies at the end of this release):

**Prof. Huon H. Gray, CBE MD FRCP FESC MACC**

Professor Gray is a highly regarded British cardiologist who has held a number of senior roles shaping public health delivery in the UK. He co-produced the Department of Health's Cardiovascular Disease (CVD) Outcomes Strategy in 2013 and was the National Clinical Director for Heart Disease at NHS England from 2013 to 2019 where he helped develop the CVD priorities in the NHS Long Term Plan (2019). Internationally respected, Prof. Gray has been closely involved with the American College of Cardiology since 2008, with its international development, as a Board member and latterly as Chair of its Governance Committee. In the Queen's New Year's Honours List 2019 he was made Commander of the Excellent Order of the British Empire (CBE).

Dr. Gray said: *“Applying new digital technologies to the detection and treatment of cardiovascular diseases has the potential to change the way we approach public healthcare delivery. I look forward to working with the team at Echo IQ and my fellow Scientific Advisory Board members to help bring these innovative new solutions to market.”*

**Madeline Jankowski, BS ACS RDCS FASE**

Madeline Jankowski is an advanced cardiac sonographer and echocardiography research associate at Northwestern University in Chicago, IL. In clinical practice, she focuses on complex valve disease for research trials, hemodynamic stress echocardiography, and advanced imaging tools such as global longitudinal strain imaging and 3D echocardiography.

Madeline completed her clinical internship at Duke University in Durham, NC before beginning her sonographer practice at Cleveland Clinic in Cleveland, OH. She joined Northwestern Medicine in 2014 as a Lead Cardiac Sonographer and has recently moved into a more research-focused role with Northwestern University. She has been invited faculty for many conferences including: the American Society of Echocardiography (ASE) Scientific Sessions, ASE's Echo Hawaii, Echo Northwestern, and the American College of Cardiology (ACC) Scientific Sessions. Madeline currently holds the position of Chair for the Adult Echo Boards Exam Committee.

Madeline Jankowski said: *“Great sonography has the potential to unlock a range of treatment pathways for many of the leading forms of structural heart disease. I'm pleased to be joining the Echo IQ Scientific Advisory Board in support of their AI-backed risk-assessment solutions based on echocardiographic measurements.”*

**Dr. Hashim A. Khan, MD, FACC**

Dr. Khan is a practicing interventional cardiologist at the renowned San Diego Cardiac Center in San Diego, California. He obtained a B.Sc. in Cell and Structural Biology from the University of Illinois, and his Medical Doctorate at Northwestern University. He holds fellowships in Interventional Cardiology and Cardiovascular Disease. Dr. Khan is a Clinical Scholar and engages in Cardiovascular research at the Scripps Translational Science Institute. He has a progressive approach to adopting newer, more successful therapies based on clinical research and frequently delivers ground-breaking treatments in advance of other heart clinics.

Dr. Khan said: *“I have seen first-hand how new approaches to cardiovascular medicine have the power to change lives for the better. The application of advanced AI to risk detection in increasingly treatable*

*conditions is something that has enormous potential, and it's why I am pleased to be joining Echo IQ's Scientific Advisory Board."*

## **Michael Mack, MD MACC**

Dr. Mack is a world-renowned surgeon who specialises in heart valve replacements. He was a member of the surgical team that performed the world's first transcatheter aortic valve replacement by the transapical approach (through the tip of the heart). Today he leads the Cardiovascular service line and holds the Chair of the Cardiovascular Governance Council at Baylor Scott and White Health, the leading not-for-profit healthcare system in Texas. He is highly published, with more than 850 peer-reviewed publications and has previously been a member of the American College of Cardiology Board of Trustees, Nominating Committee, and Governance Committee. Today he is an associate editor of the Journal of American College of Cardiology and a Director of the American Board of Thoracic Surgery.

Dr. Mack said: *"Having seen first-hand the power of new treatments to give patients productive and extended lives, I am encouraged by technical innovations that have the potential to identify more patients who would benefit from such therapies. I look forward to working with Echo IQ to support the introduction of their potentially life-enhancing risk-detection solution."*

## **David Ouyang, MD FACC FASE**

Dr. Ouyang is a Los Angeles based cardiologist affiliated with the internationally recognised Cedars-Sinai Medical Center. He obtained his medical degree from the University of California (San Francisco) School of Medicine, residency and fellowship at Stanford University, and is Board Certified in Cardiovascular Disease and Internal Medicine.

