ANNUAL REPORT 2022

Together we can ensure everyone affected by lung disease will live a longer, healthier, happier life.

institute for
RESPIRATORY HEALTH

WHAT'S INSIDE

WHAT WE DO

The Institute for Respiratory Health is a leading research organisation dedicated to fighting chronic lung conditions such as asthma, bronchiectasis, chronic obstructive pulmonary disease (COPD), cystic fibrosis, idiopathic pulmonary fibrosis, lung cancer and pleural diseases.

Our internationally recognised scientists and clinicians conduct research to better understand and treat lung conditions.

For more than seven million Australians who struggle to take a breath, the Institute for Respiratory Health offers support and hope for a healthier future.

OUR VISION

Everyone affected by lung disease will live a longer, healthier, happier life.

OUR MISSION

We bring together world-class researchers to develop new ideas, treatments and better health outcomes for people living with respiratory disease.

PRIORITIES

Foster excellence in research, innovation and expertise

Raise awareness of respiratory health issues

Ensure the long-term financial viability of the Institute

Enhance governance and operational excellence

CHAIR AND DIRECTOR REPORT

INTRODUCTION

The 2022 Annual Report highlights the significant accomplishments and milestones achieved by the Institute for Respiratory Health during the year. As ever, we remain dedicated to advancing research, promoting lung health, and supporting individuals affected by respiratory diseases. This report showcases the work undertaken by our researchers and their achievements, and the establishment of new partnerships. We also report on our overall financial stability, a result which will see us in good stead for the immediate future.

RESEARCH

The Institute continued to play a vital role in knowledge generation and translation of respiratory health for the betterment of patients and their families. In this regard, our researchers were awarded 12 new grants in 2022, totalling $5.7M. Such grant success is pivotal in ensuring we receive infrastructure funding from both Federal and State sources with which to ensure our scientists can achieve their scientific and clinical goals. This year's result is consistent with an amount that ranks us third of six institute's in the WA Government's Research Institute Support Scheme based on competitive grant funding. During 2022, our researchers published 80 manuscripts up from 70 in 2021, with more than 75% being published in the top quartile of highly prestigious journals in the world, up from 61% in 2021.

A number of new initiatives were implemented in 2022 which have greatly increased our capacity to achieve our mission of helping our researchers help those with respiratory diseases. For example, our family of researchers was greatly enlarged as we formally recognised all those researchers who were either long term collaborators of

the Institute's scientists or were scientists and clinicians who shared our vision. This was achieved through the introduction of our new Honorary Research Fellowship Scheme. In addition, the Institute partnered with The University of Western Australia, University College London and the Geoff Laurent Memorial Fellowship Fund Raising Committee to create two Geoff Laurent Fellowships for Respiratory Health. Both the Senior and Junior Fellowships will help foster international collaboration in respiratory health research and knowledge exchange between UWA and UCL.

In addition to these Fellowships, the Institute joined forces with the Charlies Foundation for Research to support the creation of the Bob Johnson and Jenny Llanos Clinical Research Fellowship. This Fellowship is designed to facilitate clinical research for respiratory diseases by enabling a newly-appointed clinician to establish an independent research program within the Department of Respiratory Medicine at the Sir Charles Gairdner Hospital.

PEER RECOGNITION

A number of our research colleagues received appropriate recognition for their dedication to respiratory health research. For example, Professor Bruce Robinson was awarded the Cancer Council WA Researcher Career Achievement Award, an award that acknowledges his outstanding contributions to the field of mesothelioma research. In addition, Professor Fraser Brims was awarded the Thoracic Society of Australia and New Zealand's Lung Cancer Special Interest Group Award for his work on 'Lung cancer screening in the Western Australian Asbestos Review Program'. This recognition highlights the impact of his research on the early detection and screening methods for lung cancer. Similarly, Professors Bruce Robinson and Anna Nowak both received WA Government Research Excellence Awards which will allow them to further their studies into the causes and treatment of mesothelioma and other lung cancers.

Finally, Professor Gary Lee was a finalist in the WA Premier's Science Awards in recognition of his leadership in pleural medicine, including his establishment of the southern hemisphere's first translational pleural medicine program.

With regard to academic recognition, Professor Yuben Moodley was awarded a Professorship at the University of Western Australia in recognition of his expertise, leadership and contributions to the field of idiopathic pulmonary fibrosis and chronic obstructive pulmonary disease.

CLINICAL TRAILS

The Institute has been recognised for more than twenty years for its capacity to undertake clinical trials of new and emerging drugs for treating respiratory diseases. In anticipation of increasing demands for these services, the Institute's Board of Directors approved the creation of a second site at the ICON Cancer Centre Midland. This expansion will not only enhance the Institute's capacity to conduct cutting-edge clinical trials and improve patient outcomes but will make participation more accessible to patients in Perth's eastern region thus improving equity of access.

FINANCES

The Institute's financial position has continued to enjoy healthy, sustained growth. The surplus for the 2022 year amounted to $294,079. This places the Institute in a stronger financial position, accumulating funds that will enable us to continue our important program of respiratory health research.

COMMUNITY OUTREACH

The Institute's Melbourne Cup fundraising event successfully raised over $45,000 in funding for cystic fibrosis (CF). This is the 19th annual luncheon, and represents an opportunity to highlight the Institute's commitment to supporting the CF community in advancing respiratory health research.

We actively promoted lung health in general through 52 press releases and participated in 32 media interviews, effectively raising awareness about respiratory diseases and the importance of research and prevention.

The LIFE group, Australia's oldest established lung diseases support group, celebrated its 30th anniversary. This milestone underscores their commitment to providing support, resources, and a sense of community to individuals living with respiratory diseases.

OUR APPRECIATION

The renowned respiratory health scientist, Sir Stephen Holgate accepted the role of International Patron for the Institute. His expertise and guidance will contribute to the institute's global impact on respiratory health.

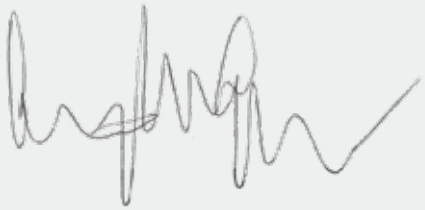
We are grateful to the support of our members, donors, volunteers and collaborators who continued to provide financial support for the Institute. This support is critical to the future of the Institute in ensuring respiratory research continues now and into the future.

Our Board members are valued business and community leaders who provide governance to the Institute. We are grateful for their strategic direction and for taking time away from their other commitments including work and family.

We would like to thank all our research staff and collaborators for continuing to fight the good fight – the Institute wouldn't exist without their passion and dedication.

Finally, the Institute wishes to express its appreciation for your role in making the Institute relevant. We are one of only six medical research institutes in Western Australia and one of only a few in Australia dedicated to studying respiratory diseases. We are forever grateful to wonderful supporters like you, who make our work possible. Your ongoing trust in us in our quest to achieve a healthier world for respiratory health is inspiring and motivates us to do our very best.

Thank you for reading this year's Annual Report, we trust you'll find it informative.



