THE DEPARTMENT OF PAEDIATRICS

The Department of Paediatrics, within the School of Clinical Sciences at Monash Health, is based at Monash Medical Centre in Clayton – the largest hospital in the Monash Health network and the principal teaching hospital of Monash University.

Located in the new Monash Children’s Hospital (a dedicated 230-bed state-of-the-art facility) and within the Monash Health Translation Precinct (MHTP), the Department plays a very important role in the research translation of the School and University.

This co-location provides our students and clinician-scientists with unparalleled access to patients, research facilities and collaborative opportunities throughout our local and international partner network, including The Ritchie Centre—the largest perinatal research centre in Australia.
Clinical research into the diseases affecting newborns, children and adolescents is conducted at the Monash Children’s Hospital, Monash Health and the Department of Paediatrics, with basic research at The Ritchie Centre, in partnership with the Hudson Institute of Medical Research.

The Ritchie Centre is the largest perinatal research centre in Australia and functions as a major research arm for the Department of Paediatrics. The Ritchie Centre has an annual research budget of about $10 million. Academically, The Ritchie Centre enjoys an especially close relationship with Monash Newborn. A key part of our strategy is ensuring cutting edge laboratory research is tested and translated into patient care.

Key areas of translational research include neuroprotective strategies and the prevention of lung disease through optimising non-invasive respiratory support, the timing of cord clamping, functional cardiac echocardiography and the management of pulmonary hypertension, and the immunology of neonatal and childhood lung disease. Animal and clinical studies in the use of melatonin to prevent brain damage from birth asphyxia are funded by the Gates Foundation. Vaccine safety research in pregnancy and childhood is funded by the World Health Organisation, US National vaccine Program Office, and Monash Health Foundation.

Our research focuses on:
- neonatology
- immunology
- cancer
- infectious diseases
- vaccine safety
- sleep disorders
- cystic fibrosis
- inflammatory bowel disease
- diabetes
- the integration of databases in primary, secondary and tertiary care

Clinical trials are conducted by Monash Kids Research in:
- infectious diseases
- immunisation
- endocrinology
- urology
- neurology

Clinical research into diseases of childhood are funded by the NHMRC, philanthropic foundations, and industry grants.
We actively support students and practitioners/clinicians wanting to undertake research in paediatrics. We encourage applications for Honours (Bachelor of Medical Science, Bachelor of Science, Bachelor of Biomedical Science) and PhD research projects, and have fantastic opportunities for early career academic paediatricians and scientists who have recently completed a higher degree and are transitioning to independent research funding.

As a teaching hospital, Monash Children’s Hospital trains the next generation of doctors and paediatric specialists. Monash Newborn is part of the Melbourne Neonatal Fellowship Program, a rigorous academic program for neonatal registrars and paediatricians. The hospital also provides active nurse education in the special area of newborn care.

Monash Children’s provides all paediatric and neonatal services for Monash Health across three campuses: Monash Children’s Hospital in Clayton, Dandenong and Casey Hospitals. It is one of Australia’s largest children’s hospitals and is Victoria’s largest provider of neonatal services. Last year Monash Children’s treated 39,000 children in its paediatric and neonatal wards and 66,000 children attended its emergency departments.

Monash Children’s Hospital is already operating close to the scale and capacity of Melbourne’s Royal Children’s Hospital, serving one of Australia’s fastest-growing population centres.
Monash Newborn

An experienced team of eleven neonatologists (neonatal paediatricians) and neonatal nursing staff deliver 24 hour specialist care to ensure the best possible outcomes for the 1,500 babies admitted every year.

Monash Newborn provides 64 fully staffed cots – 32 each in our Neonatal Intensive Care Unit (NICU) and our Special Care Nursery (SCN). In our NICU there are mostly two cots per room and in our SCN, mostly three cots per room. To provide exceptional care for such large numbers of sick and premature babies the nursery has been divided into two teams.