Dr. Ouyang was a competition finalist in the American Society of Echocardiography Arthur Weyman Young Investigator's Award Competition and was awarded the 2018 Merck Research Fellowship at the American College of Cardiology Foundation. Expert in the statistical analysis of large datasets within cardiovascular medicine, he has produced a significant number of research publications including in Nature that address deep learning and computer vision of cardiovascular imaging.

Dr. Ouyang said: *"Echo IQ's use of large cardiac datasets to develop solutions that advance risk detection for increasingly treatable conditions is incredibly exciting. I look forward to joining their Scientific Advisory Board in support of this important aim."*

## **Partho P. Sengupta, MD MBBS FACC FASE**

Dr. Partho Sengupta is world-leading cardiologist and the Henry Rutgers Professor and Chief of Division of Cardiology at Rutgers Robert Wood Johnson Medical School & University Hospital. He completed his clinical residency and cardiology fellowship at Mayo Clinic Rochester and Arizona respectively and has over 250 peer-reviewed publications.

He is an Associate Editor for the Journal of American College of Cardiology: Imaging, and has served as a member of the Board of Directors for the American Society of Echocardiography and as the Chair of the ASE Telehealth and New Technology Taskforce. Dr. Sengupta has been a TedMed speaker and has been recognized as a Top 25 professor of ultrasound medicine. Dr. Sengupta is board certified in internal medicine, cardiovascular medicine, and echocardiography.

Dr. Sengupta said: *"The application of new techniques such as machine learning and artificial intelligence to the world of cardiology creates significant opportunity to deliver meaningful improvements in diagnosis and treatment. Echo IQ operates at the nexus of technology and medicine and I am pleased to be joining their scientific advisory board where I can share learnings from my own research and clinical practice."*

### **Jordan B. Strom, MD MSc FACC FASE**

Dr. Jordan Strom is Associate Director of the Echocardiography Laboratory and Director of Echocardiographic Research at Beth Israel Deaconess Medical Center, Section Head of Cardiovascular Imaging Research at the Richard A. and Susan F. Smith Center for Outcomes Research in Cardiology, and Assistant Professor of Medicine at Harvard Medical School. He serves as a guest editor and Editorial Board member for the Journal of the American Society of Echocardiography, current member of the American Society of Echocardiography Board of Directors, and member of the American College of Cardiology Imaging Council Leadership committee.

Dr. Strom said: *"The work being undertaken by Echo IQ utilizes novel approaches to the diagnosis of cardiovascular diseases that could potentially open treatment avenues for those in greatest need. The convergence of artificial intelligence, machine learning and novel techniques in echocardiography is incredibly exciting, and I am pleased to be able to contribute to the ongoing development of Echo IQ and the important work being done."*

### **James Thomas, MD FACC FASE FESC**

Dr. Thomas is a cardiologist at Northwestern Medicine with a clinical focus in valvular heart disease and echocardiography. He has conducted extensive research into applying physical principles and advanced technology in cardiovascular imaging and now serves as Director for the Center for Heart Valve Disease and Academic Affairs in the Bluhm Cardiovascular Institute. He co-directs the Center for Artificial Intelligence in Cardiovascular Disease.

Dr. Thomas attended Harvard College and Harvard Medical School before clinical training at Massachusetts General Hospital and the University of Vermont. Dr. Thomas has over 650 peer reviewed publications and is past-president of the American Society of Echocardiography (ASE). Dr. Thomas currently serves as lead scientist for ultrasound with NASA, focusing on the effects of space on cardiovascular function.

Dr. Thomas said: *"This is an exciting time to be in Cardiology and companies like Echo IQ are helping to bring novel technologies to the world of medicine. Unlocking the power of ultrasound through AI fascinates me and I'm pleased to be joining the Echo IQ Scientific Advisory board as they forge new innovation pathways."*

(Full Biographies follow)

## FULL BIOGRAPHIES OF ECHO IQ SCIENTIFIC ADVISORY BOARD MEMBERS

### **Huon H. Gray, CBE MD FRCP FESC MACC**

Huon Gray was consultant adult and interventional cardiologist at Southampton University Hospital from 1989 to 2020. In 2003 he was appointed President of the British Cardiac Society, receiving its Mackenzie Medal in 2014.