Mr Craig McGown
Chair of the Board

Emeritus Professor Geoff Stewart
Director

2022 SNAPSHOT

82
Staff
inc students & associates

10
Research Groups

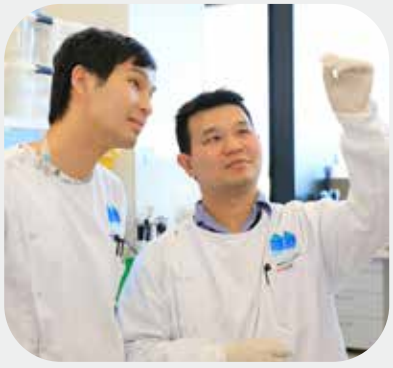
81
Research Papers Published

12
New Grants Awarded

76%
of papers appear in top 25% influential journals worldwide

36
Active Clinical Trials

$1M
New Grants Awarded



$5.7M
In Competitive Grants

$7.6M
In Total Revenue

BOARD OF DIRECTORS

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CHAIR

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DEPUTY CHAIR

MR MICHAELL FAY
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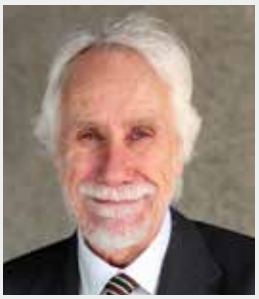

EMERITUS PROFESSOR
GEOFF STEWART
DIRECTOR

Finance Subcommittee
Mr Michael Fay (Chair), Ms Sue Morey, E/Prof Geoff Stewart, Mr Bi Lam, Mrs Sarah Cermak

Scientific Subcommittee
E/Prof Geoff Stewart (Chair), Prof Gary Lee, Prof Grant Waterer, Prof Scott Bell, Prof Stephen Holgate

Ex-officio Members
Mr Bi Lam, Finance Manager, Mrs Sarah Cermak, Business Services Manager

APPOINTMENT OF SUE MOREY, OAM AS NEW PATRON

Nurse Practitioner Sue Morey has been involved with the Institute since its inception, more than 20 years ago, and is an active board director as well as a former chair of the board.

Director of the Institute, Emeritus Professor Geoff Stewart said, “It is with great pleasure that we are able to announce the appointment of Sue to the position of patron. The appointment reflects the dedication and commitment Sue has given to the Institute since 2001.

“Sue’s experience, drawn from more than 40 years as a nurse practitioner and a great advocate for respiratory health, has enabled her to provide valuable advice and guidance to the Institute for more than two decades.

“She is a generous, caring and well-respected figure in the Department of Respiratory Medicine at Sir Charles Gairdner Hospital and was awarded the Order of Australia medal in 2004 for her services to respiratory medicine nursing.

“Sue is the second patron associated with the Institute and follows in the footsteps of our inaugural patron, the Hon Wayne Martin AC QC.

“We thank Sue for taking on the role of patron and we look forward to partnering with her as our scientists and clinician-researchers continue their work to find new treatments and cures for lung disease.”

Sue said she was proud to be appointed Patron of the Institute, “It’s been rewarding to see how the Institute has adapted and progressed to help those who struggle to breathe every day across Western Australia. I look forward to working with them to achieve their ambitious goals for the future.”

Emeritus Professor Geoff Stewart thanked the outgoing patron, the Honourable Wayne Martin, for his service to the Institute.

OUR RESEARCH

The Institute advocates for, and undertakes, research into the broad spectrum of chronic respiratory conditions. We support a number of research leaders who fund their groups, largely by winning peer-reviewed grants but also through donations from a variety of sources.

None of our research leaders and their groups work in isolation, and their successes and productivity is based on establishing viable collaborations with like-minded scientists and clinicians at local, national and international levels. They conduct innovative scientific and clinical research into chronic disease and the pathological mechanisms which play a causal role in disease manifestation.

In 2022-23, our research profile changed as we formally recognised the contributions of our Honorary Fellows and the appointment of new research leaders. This has had a significant impact on the breadth and depth of our research activities within the Institute; made even more significant by the start to formally integrate members of the National Centre for Asbestos Related Diseases into the Institute.

Our research portfolio now includes all areas of respiratory health research. Each of these areas of interest comprise a number of Principal Investigator-led groups which have been productive this year. In this regard, we take the opportunity of highlighting some of the research being undertaken by our research leaders below.

During this period, our researchers have demonstrated their research prowess and relevancy by being awarded numerous grants from a variety of Federal and State sources and the number of publications resulting from their work. In addition, four of our researchers have been individually recognised for their research excellence. These include Professors Anna Nowak, Bruce Robinson, Fraser Brims and Gary Lee.

Professors Nowak and Robinson were each awarded a WA Government Research Excellence Award and Professor Robinson's research was recognised with a Cancer Council WA Researcher Career Achievement Award. Professor Brims was awarded TSANZ Lung Cancer Special Interest Group Award for his lung cancer screening work in the Western Australian Asbestos Review Program.

Finally, Gary Lee was a finalist in the 2022 Premier's Science Awards for his work on pleural diseases. Professor Lee is regarded as a world leader in pleural medicine particularly his research on the build-up of fluid in the chest, which affects more than 90,000 Australians a year most commonly caused by cancer, infection or heart failure. Using high-quality clinical trials, he has transformed pleural care worldwide, saved lives, improved quality of life, cut morbidity and hospitalisations, introduced new therapies and informed many clinical guidelines.

OUR RESEARCH CENTRES

The Institute undertakes research into the broad spectrum of chronic respiratory conditions.

AIRWAY DISEASES

ASBESTOS RELATED DISEASES

CLINICAL TRIALS

CYSTIC FIBROSIS & BRONCHIECTASIS

PLEURAL MEDICINE

THORACIC CANCERS

VACCINES & VIRAL IMMUNITY

ASSOCIATE PROFESSOR STEVE MUTSAERS AND IDIOPATHIC PULMONARY FIBROSIS

A rare disease is a medical condition that affects fewer than 1 in 2,000 people. Associate Professor Steve Mutsaers, a researcher from the Institute for Respiratory Health said, 'There are more than 7,000 rare diseases in the world and many of these relate to lung conditions such as alpha-1 antitrypsin deficiency, cystic fibrosis and idiopathic pulmonary fibrosis (IPF)'.

'My research has been particularly focused on IPF, a disease that causes scarring of the lungs. Every year in Australia it is estimated 1,250 people are diagnosed with this rare disease and patient survival, once diagnosis is made is often around three to five years'.

'Those with the disease have to fight to breathe every single day. Currently, there is no cure but research in this space could change this' said Associate Professor Mutsaers.

'Any research undertaken into rare diseases such as IPF can bring us one step closer to life-changing breakthroughs and better treatments, but more funding is required, particularly for basic or discovery science that aims to unravel the disease processes involved and thus discover new ways to attack the disease.

'From this knowledge, new therapies will be developed that not only improve the quality of life for those with the disease but, in some cases, cure it.

'Many rare diseases resemble common ones and can even involve some of the same disease pathways. Funding research into rare diseases such as IPF greatly increases the chances of gaining insight into the development of more common diseases - a win-win situation.

Associate Professor Mutsaers and colleagues at the Institute for Respiratory health are trying to discover what causes the scarring of the lungs in IPF.

They are particularly interested in understanding the role the immune system plays in IPF as they have generated novel data about the nature of the some of the antibodies produced by patients suggesting a breakdown in the body's normal control mechanisms that protect the body attacking itself.

Identifying how this happens may lead to new treatments being developed that will enable doctors to better predict which patients are likely to respond better to current treatments.

'Research gives hope to those with rare diseases like IPF. It helps us look into the causes, treatments and potentially a cure for IPF and other rare diseases.' said Associate Professor Mutsaers.