Monash Newborn has been designed to deliver family-centred health care based on a partnership between parents, staff and the extended family. The new rooms have much greater space, more privacy and enable families to actively participate in the care of their baby. There are also designated family areas and facilities including ‘rooming in’ rooms where the family can stay overnight or longer before taking their baby home.

The babies in Monash Newborn may have been born at Monash Medical Centre, Clayton but some come from other hospitals, regional areas and occasionally other states. Many arrive via the Paediatric Infant Perinatal Emergency Retrieval (PIPER) service which transfers very sick newborns and infants between hospitals in Victoria.

In some cases, babies have had medical conditions identified prior to birth by the renowned Fetal Diagnostic Unit and require medical or surgical intervention before and after birth.

Following birth and admission to Monash Newborn, parents receive a discharge or transfer plan for their baby and may also be referred to other specialist services. After discharge, selected groups of babies are followed-up at our special Growth and Development Clinic, which focuses on the first two years of life.

Monash Newborn at Monash Children’s Hospital provides exceptional care and treatment for sick and premature babies.

Monash Medical Centre, Clayton is the only Victorian hospital where both newborn baby and mother can both be treated on the same site if they both require intensive care.

Monash Newborn is the largest of the four Neonatal Intensive Care Units (NICU) in Victoria.
Professor Nick Freezer
Professor Nick Freezer is the Head of the Monash University Department of Paediatrics, Medical Director of the Women’s and Children’s Program for Monash Health and Medical Director of Monash Children’s Hospital. As a practising respiratory physician, he continues to research the dangers of corticosteroid use in children, especially children aged under six. Professor Freezer was among the first group of researchers to alert the world to the dangers of over treating asthmatic children with inhaled corticosteroids.

Professor Marcel Nold
Professor Marcel Nold is the newly appointed Professor Paediatric Immunology at Monash. As neonatologist and a clinician-scientist, paediatrician, his work, carried out in Germany, the USA and Australia, is focussed on interventional immunology and has attracted the interest of opinion-leading journals and pharmaceutical companies. His work is currently being commercialised for translation to clinical trials in two companies. Professor Nold is passionate about his research, making a meaningful difference to his baby patients and their families. Aiming to lay the foundations for much-needed new therapies, he employs bedside-to-bench-and-back approaches to explore the molecular mechanisms underpinning severe diseases of premature infants, such as bronchopulmonary dysplasia, pulmonary hypertension and necrotising enterocolitis.

Professor Rosemary Horne
Professor Rosemary Horne is a Senior Principal Research Fellow and heads the Infant and Child Health research group within the Ritchie Centre, Hudson Institute of Medical Research and Department of Paediatrics, Monash University. Her research interests focus on numerous aspects of sleep in infants and children. Rosemary has published more than 170 scientific research and review articles. She is Chair of the Physiology working group of the International Society for the Study and Prevention of Infant Deaths and the Red Nose (formerly SIDS and Kids Australia) National Scientific Advisory Group, a Director of the International Paediatric Sleep Association, and is on the editorial boards of the Journal of Sleep Research, Sleep and Sleep Medicine.
Professor Arvind Sehgal

Professor Arvind Sehgal is a Consultant Neonatologist at Monash Newborn and Professor in the Department of Paediatrics, Monash University. He completed a Fellowship in Neonatal Cardiology at University College Hospital, London, UK and The Integrated Neonatal Perinatal Fellowship at The Hospital for Sick Children and University of Toronto, Canada. Professor Sehgal joined Monash as a neonatologist in 2007 and has functional echocardiography in critical care as his clinical and research interest. He organises the biennial Monash Cardiovascular Symposium and has led ‘Topic Symposia’ and Echocardiography workshops at international conferences. He has more than 80 publications in international peer-reviewed journals and recently completed his PhD under the Department of Paediatrics, Monash University.