Prof. Gray co-chaired the Dept. of Health's National Infarct Angioplasty Project (2006-8), which led to the subsequent national roll out of primary PCI for ST elevation myocardial infarction in England. He was also clinical adviser and then chair of two NICE guidelines on acute coronary syndromes (2007-13).

He is honorary professor at Queen Mary University, London and has published widely on various aspects of cardiology and health service delivery. He was Deputy and then Interim National Clinical Director for Heart Disease at the United Kingdom's Department of Health (2007-12), co-producing its CVD Outcomes Strategy (2013), and was then National Clinical Director for Heart Disease in NHS England between 2013-19, helping develop the CVD priorities in the NHS Long Term Plan (2019).

He was made Commander of the Excellent Order of the British Empire (CBE) in the Queen's New Year's Honours list 2019. Huon has served in various capacities within the American College of Cardiology (ACC); as chair of its International Council (2008-13), on its Board of Trustees (2012-16), as member of its Governance Committee (2016-19) and then its chair (2019-22). He received the ACC's Presidential Citation in 2013 and designation as Master of the ACC in 2018.

### **Madeline Jankowski, BS ACS RDCS FASE**

Madeline Jankowski is an advanced cardiac sonographer and echocardiography research associate at Northwestern University in Chicago, IL. In clinical practice, she focuses on complex valve disease for research trials, hemodynamic stress echocardiography, and advanced imaging tools such as global longitudinal strain imaging and 3D echocardiography. Her research efforts focus on advanced echocardiography tools and integration of artificial intelligence into echocardiography.

Growing up in the Midwest, Madeline went to ultrasound school in Sioux Falls, SD and clinical internship at Duke University in Durham, NC before beginning her sonographer practice at Cleveland Clinic in Cleveland, OH. She joined Northwestern Medicine in 2014 as a Lead Cardiac Sonographer and has recently moved into a more research-focused role with Northwestern University.

Madeline has been an active lecturer and volunteer for the field of echocardiography - educating, representing and advocating for sonographers since 2014. She has been invited faculty for many conferences including: the American Society of Echocardiography (ASE) Scientific Sessions, ASE's Echo Hawaii, Echo Northwestern, and the American College of Cardiology (ACC) Scientific Sessions. She is currently in the 2nd cohort of the ASE Leadership Academy with expected graduation in June 2022. Madeline also volunteers for American Registry for Diagnostic Medical Sonography (ARDMS) and currently holds the position of Chair for the Adult Echo Boards Exam Committee.

### **Dr. Hashim A. Khan, MD FACC**

Dr. Khan is a practicing interventional cardiologist at the renowned San Diego Cardiac Center in San Diego, California. He obtained a B.Sc. in Cell and Structural Biology from the University of Illinois in Urbana Champaign, and his Medical Doctorate at Northwestern University in Chicago, IL. Dr. Khan then completed his residency in Internal Medicine at Northwestern University after which he pursued fellowship training in cardiovascular diseases at the Scripps Clinic in La Jolla, CA. Dr. Khan culminated his training with an advanced fellowship in interventional and structural cardiology at Northwestern University. During his tenure as a resident and fellow, Dr. Khan was awarded several teaching awards as well as research awards. His research interests were primarily in the field of echocardiography as it applies to the exciting and evolving field of structural interventions in cardiology. Dr. Khan



is board certified in Cardiovascular Diseases, Interventional Cardiology, Echocardiography, Nuclear Cardiology and Internal Medicine.

Dr. Khan is a Clinical Scholar and engages in Cardiovascular research at the Scripps Translational Science Institute. He has a progressive approach to adopting newer, more successful therapies based on clinical research and frequently delivers ground-breaking treatments in advance of other heart clinics. Dr. Khan is actively engaged in clinical medicine and is especially devoted to the echocardiography laboratory and the role it plays in his ability to perform interventions designed to treat valvular heart disease in a minimally invasive manner. Dr. Khan performs TAVR and Mitraclip procedures frequently and is acutely aware of the importance a timely diagnosis makes in improving the prognosis of valvular heart disease for a patient.