PROFESSOR FRASER BRIMS AND LUNG CANCER

Lung cancer is Australia's biggest cancer killer, killing more Australians than breast and bowel cancers combined, and has the lowest survival rate. Modelling shows that up to 170,000 Australians will be diagnosed with the disease over the next decade and it will remain the leading cause of all cancer deaths for the next two decades.

Marked variations in the provision and quality of lung cancer care in Australia have been repeatedly described, which may adversely influence outcomes for patients with this condition. Professor Fraser Brims of the Institute has been a strong advocate for the creation of the Lung Cancer Clinical Quality Data Platform (LUCAP) to ensure that lung cancer patients Australia wide will be optimally treated.

For this to be achieved, clinical data such as how quickly people get lung cancer tests, what sorts of tests are performed, how quickly people get treated after diagnosis, and which treatments ensure the best outcomes will be essential. LUCAP will enable data to be collected and analysed such that a clearer picture of lung cancer-care across Australia will emerge and inform best practice.

The establishment of LUCAP has been made possible from funds provided by Cancer Australia and the Lung Foundation Australia to Professor Brims, the lead investigator for the project. During 2022, the LUCAP group have been piloting the program to establish the appropriate protocols for linking clinical data across institutions and defining the necessary infrastructure requirements. Eventually, LUCAP will be able collect data over a patient's journey, from the initial diagnosis through the disease progression in diverse institutions across Australia.

The data collected will then help optimise the quality of patient care and health outcomes Australia-wide. The group have recently received extra funding to expand LUCAP data collection, nationally, to include institutions in New South Wales and Queensland and, through funding from the Lung Ambition Alliance to support the expansion of LUCAP within Western Australia.

Professor Brims said 'It is fantastic to be able to expand LUCAP nationally and further within WA. We now have strong support from all States and Territories and major stakeholders involved in lung cancer care in Australia.'

'We can now look to meaningfully impact changes on Australia's leading cause of cancer-related death.'

Professor Brims indicated that LUCAP is the first of its kind in Australia and engages with leading respiratory experts and pharmaceutical companies across the country, and uses world-leading technologies.

"Just like the National Lung Cancer Audit in the United Kingdom, we hope to drive improvements in lung cancer care and outcomes by bringing the standard of lung cancer care up to that of the best in the world," Professor Brims said.

PROFESSOR BRUCE ROBINSON AND THE EDICT PROGRAM

The Early Digital Intervention for Covid-19 Therapy (EDICT) program, established by Professor Robinson together with a number of his colleagues, notably Dr Doug Forrester, is an ongoing, innovative, study using digital monitoring technologies to engage with those who have chronic lung conditions. Starting with Covid-19, it is now developing into a multi-disease platform to include illnesses such as cystic fibrosis and bronchiectasis. At its core, it is a platform designed to enable clinicians to capture health data from their patients remotely so that they can be treated in the comfort of their own homes.

Their work is timely given the new developments in the area of wearable technologies such as smart watches and fitness trackers. Such devices have the capacity to provide clinicians with a range of important personal data to help patients, provide them with a better experience and facilitate more expedient outcomes for patients with chronic lung disease.

Digital remote-monitoring is now a suitable option for patients with a variety of chronic lung diseases. This is particularly so, given that every time a patient visits their doctor or a hospital clinic they run the risk of being exposed to microorganisms that could be detrimental to their health. Such monitoring will not only protect such patients but also give them greater control over their condition as well as reducing the number of necessary hospital visits. This, of course, will result in better health outcomes as well as reduce health care costs. Dr Forrester's leadership in this program has accelerated the work towards making this project successful.

To ensure the success of this program, Professor Robinson and Dr Forrester have created a diverse collaborative network of WA leaders across the health, industry and laboratory sectors as well as community consumer groups comprising specific ethnic communities and aged care facilities.

Professor Robinson said that 'The ultimate goal of the Program is, of course, not just to help COVID patients but to be able to monitor any patient with a range of chronic lung condition whilst at home and allow health professionals to monitor them in real-time, that is, whilst they are perhaps too ill to attend hospital or even a GP's surgery'.

He also said that 'the advantage of being able to provide personalised and quick feedback to the patient is that it will greatly enhance a clinician's ability to treat a patient quickly and appropriately, address their clinical concerns in a timely fashion and thus reduce the psychological stresses associated with being ill'.

CENTRE FOR CLINICAL TRIALS

Before any drug is made available to the public, manufacturers are required to ensure that it is safe to do so by undertaking clinical trials.

The Centre for Clinical Trials with the Institute is one of the largest of its kind in Australia. It is highly regarded, nationally and internationally, for its work in helping pharmaceutical companies test the safety and efficacy of drugs used to treat chronic lung disease.

Trials are sponsored by a range of Australian and international pharmaceutical and biotech companies as well as some grant funding.

The Centre comprises of consultants, doctors, registered nurses and health science professionals. Patients are closely monitored, with regular health checks in the clinic.

The Unit has a collaborative relationship with both our research leaders and respiratory consultants in the tertiary hospital sector.

Due to the increased demands for these services, the Institute's Board of Directors approved the creation of a second site at the ICON Cancer Centre Midland. This expansion will not only enhance the Institute's capacity to conduct cutting-edge clinical trials and improve patient outcomes but will make participation more accessible to patients in Perth's eastern region thus improving equity of access.

In 2022, the Centre conducted 36 studies on a variety of chronic lung diseases including:

- Asthma
- Alpha 1-antitrypsin deficiency
- Bronchiectasis
- Chronic obstructive pulmonary disease
- Cystic fibrosis
- Idiopathic pulmonary fibrosis
- Vaccines

OUR COMMUNITY

LIFE CELEBRATE 30 YEARS

This year marks a significant milestone for the first respiratory support group in Australia, as we celebrate 30 years of LIFE (Lung Information and Friendship for Everyone).

In 1992, Edna Brown, newly diagnosed with idiopathic pulmonary fibrosis (IPF), sought solace and support from others who shared her condition. Pulmonary fibrosis was a foreign concept to her, and she recognized the need for a community. Alongside a group of IPF patients, Edna founded the Lung Impaired Support Association (LISA).

Edna was the heart and soul of LISA. She ran the meetings, provided lunch, organized speakers and excursions, liaised with hospital doctors, conducted media interviews, and produced newsletters. Her dedication made her the go-to person for those living with lung disease. LISA and Edna frequently featured on radio and in the West Australian newspaper, extending their reach across the country. People from all over Australia sought her advice on establishing similar support groups.

In 2009, LISA evolved into LIFE, the community support arm of the Institute, reflecting its expanded mission of providing lung information and friendship for everyone.

In 2012, as Edna's health declined, she passed the leadership to Jenni Ibrahim, an integral part of the group since its inception. Edna sadly passed away in 2014.

Jenni Ibrahim led the LIFE group with unwavering dedication for seven years, supporting individuals living with chronic lung conditions. In 2020 Jenni was awarded the Medal of the Order of Australia for her advocacy in respiratory health. Her passing in 2021 was a significant loss to the community.

Today, Sal Hyder and Gaye Cruickshank continue to run the LIFE group, welcoming new members and providing support to those newly diagnosed with chronic lung conditions. Monthly meetings and social gatherings remain a cornerstone of the group's activities, fostering community and camaraderie.

As we celebrate 30 years of LIFE, we extend our deepest gratitude to Sal and Gaye for their dedication and support. Their efforts ensure that the legacy of Edna Brown and Jenni Ibrahim lives on, offering hope and friendship to those navigating life with chronic lung diseases.