Dr. Khan has dedicated his life to treating a range of heart conditions and researching new medical approaches to heart diseases and conditions. He is progressive in adopting newer, more successful therapies based on clinical research and frequently delivers ground-breaking treatments to his patients.

## **Michael J. Mack, MD MACC**

Michael Mack, M.D. has practiced cardiothoracic surgery in Dallas, TX since 1982. He is board certified in Internal Medicine, General Surgery, and Thoracic Surgery and is currently the Director of the Cardiovascular Service Line for Baylor Scott & White Health, Chair of the Baylor Scott & White Cardiovascular Governance Council and Past President of the Baylor Scott & White Research Institute. He has over 850 peer reviewed publications.

Dr. Mack is also the Senior Vice Chair of the Cardiothoracic Surgery Network (CTSN) of the NIH and is an Associate Editor of the Journal of American College of Cardiology. He is also a Director of the American Board of Thoracic Surgery, Co-Chair of the Heart Valve Collaboratory and a member of the ACC Innovations Work Group.

Dr. Mack was President of the Society of Thoracic Surgeons (STS) 2011 and is Past President of the Thoracic Surgery Foundation for Research and Education (TSFRE) 2009-2011, the Southern Thoracic Surgical Association (STSA) 2009 and the International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS) 2000. He is also a past member of the American College of Cardiology Board of Trustees, Nominating Committee, and Governance Committee and is the past Co-Chair of the STS/ACC National Transcatheter Valve Therapy (TVT) Registry Stakeholder Advisory Group.

He is a Master of the ACC and is an honorary member of the German Society for Thoracic and Cardiovascular Surgery and the Indian Association of Cardiovascular and Thoracic Surgery, Mexican Society of Cardiac Surgery and has received the Presidential Citation of the American College of Cardiology and the Transcatheter Cardiovascular Therapeutics (TCT) Lifetime Achievement Award.

## **David Ouyang, MD FACC FASE**

Dr. David Ouyang is a Los Angeles based cardiologist affiliated with the internationally recognised Cedars-Sinai Medical Center. He obtained his medical degree from the University of California (San Francisco) School of Medicine, residency and fellowship in Cardiovascular Medicine at Stanford University, and is Board Certified in Cardiovascular Disease and Internal Medicine. Dr. Ouyang has also completed post-doctoral studies in Computer Science and Biomedical Data Science at Stanford University.

Having majored in Statistics (Rice University), Dr. Ouyang has always been fascinated by how to visualise and interpret data. He believes strongly in the opportunity to apply increases in data being collected to personalise care and improve diagnosis and treatment of cardiovascular disease.

Dr. Ouyang was a competition finalist in the American Society of Echocardiography Arthur Weyman Young Investigator's Award Competition and was awarded the 2018 Merck Research Fellowship at the American College of Cardiology Foundation. He received the Edwin Alderman Award for Excellence in Clinical Research in 2020. Expert in the statistical analysis of large datasets within cardiovascular medicine, he has produced a significant number of research publications that address deep learning and computer vision of cardiovascular imaging.

## **Partho P. Sengupta, MD MBBS FACC FASE**

Dr Partho P. Sengupta is the Henry Rutgers Professor and the Chief of Division of Cardiology at Rutgers Robert Wood Johnson Medical School & University Hospital.

Dr Sengupta completed his clinical residency and cardiology fellowship at Mayo Clinic Rochester and Arizona respectively. He has over 250 peer-reviewed publications.

Prior to joining Rutgers, he served as Abnash C. Jain Chair and Professor of Cardiology and the Chief of Division of Cardiology and Director of Cardiac Imaging at West Virginia University, Morgantown. He is an Associate Editor for the Journal of American College of Cardiology: Imaging and has served as a member of the Board of Directors for the American Society of Echocardiography and as the Chair of the ASE Telehealth and New Technology Taskforce.