STEWART'S STORY

I was diagnosed with cystic fibrosis at the age of four with a three-month stint in hospital. Ever since, I've taken between 20-40 tablets a day and have had to do physiotherapy two to three times a day just to try and live a normal life.

Dad got me into soccer when I was eight as the doctors advised being active could be beneficial with the disease. I then started playing cricket and football as a teenager. The disease started to significantly affect my life as I got older and it began to impact my work life and ability to continue playing sports.

From 2012, things got pretty ugly for me. Most of the day I would be coughing and would constantly feel exhausted. I started to lose weight and was in and out of hospital with pneumonia.

I had to give up my love of sport and was trying to hang on to my job but was constantly in physiotherapy and the rest of the time I would have to go to bed due to constant fatigue.

But Trikafta has been a game-changer. I was just existing as opposed to living. Now I'm living.

None of this would have happened without medical research. It's been my mini-miracle – my second chance.

As part of the clinical trial, I started taking two small orange pills twice a day and one at night for twelve weeks. When you do a trial, you don't know if you're on the actual drug or a placebo. But within a week I could feel a difference.

I noticed an improvement in my breathing and appetite. I stopped coughing almost straight away and I didn't feel like I was drowning in my own mucus.

My energy levels were up and the fatigue was gone. My fitness improved, I started to gain weight and I could play cricket again.

I also got to continue working and keep my independence and ability to look after myself.

What's even more miraculous is that I've been able to fulfil a dream and explore the world, something that I could never have imagined before Trikafta. I've travelled to New Zealand and Tasmania – my whole world has expanded.

TARYN & CONNOR'S STORY

Taryn Barrett's son Connor has faced many challenges since he was diagnosed with cystic fibrosis (CF) at three weeks of age but she is hopeful he has a brighter future ahead.

She has been working with other families across Western Australia to raise funds for life-saving research and lobby for modulator medicines to be added to the PBS since Connor was born seven years ago.

Taryn said Connor was diagnosed through the Guthrie heel prick test and immediately began his regime of twice-daily chest physiotherapy and consumption of more than 175 doses of medicine weekly.

"Connor is one of 3,500 precious Australians fighting against this devastating disease and time isn't on their side," she said.

"The CF researchers, like those at the Institute for Respiratory Health, hold my little boy's life in their hands and they need our support.

"Parents of children with CF celebrate their child's birthdays and milestones happily but they simultaneously frighten us because we know that every day, month and year matters.

"While we welcome the research breakthroughs that we've been granted in recent years, the tragic reality is that only half of adults with CF are making it to their 30s.

"I want Connor to expect that he will grow old alongside his brothers and I am forever grateful for the researchers at the Institute for Respiratory Health who work tirelessly to make this a possibility."

The Bunbury mother of three shared her family's story at the Glenn Brown Memorial Fund Melbourne Cup fundraiser as one of the keynote speakers.

CF is a rare recessive genetic disease for which there is currently no cure.

Taryn & Connor pictured right.

FUNDRAISING FOR CYSTIC FIBROSIS RESEARCH

More than $45,000 was raised at this year's Melbourne Cup Luncheon in support of CF research through its Glenn Brown Memorial Grant support program. We are grateful to guests, sponsors, donors and volunteers for making the day a success.

Taryn Barrett was one of the keynote speakers at this year's event. Her son, Connor has faced many challenges since he was diagnosed with CF at three weeks of age but she is hopeful that he has a brighter future ahead thanks to research.

Taryn had the room in tears with her moving speech, "I'm honoured to be invited to speak at this event and to share our story so far and our greatest hopes for the future.

"I love that this fundraising event honours the memory of such a beautiful boy while giving hope to those with CF, who have come after him, like our Connor.

"Glenn Brown was worried that he'd be forgotten but he continues to inspire through this event. This is thanks to two inspiring mums Janeine Thomas and Alison Guest who wanted to make sure that the 15-year-old fun loving boy's memory would live on."

Researcher Maggie Harrigan who received funding from the Glenn Brown Memorial Fund shared some of the outcomes into her research on how adults affected by CF view and value themselves as a person, to help improve their overall wellbeing.

THANK YOU TO OUR SUPPORTERS

We are thankful to our donors, sponsors, members and volunteers who supported our fundraising efforts, donation appeals and activities during 2022.

Every single contribution is enormously appreciated, all of which is used solely to support our research activities.

Major Donors

Cargill R

Cole M

McGown C

Singh C

Donors

Abdu B

Agnew M

Anderson M

Ashby T

Austin F

Austin R

Bannister A

Barrett E

Bates K

Batt A

Bickerton R

Bird S

Bishop C

Blair-Rae H

Bott T

Bovell G

Bowyer M

Brennan R

Bueno A

Bultynck L

Butorac H

Calder E

Campbell J

Cermak S

Chatfield G

Cheney K

Chinnery R

Choo C

Clarke M

Clifton B

Cockerill S

Cockram J

Costabile E

Cowaramup Lions Club

Cruickshank G

Cummins J

Czirr I

Dickinson J

Dockery R

Dorks G

Durbin J

Edsall J

Emmanuel D

Fitzgerald R

Fleet N

Foster J

Frank F

Fuller B

Good N

Goodes G

Gordon E

Graham R

Green C

Greig B

Hall S

Hills F

Hodge P

Humble J

Jones A

Keane J

Kennedy L

Kitt V

Lam S

Leif S

Linders A

Liw R

Lloyd G

Luscombe A

Lyons H

Manning P

Martin K

Martin P

Martinick G

McGillivray F

McGuinness E

McNally E

Meagher C

Morey S

Morgan A

Murnane T

Murray I

Murray P

Nakala K

Neil K

Odorisio R

Pamment E

Pannett J

Papanastasiou C

Paust G

Payne D

Potter G

Raynor L

Reddy P

Reid B

Rickerby T

Robinson R

Sarigny L

Saunders I

Searle E

Sebbes M

Seragusana J

Sherwood A

Shing Y

Singh C

Sinnott J

Spargo J

Stacey J

Stacey R & J

Stewart G

Stone C

Strahan R & E

Swager C

Thomas R

Thomson P

Tomasi F

Trenos H

Turnball M

Turner P

Van C

Vawser K

Viney M

Watkins P

Weatherald M

West E

Westernex Perth

Whitmore M

Wilkinson A

Williams J

Willum J

Wyld S & E

Wyrwich M

Yeldon B

Members

Andrew J

Armstrong H

Bassett G

Bassett J

Bastian D

Bousfield L

Bovell G

Bradshaw J

Campbell J

Cheney K

Cherry R

Clinton J

Cruickshank G

Cummins J

Dickinson J

D'Silva C

Durbin J

Eddy R

Fitzgerald R

Forsyth M

Frank F

Fraser H

Fuller C

Good N

Greig B

Hills F

Hyder S

Judd N

Keane J

Kennedy L

Knapp S

Lam B

Langford R

Leif Akslen S

Lenghaus A

Luyer J

Lyons H

MacDonagh R

Maiorana J

Maiorana J

Mansell J

McGillivray F

McGuinness E

Meaney D

Mitchell I

Morgan A

Murnane T

Papanastasiou C

Parker S

Paust G

Payne D

Payne R

Pirie A

Price J

Reay J

Redmond B

Reeves I

Riddings P

Russell L

Saunders I

Shields V

Stevens M

Swager C

Tawhai S

Tennant B

Tozer M

Turner P

Tye B

Wells E

White J

Willis T

Volunteers

Chittleborough D

Taylor R

Robins V

McGregor K

Gan S

Pratt A

Milne N

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Neilson S

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Osborne S

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Roberts W

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Rodd G

Burgess A

Carr S

Campaign Partners

Calder Designs

Cape Mentelle

Famous Sharron

Ferngrove Wines

Heroes and Villains

Kailis

Lace and Roses

Mal's Strawberries

Mirror Moments

Mortgage Choice Kingsley

Nerellie Richards

Redhead Digital Marketing

Vasse Felix

Finance report

Your Board members submit their report together with the financial report of Institute for Respiratory Health (Inc) (the "Institute") for the financial year ended 31 December 2022 and auditors report thereon.

Board members

The names of board members throughout the year and at the date of this report are:

Tracy Armson (resigned 10 May 2022)	Craig McGown
Michael Fay (appointed 10 May 2022)	Melita Markey (appointed 10 May 2022)
Anthony Fortina	Sue Morey
Johnson Kitto	Geoff Stewart
Gary Lee	Shona Tchilingirian

The Board members have been in office since the start of the year to the date of this report unless otherwise stated.

Principal activities

The principal activities of the Institute during the financial year were to conduct research and conduct clinical trials in the area of respiratory health.

Significant changes in the state of affairs

No significant change in the nature of these activities occurred during the year.

Operating result

The surplus for the year amounted to $294,079 (2021 $885,798).

After balance date events

No matters or circumstances have arisen since the end of the financial year which significantly affected or may significantly affect the operations of the Institute, the results of those operations, or the state of affairs of the Institute in future financial years.

Environmental regulation

The Institute's operations are not regulated by any significant environmental regulation under a law of the Commonwealth or of a State or Territory.

Proceedings on behalf of the Institute

No person has applied for leave of Court to bring proceedings on behalf of the Institute or intervene in any proceedings to which the Institute is a party for the purpose of taking responsibility on behalf of the Institute for all or any part of those proceedings.

Indemnification of officers

No indemnities have been given or insurance premiums paid, during or since the end of the year, for any person who is or has been an officer of the Institute.

Indemnification of auditors

No indemnities have been given or insurance premiums paid, during or since the end of the year, for any person who is or has been an auditor of the Institute.

Signed in accordance with a resolution of the members of the Board.

Board member: Craig McGown

Board member: Michael Fay

Dated this 26 day of April 2023

AUDITOR'S DECLARATION

HTG Partners
Growth Strategy Solutions
Accounting | Tax | Audit | Advisory

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Victoria Park
Western Australia 6979

AUDITOR'S INDEPENDENCE DECLARATION UNDER AUSTRALIAN CHARITIES AND NOT-FOR-PROFITS COMMISSION ACT SECTION 60-40 TOTHE BOARD OF INSTITUTE OF RESPIRATORY HEALTH (INC)

In accordance with Subdivision 60-C of the *Australian Charities and Not-for-Profits Commission Act 2012*, I provide the following declaration of independence to the Board of Institute of Respiratory Health (Inc). As the lead audit partner for the audit of the financial report of Institute of Respiratory Health (Inc) for the year ended 31 December 2022, I declare that, to the best of my knowledge and belief, during the year ended 31 December 2022 there have been no contraventions of:

1. The auditor independence requirements as set out in the *Australian Charities and Not-for-Profits Commission Act 2012* in relation to the audit; and

ii. Any applicable code of professional conduct in relation to the audit.

HTG PARTNERS

TIMOTHY TURNER
PARTNER

Dated this 27th day of April 2023

PARTNERS

Timothy Turner
BBus (Acc), FCPA, CTA
Registered Company Auditor

Vick Gelevitis
BBus (Acc), FCPA, CTA

Darryl Rodrigues
BSc, BBus (Acc), CPA

For a comprehensive review of our financial position, please email admin@resphealth.uwa.edu.au.

INCOME STATEMENT

FOR THE YEAR ENDED 31 DECEMBER 2022

	2022 $	2021 $
Revenue		
International research grant	1,511,045	1,235,178
Australian research grants	2,309,198	1,727,569
Research support	174,950	183,549
Clinical trials	1,107,874	797,426
Respirology	280,213	287,757
Infrastructure funding	1,736,621	2,551,236
Fundraising income and donations	139,976	206,570
Corporate grants	-	85,147
Membership income	1,123	1,000
Interest income	71,103	9,533
Job Keeper and cash flow boost grants	-	270,200
Other income	335,795	714,828
Total revenue	**7,667,898**	**8,069,993**
Expenses		
Employee benefits expense	(5,349,556)	(5,076,513)
Training and development	(90,059)	(43,733)
Events and functions	(9,956)	(14,451)
Office management and general expenses	(290,496)	(419,012)
Research and clinical expenses	(987,493)	(1,025,684)
Equipment	(124,466)	(115,991)
Professional and finance fees	(92,880)	(45,958)
Audiovisual and publications	(40,487)	(31,783)
Communications and fundraising	(97,075)	(77,820)
Technology and supports	(42,998)	(30,344)
Finance costs	(725)	(539)
Awards and scholarships	(247,628)	(302,367)
Total expenses	**(7,373,819)**	**(7,184,195)**
Surplus before and after tax	**294,079**	**885,798**
Other comprehensive income	-	-
Total comprehensive income attributable to members of the Institute	**294,079**	**885,798**
Surplus allocated to		
Restricted funds	(7,118)	(269,541)
Designated funds	(393,172)	275,848
Unrestricted funds	694,369	879,491
	294,079	**885,798**

BALANCE SHEET

FOR THE YEAR ENDED 31 DECEMBER 2022

	2022 $	2021 $
CURRENT ASSETS		
Cash and cash equivalents	7,637,257	6,146,350
Trade and other receivables	3,328,639	3,560,277
Prepaid expenses	31,103	-
TOTAL CURRENT ASSETS	10,996,999	9,706,627
TOTAL ASSETS	10,996,999	9,706,627
CURRENT LIABILITIES		
Trade and other payables	489,925	340,332
Contract liabilities	1,763,883	1,068,861
Employee provisions	625,586	524,295
TOTAL CURRENT LIABILITIES	2,879,394	1,933,488
NON-CURRENT LIABILITIES		
Employee provisions	163,015	112,628
TOTAL NON-CURRENT LIABILITIES	163,015	112,628
TOTAL LIABILITIES	3,042,409	2,046,116
NET ASSETS	**7,954,590**	**7,660,511**
MEMBERS' FUNDS		
ACCUMULATED FUNDS		
Restricted	391,662	398,780
Designated	3,741,923	4,135,095
Unrestricted	3,821,005	3,126,636
TOTAL MEMBERS' FUNDS	**7,954,590**	**7,660,511**

PUBLICATIONS

JOURNAL ARTICLES

1. Armato SG, Nowak AK, Francis RJ, Katz SI, Kholmatov M, Blyth KG, Gudmundsson E, Kidd AC, Gill RR. Imaging in pleural mesothelioma: A review of the 15th International Conference of the International Mesothelioma Interest Group. Lung Cancer, 2022;164:76-83. DOI: 10.1016/j.lungcan.2021.12.008. Q1