He has won several excellence awards including ASE's Young Investigator's Award in 2004, Mayo Clinic Research Award in 2007, Mayo Brothers Distinguished Fellowship Award in 2009, AACIO Young Investigator Award in 2010 and ASE's Rich Popp Award for excellence in Teaching in 2020. He also received ASE's 14th Feigenbaum Lectureship for recognizing his significant contributions to research in the field of echocardiography. He delivered ASE's first-ever presentation using hologram technology at ASE's 24th Annual Scientific Sessions. His futuristic ideas, investigative skills and international work have been widely acclaimed by major media outlets and he was an invited stage speaker for TEDMED 2016. He has been nominated by the American Medical Association for "Inspiration in Medicine" talk for the year 2017.

## **Jordan B. Strom, MD MSc FACC FASE**

Dr. Jordan Strom is Associate Director of the Echocardiography Laboratory and Director of Echocardiographic Research at Beth Israel Deaconess Medical Center Section Head of Cardiovascular Imaging Research at the Richard A. and Susan F. Smith Center for Outcomes Research in Cardiology, and Assistant Professor of Medicine at Harvard Medical School. He received his B.S. in Biology from Yale University and an M.D. from Harvard Medical School, before subsequently training in Internal Medicine at the Massachusetts General Hospital and in Cardiovascular Medicine at Beth Israel Deaconess Medical Center where he was Chief Fellow for the 2017-2018 year. He received additional post-graduate training in Clinical Epidemiology and Biostatistics at the Harvard T.H. Chan School of Public Health, receiving an M.Sc. in Epidemiology in May 2018.

Dr. Strom was the inaugural fellow and is currently a faculty investigator at the Richard A. and Susan F. Smith Center for Outcomes Research in Cardiology. His research involves evaluation of the relationship of cardiac structure and function to health outcomes, particularly for valvular heart disease. Additionally, his research focuses on the optimal use and timing of cardiac imaging in practice. He specializes in the analysis of large administrative, registry, and clinical trial data, in particular imaging registries. He has received grant funding for this work from the American Heart Association and the National Institutes of Health and he has published more than 60 peer-reviewed publications in journals such as *Circulation*, *European Heart Journal*, and the *Annals of Internal Medicine*. He serves as a guest editor and Editorial Board member for the Journal of the American Society of Echocardiography and is a member of the ACC Imaging Council Leadership committee.

Dr. Strom was a member of the inaugural class of the American Society of Echocardiography's Leadership Academy and is the inaugural member elected to the ASE Board of Directors in this capacity. In addition to his role as Co-Chair of the Image Guide Echo Registry committee, he serves as the ACC representative to the board of directors of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS) which oversees training in diagnostic medical sonography in the US, the ACC Commissioner to Commission on Accreditation of Allied Health Education Programs (CAAHEP), the largest programmatic accreditor of the health sciences professions, accrediting over 2,100 education programs in 32 health sciences occupations, and is a member of the Board of Directors of the International Contrast Ultrasound Society (ICUS).

## **James D. Thomas, MD FACC FASE FESC**

James D. Thomas, MD, is a cardiologist at Northwestern Medicine with a clinical focus in valvular heart disease and echocardiography and extensive research into applying physical principles and advanced technology in cardiovascular imaging. He now serves as Director for the Center for Heart Valve Disease and Academic Affairs in the Bluhm Cardiovascular Institute and co-directs the Center for Artificial Intelligence in Cardiovascular Disease while serving as Professor of Medicine at Northwestern University Feinberg School of Medicine.

Born and raised in Oklahoma City, Dr. Thomas attended Harvard College (graduating summa cum laude in Applied Mathematics) and Harvard Medical School before clinical training at Massachusetts General Hospital and the University of Vermont. Dr. Thomas has over 650 peer reviewed publications with an h-index of 149. He is past-president of the American Society of Echocardiography (ASE) and co-chairs a committee to standardize the measurement of myocardial strain by echocardiography. He previously served on the Cardiovascular Board of the American Board of Internal Medicine (ABIM) and as co-chairman for the 2007 American College of Cardiology (ACC) Annual Scientific Sessions.

Dr. Thomas also serves as lead scientist for ultrasound with NASA, focusing on the effects of space on cardiovascular function. Other research interests include cardiac mechanics, application of new echocardiography technology, artificial intelligence and integration of engineering principles into clinical decision-making.

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**Authorised for release by the Board of Directors of Echo IQ Limited.**

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**ABOUT ECHO IQ**

Echo IQ uses AI-driven technology and proprietary software to improve decision making in Cardiology. The company is based in Sydney, Australia.