2. Baber J, Arya M, Moodley YP, Jaques A, Jiang Q, Swanson KA, Cooper D, Maddur MS, Loschko J, Gurtman A, Jansen KU, Gruber WC, Dormitzer PR, Schmoele-Thoma B. A Phase 1/2 Study of a Respiratory Syncytial Virus Prefusion F Vaccine with and Without Adjuvant in Healthy Older Adults. J Infect Dis, 2022;226:2054-2063. DOI: 10.1093/infdis/jiac189. Q1

3. Breen LJ, Huseini T, Same A, Peddle-McIntyre CJ, Lee YCG. Living with mesothelioma: A systematic review of patient and caregiver psychosocial support needs. Patient Educ Couns, 2022;105:1904-1916. DOI: 10.1016/j.pec.2022.02.017. Q2

4. Brims F, Harris EJ, Kumarasamy C, Ringuet A, Adler B, Franklin P, de Klerk N, Musk B, Murray C. Correlation of lung function with ultra-low-dose CT-detected lung parenchymal abnormalities: a cohort study of 1344 asbestos exposed individuals. BMJ Open Respir Res, 2022;9. DOI: 10.1136/bmjresp-2022-001366. Q1

5. Brims FJ, McWilliams A, Harden SV, O'Byrne K. Lung cancer: progress with prognosis and the changing state of play. Med J Aust, 2022;216:334-336. DOI: 10.5694/mja2.51474. Q1

6. Brims FJH, Kumarasamy C, Nash J, Leong TL, Stone E, Marshall HM. Hospital-based multidisciplinary lung cancer care in Australia: A survey of the landscape in 2021. BMJ Open Respir Res, 2022;9. DOI: 10.1136/bmjresp-2021-001157. Q1

7. Canonica GW, Spanevello A, de Llano LP, Domingo Ribas C, Blakey JD, Garcia G, Inoue H, Dalcolmo M, Yang D, Mokashi S, Kurne A, Butta AK. Is asthma control more than just an absence of symptoms? An expert consensus statement. Respir Med, 2022;202:106942. DOI: 10.1016/j.rmed.2022.106942. Q1

8. Carbone M, Pass HI, Ak G, Alexander HR, Baas P, Baumann F, Blakely AM, Bueno R, Bzura A, Cardillo G, Churpek JE, Dianzani I, De Rienzo A, Emi M, Emri S, Felley-Bosco E, Fennell DA, Flores RM, Grosso F, Hayward NK, Hesdorffer M, Hoang CD, Johansson PA, Kindler HL, Kittaneh M, Krausz T, Mansfield A, Metintas M, Minaai M, Mutti L, Nielsen M, O'Byrne K, Opitz I, Pastorino S, Pentimalli F, de Perrot M, Pritchard A, Ripley RT, Robinson BW, Rusch V, Taioli E, Takinishi Y, Tanji M, Tsao AS, Tuncer AM, Walpole S, Wolf A, Yang H, Yoshikawa Y, Zolondick A, Schrump DS, Hassan R. Medical and Surgical Care of Patients With Mesothelioma and Their Relatives Carrying Germline BAP1 Mutations. J Thorac Oncol, 2022;17:873-889. DOI: 10.1016/j.jtho.2022.03.014. Q1

9. Chang F, Keam S, Hoang TS, Creaney J, Gill S, Nowak AK, Ebert M, Cook AM. Immune marker expression of irradiated mesothelioma cell lines. Front Oncol, 2022;12. DOI: 10.3389/fonc.2022.1020493. Q2

10. Chimed-Ochir O, Rath EM, Kubo T, Yumiya Y, Lin RT, Furuya S, Brislane K,

Klebe S, Nowak AK, Kang SK, Takahashi K. Must countries shoulder the burden of mesothelioma to ban asbestos? A global assessment. BMJ Glob Health, 2022;7. DOI: 10.1136/bmjgh-2022-010553. Q1

11. Clynick B, Corte TJ, Jo HE, Stewart I, Glaspole IN, Grainge C, Maher TM, Navaratnam V, Hubbard R, Hopkins PMA, Reynolds PN, Chapman S, Zappala C, Keir GJ, Cooper WA, Mahar AM, Ellis S, Goh NS, De Jong E, Cha L, Tan DBA, Leigh L, Oldmeadow C, Walters EH, Jenkins RG, Moodley YP. Biomarker signatures for progressive idiopathic pulmonary fibrosis. Eur Respir J, 2022;59. DOI: 10.1183/13993003.01181-2021. Q1

12. Cox IA, Campbell J, de Graaff B, Otahal P, Corte TJ, Moodley YP, Hopkins P, Macansh S, Walters EH, Palmer AJ. Assessment of health-related quality of life in Australian patients with idiopathic pulmonary fibrosis: a comparison of the EQ-5D-5L and the AQoL-8D. Qual Life Res, 2022. DOI: 10.1007/s11136-022-03205-z. Q1

13. Cox IA, de Graaff B, Ahmed H, Campbell J, Otahal P, Corte TJ, Moodley YP, Goh N, Hopkins P, Macansh S, Walters EH, Palmer AJ. The economic burden of idiopathic pulmonary fibrosis in Australia: a cost of illness study. Eur J Health Econ, 2022. DOI: 10.1007/s10198-022-01538-7. Q1

14. Cox IA, Otahal P, de Graaff B, Corte TJ, Moodley YP, Zappala C, Glaspole I, Hopkins P, Macansh S, Walters EH, Palmer AJ. Incidence, prevalence and mortality of idiopathic pulmonary fibrosis in Australia. Respirology, 2022;27:209-216. DOI: 10.1111/resp.14194. Q1

15. Crawford AL, Blakey JD, Baumwol K. Paroxysmal dyspnoea in asthma: Wheeze, ILO or dysfunctional breathing? Front Allergy, 2022;3:1054791. DOI: 10.3389/falgy.2022.1054791.

16. Creaney J, Patch AM, Addala V, Sneddon SA, Nones K, Dick IM, Lee YCG, Newell F, Rouse EJ, Naeini MM, Kondrashova O, Lakis V, Nakas A, Waller D, Sharkey A, Mukhopadhyay P, Kazakoff SH, Koufariotis LT, Davidson AL, Ramarao-Milne P, Holmes O, Xu Q, Leonard C, Wood S, Grimmond SM, Bueno R, Fennell DA, Pearson JV, Robinson BW, Waddell N. Comprehensive genomic and tumour immune profiling reveals potential therapeutic targets in malignant pleural mesothelioma. Genome Med, 2022;14. DOI: 10.1186/s13073-022-01060-8. Q1

17. Dick IM, Lee YCG, Cheah HM, Miranda A, Robinson BWS, Creaney J. Profile of soluble factors in pleural effusions predict prognosis in mesothelioma. Cancer Biomark, 2022;33:159-169. DOI: 10.3233/cbm-210280. Q3

18. Fitzgerald DB, Blakey JD, Joshi P, Kuok YJ, Lee YCG, Thomas R. Ultrasound Clues in Lobar Pneumonia. Chest, 2022;161:e59-e62. DOI: 10.1016/j.chest.2021.04.077. Q1

19. Fitzgerald DB, Muruganandan S, Peddle-McIntyre CJ, Lee YCG, Singh B. Ipsilateral and contralateral hemidiaphragm dynamics in symptomatic pleural effusion: The 2nd PLeural Effusion And Symptom Evaluation (PLEASE-2) Study. Respirology, 2022;27:882-889. DOI: 10.1111/resp.14307. Q1

20. Fitzgerald DB, Sidhu C, Budgeon C, Tan AL, Read CA, Kwan BCH, Smith NA, Fysh ET, Muruganandan S, Saghaie T, Shrestha R, Badiei A, Nguyen P, Burke A, Goddard J, Windsor M, McDonald J, Wright G, Czarnecka K, Sivakumar P, Yasufuku K, Feller-Kopman DJ, Maskell NA, Murray K, Lee YCG. Australasian Malignant PLeural Effusion (AMPLE)-3 trial: study protocol for a multi-centre randomised study comparing indwelling pleural catheter (±talc pleurodesis) versus video-assisted thoracoscopic surgery for management of malignant pleural effusion. Trials, 2022;23. DOI: 10.1186/s13063-022-06405-7. Q1

21. Fitzgerald DB, Waterer GW, Budgeon C, Shrestha R, Fysh ET, Muruganandan S, Stanley C, Saghaie T, Badiei A, Sidhu C, Harryanto H, Duong V, Azzopardi

M, Manners D, Lan NSH, Popowicz ND, Peddle-McIntyre CJ, Rahman NM, Read CA, Tan AL, Gan SK, Murray K, Lee YCG. Steroid Therapy and Outcome of Parapneumonic Pleural Effusions (STOPPE) A Pilot Randomized Clinical Trial. Am J Respir Crit Care Med, 2022;205:1093-1101. DOI: 10.1164/rccm.202107-1600OC. Q1

22. Forde P, Kindler H, Zauderer M, Sun Z, Ramalingam S, Anagnostou V, Brahmer JR, Nowak AK, Kok PS, Brown C, Yip S, Cook AM, Lesterhuis WJ, Hughes BGM, Pavlakis N, Stockler MR, O'Byrne KJ. DREAM3R: DuRvalumab With chEmotherapy as First Line treAtment in Advanced Pleural Mesothelioma: A Phase 3 Randomised Trial. Int. J. Radiat. Oncol. Biol. Phys, 2022;112:e9-e10. DOI: 10.1016/j.ijrobp.2021.10.177. Q1

23. Ge T, Phung AL, Jhala G, Trivedi P, Principe N, De George DJ, Pappas EG, Litwak S, Sanz-Villanueva L, Catterall T, Fynch S, Boon L, Kay TW, Chee J, Krishnamurthy B, Thomas HE. Diabetes induced by checkpoint inhibition in nonobese diabetic mice can be prevented or reversed by a JAK1/JAK2 inhibitor. Clinical and Translational Immunology, 2022;11. DOI: 10.1002/cti2.1425.Q1

24. Gill S, Nowak AK, Bowyer S, Endersby R, Ebert MA, Cook AM. Clinical evidence for synergy between immunotherapy and radiotherapy (SITAR). J Med Imaging Radiat Oncol, 2022;66:881-895. DOI: 10.1111/1754-9485.13441. Q3

25. Graham PT, Nowak AK, Cornwall SMJ, Larma I, Nelson DJ. The STING agonist, DMXAA, reduces tumor vessels and enhances mesothelioma tumor antigen presentation yet blunts cytotoxic T cell function in a murine model. Front Immunol, 2022;13:969678. DOI: 10.3389/fimmu.2022.969678. Q1

26. Haines RR, Putsathit P, Hammer KA, Tai AS. Activity of newest generation β-lactam/β-lactamase inhibitor combination therapies against multidrug resistant Pseudomonas aeruginosa. Sci Rep, 2022;12. DOI: 10.1038/s41598-022-21101-x. Q1

27. Haines RR, Putsathit P, Tai AS, Hammer KA. Antimicrobial effects of Melaleuca alternifolia (tea tree) essential oil against biofilm-forming multidrug-resistant cystic fibrosis-associated Pseudomonas aeruginosa as a single agent and in combination with commonly nebulized antibiotics. Lett Appl Microbiol, 2022;75:578-587. DOI: 10.1111/lam.13589. Q2

28. Hancock KL, Bosnic-Anticevich S, Blakey JD, Hew M, Chung LP, Cvetkovski B, Claxton S, Del Fante P, Denton E, Doan J, Ranasinghe K, Morgan L, Sharma A, Smith PK, Stewart D, Thompson PJ, Wiseman R, Upham JW, Yan KY, Carter V, Dhillon K, Heraud F, Le T, Vella R, Price D. Characterisation of the Australian Adult Population Living with Asthma: Severe - Exacerbation Frequency, Long-Term OCS Use and Adverse Effects. Pragmat Obs Res, 2022;13:43-58. DOI: 10.2147/POR.S360044.

29. Harrigan M, Bennett K, Mulrennan S, Jessup M. Living with cystic fibrosis during the COVID-19 pandemic: a social connectedness perspective. Int J Qual Stud Health Well-being, 2022;17. DOI: 10.1080/17482631.2022.2062820. Q1

30. Hoy RF, Brims FJ. The National Occupational Respiratory Disease Registry (NORDR): it is time to learn from failure. Med J Aust, 2022;216:328-330. DOI: 10.5694/mja2.51465. Q1

31. Humphries SM, Mackintosh JA, Jo HE, Walsh SLF, Silva M, Calandriello L, Chapman S, Ellis S, Glaspole I, Goh N, Grainge C, Hopkins PMA, Keir GJ, Moodley YP, Reynolds PN, Walters EH, Baraghoshi D, Wells AU, Lynch DA, Corte TJ. Quantitative computed tomography predicts outcomes in idiopathic pulmonary fibrosis. Respirology, 2022;27:1045-1053. DOI: 10.1111/resp.14333. Q1

32. Jayawardena T, Vekaria S, Krivinskas S, Sidhu C, Chakera A, Lee YCG. Antibiotic

administration via indwelling peritoneal catheter to treat infected malignant ascites. Respirol Case Rep, 2022;10. DOI: 10.1002/rcr2.1055. Q3

33. Jeffery E, Lee YCG, Newton RU, Lyons-Wall P, McVeigh J, Fitzgerald DB, Straker L, Peddle-McIntyre CJ. Changes in body composition in patients with malignant pleural mesothelioma and the relationship with activity levels and dietary intake. Eur J Clin Nutr, 2022;76:979-986. DOI: 10.1038/s41430-021-01062-6. Q1

34. Jhala G, Krishnamurthy B, Brodnicki TC, Ge T, Akazawa S, Selck C, Trivedi PM, Pappas EG, Mackin L, Principe N, Brémaud E, De George DJ, Boon L, Smyth I, Chee J, Kay TWH, Thomas HE. Interferons limit autoantigen-specific CD8+ T-cell expansion in the non-obese diabetic mouse. Cell Rep, 2022;39. DOI: 10.1016/j.celrep.2022.110747. Q1

35. Keam S, MacKinnon KM, D'Alonzo RA, Gill S, Ebert MA, Nowak AK, Cook AMM. Effects of Photon Radiation on DNA Damage, Cell Proliferation, Cell Survival, and Apoptosis of Murine and Human Mesothelioma Cell Lines. Adv Radiat Oncol, 2022;7:101013. DOI: 10.1016/j.adro.2022.101013. Q2

36. Kindler HL, Novello S, Bearz A, Ceresoli GL, Aerts J, Spicer J, Taylor P, Nackaerts K, Greystoke A, Jennens R, Calabrò L, Burgers JA, Santoro A, Cedrés S, Serwatowski P, Ponce S, Van Meerbeeck JP, Nowak AK, Blumenschein G, Jr., Siegel JM, Kasten L, Köchert K, Walter AO, Childs BH, Elbi C, Hassan R, Fennell DA. Anetumab ravtansine versus vinorelbine in patients with relapsed, mesothelin-positive malignant pleural mesothelioma (ARCS-M): a randomised, open-label phase 2 trial. Lancet Oncol, 2022;23:540-552. DOI: 10.1016/S1470-2045(22)00061-4. Q1

37. Kok PS, Forde PM, Hughes B, Sun Z, Brown C, Ramalingam S, Cook AM, Lesterhuis WJ, Yip S, O'Byrne K, Pavlakis N, Brahmer J, Anagnostou V, Ford K, Fitzpatrick K, Bricker A, Cummins MM, Stockler M, Nowak AK. Protocol of DREAM3R: DuRvalumab with chEmotherapy as first-line treAtment in advanced pleural Mesothelioma-a phase 3 randomised trial. BMJ Open, 2022;12:e057663. DOI: 10.1136/bmjopen-2021-057663. Q1

38. Lam SK, Mutsaers SE. Editorial: Novel agents and combinations for treatment of malignant pleural mesothelioma in pre-clinical models. Front Pharmacol, 2022;13. DOI: 10.3389/fphar.2022.1015959. Q1

39. Lau EPM, Eshraghi M, Dootson K, Yeoh C, Phu WY, Lee YCG, Popowicz ND. An international survey on the use of intrapleural tissue plasminogen activator/DNase therapy for pleural infection. ERJ Open Res, 2022;8. DOI: 10.1183/23120541.00590-2021. Q2

40. Lau EPM, Sidhu C, Popowicz ND, Lee YCG. Pharmacokinetics of antibiotics for pleural infection. Expert Rev Respir Med, 2022;16:1057-1066. DOI: 10.1080/17476348.2022.2147508. Q2

41. Lee YCG. Bedside ultrasonography to determine pleurodesis success: SIMPLE but how sound? Lancet Respir Med, 2022;10:122-123. DOI: 10.1016/s2213-2600(21)00441-0. Q1

42. Lee YCG, Singh B. Pneumothorax: Clearing the Air on the Pressure-Dependent Airleak Hypothesis. Am J Respir Crit Care Med, 2022;206:143-144. DOI: 10.1164/rccm.202202-0271ED. Q1

43. Louw A, Lee YCG, Acott N, Creaney J, van Vliet C, Chai SM. Diagnostic utility of BAP1 for malignant pleural mesothelioma in pleural fluid specimens with atypical morphology. Cytopath, 2022;33:84-92. DOI: 10.1111/cyt.13015. Q3

44. Louw A, Panou V, Szejniuk WM, Meristoudis C, Chai SM, van Vliet C, Lee YCG, Dick IM, Firth T, Lynggaard LA, Asghari AB, Vyberg M, Hansen J, Creaney J, Røe OD. BAP1 Loss by Immunohistochemistry Predicts Improved Survival to First-Line Platinum and Pemetrexed Chemotherapy

for Patients With Pleural Mesothelioma: A Validation Study. J Thorac Oncol, 2022;17:921-930. DOI: 10.1016/j.jtho.2022.04.008. Q1

45. Louw A, van Vliet C, Peverall J, Colkers S, Acott N, Creaney J, Lee YCG, Chai SM. Analysis of early pleural fluid samples in patients with mesothelioma: A case series exploration of morphology, BAP1, and CDKN2A status with implications for the concept of mesothelioma in situ in cytology. Cancer Cytopathol, 2022;130:352-362. DOI: 10.1002/cncy.22548. Q2

46. Lui MMS, Yeung YC, Ngai JCL, Sin KM, Lo YT, Cheung APS, Chiang KY, Chan YH, Chan KKP, Lam CHK, Law WL, Fung SL, Lam WK, Lam DCL, Shek LH, Wong IWY, Yau APY, Lee YCG, Chan JWM. Implementation of evidence on management of pleural diseases: insights from a territory-wide survey of clinicians in Hong Kong. BMC Pulmonary Medicine, 2022;22. DOI: 10.1186/s12890-022-02196-4. Q2

47. Martens M, Kreidl F, Ehrhart F, Jean D, Mei M, Mortensen HM, Nash A, Nymark P, Evelo CT, Cerciello F. A Community-Driven, Openly Accessible Molecular Pathway Integrating Knowledge on Malignant Pleural Mesothelioma. Front Oncol, 2022;12:849640. DOI: 10.3389/fonc.2022.849640. Q2

48. McLeod C, Wood J, Mulrennan S, Morey S, Schultz A, Messer M, Spaapen K, Wu Y, Mascaro S, Smyth AR, Blyth CC, Webb S, Snelling TL, Norman R. Preferred health outcome states following treatment for pulmonary exacerbations of cystic fibrosis. J Cyst Fibros, 2022;21:581-587. DOI: 10.1016/j.jcf.2021.11.010. Q1

49. Montgomery BD, Blakey JD. Respiratory inhalers and the environment. Aust J Gen Pract, 2022;51:929-934. DOI: 10.31128/AJGP-08-22-6536. Q3

50. Moodley YP. Rheumatoid factor and anti-citrullinated antibodies in non-connective tissue interstitial lung disease: The chicken or the egg? Respirology, 2022;27:801-803. DOI: 10.1111/resp.14343. Q1

51. Moodley YPP. Circulating cell-free double-stranded DNA and metabolic derangements in idiopathic pulmonary fibrosis: a new association. Thorax, 2022;77:114. DOI: 10.1136/thoraxjnl-2021-218192. Q1

52. Mulrennan S, Sapru K, Tewkesbury D, Jones AM. Beyond the Lungs-Emerging Challenges in Adult Cystic Fibrosis Care. Semin Respir Crit Care Med, 2022. DOI: 10.1055/s-0042-1758734. Q2

53. Nowak AK, Jackson A, Sidhu C. Management of Advanced Pleural Mesothelioma-At the Crossroads. JCO Oncol Pract, 2022;18:116-124. DOI: 10.1200/OP.21.00426. Q1

54. Orozco Morales ML, Rinaldi CA, de Jong E, Lansley SM, Gummer JPA, Olasz B, Nambiar S, Hope DE, Casey TH, Lee YCG, Leslie C, Nealon G, Shackleford DM, Powell AK, Grimaldi M, Balaguer P, Zemek RM, Bosco A, Piggott MJ, Vrielink A, Lake RA, Lesterhuis WJ. PPARα and PPARγ activation is associated with pleural mesothelioma invasion but therapeutic inhibition is ineffective. iScience, 2022;25. DOI: 10.1016/j.isci.2021.103571. Q1

55. Peters S, Scherpereel A, Cornelissen R, Oulkhouir Y, Greillier L, Kaplan MA, Talbot T, Monnet I, Hiret S, Baas P, Nowak AK, Fujimoto N, Tsao AS, Mansfield AS, Popat S, Zhang X, Hu N, Balli D, Spires T, Zalcman G. First-line nivolumab plus ipilimumab versus chemotherapy in patients with unresectable malignant pleural mesothelioma: 3-year outcomes from CheckMate 743. Ann Oncol, 2022;33:488-499. DOI: 10.1016/j.annonc.2022.01.074. Q1

56. Popat S, Baas P, Faivre-Finn C, Girard N, Nicholson AG, Nowak AK, Opitz I, Scherpereel A, Reck M. Malignant pleural mesothelioma: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up(□). Ann Oncol, 2022;33:129-142.

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BOOK CHAPTERS

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