Professor Graham Jenkin

Professor Graham Jenkin leads the Ritchie Centre Stem Cells and Regenerative Medicine Group. His research focuses on fetal and neonatal wellbeing, in particular at-risk pregnancies, including Fetal Growth Restriction (FGR), infection in pregnancy, fetal and perinatal hypoxia, and premature birth. Professor Jenkin’s research has generated a new approach to the clinical monitoring of fetal health during late gestation and treatment in compromised pregnancies. Application of his research to development of therapies for management of chronic adult and neonate lung disease and neuroregeneration continues to inform clinical treatment of the respiratory and neurological consequences of birth asphyxia and premature birth leading to cerebral palsy. Professor Jenkin works closely with regenerative medicine-based companies including Cell Care Australia, on cord blood and pregnancy tissue storage for cell based therapy, and with Cytomatrix developing novel stem cell expansion technologies through an Advanced Manufacturing Commercial Research Consortium (with Cytomatrix) and an ARC Linkage grant (With Cell Care). In 2009, he was honoured by Monash University for his work on orthopaedic applications of mesenchymal stem cells with Mesoblast Ltd, as recipient of the Vice Chancellor’s Award for Excellence in Innovation and Collaboration in Research with Industry. More recently, Professor Jenkin led the development of a public sector Victorian Consortium for Cell-based Therapies, consisting of Healthcare, Research Institutions, and Commercial Organisations to facilitate research and translation of rapidly evolving cell therapies through clinical trials to the clinic. Resulting in significant Federal Government Super Science Scheme seed funding, this has enabled the establishment of a Cell Therapy Translational Platform in the new Translational Research Facility of the Monash Health Translation Precinct. Professor Jenkin’s publications include a total of over 130 papers, 20 invited book chapters/journal review articles, and editing of four Journal Symposia publications.
Professor David Burgner

Professor David Burgner is a paediatric infectious diseases clinician and researcher. His research is on the differential susceptibility to early life infection and inflammation and how this impacts on the development of cardiovascular and metabolic risk: the interface between communicable and non-communicable diseases. Professor Burgner also has a clinical and research interest in Kawasaki disease I and in susceptibility and pathogenesis of perinatal inflammation and neonatal infections. His group uses a variety of approaches, including population data linkage, population cohorts and disease specific cohorts. Professor Burgner collaborates widely, both nationally and internationally.

Professor Jim Buttery

Professor Jim Buttery is a paediatric infectious diseases physician. He is Head of Infection and Immunity, and Director of Research at Monash Children’s Hospital and Head of Monash Immunisation, Monash Health. He is Professor of Paediatric Epidemiology at Monash University. Professor Buttery heads Epidemiology and Signal Investigation for SAEFVIC, the Victorian immunisation safety service. He is the current president of the World Society of Pediatric Infectious Diseases, and serves as a member of the Strategic Priority Group of the WHO Global vaccine Safety Initiative, the Australian Medical Services Advisory Committee, and the Advisory Committee on Vaccines for the Therapeutic Goods Administration. Professor Buttery is particularly interested in the use of real time datasets to better detect vaccine safety signals and infectious disease outbreaks as early as possible. He conducts clinical and epidemiological research in vaccine safety, vaccinology and infectious diseases. Professor Buttery collaborates nationally and internationally in developed and developing settings.
Associate Professor Flora Wong

Associate Professor Flora Wong is a Senior Consultant Neonatologist at Monash Newborn, an Associate Professor in the Department of Paediatrics, Monash University and Head of the Neonatal Brain Protection Laboratory at The Ritchie Centre, The Hudson Institute of Medical Research. Dr Wong was awarded the NHMRC Career Development Fellowship (2015-2018) to continue her research in newborn cerebral pathophysiology, cerebral blood flow and oxygenation in relation to brain injury in newborn infants undergoing intensive care. Her projects investigate mechanisms of newborn brain injury, development of cot-side monitoring and neuroprotective strategies. Dr Wong is an expert in using near-infrared spectroscopy to examine the cerebral haemodynamics and has pioneered the research utilising Spatially Resolved Spectroscopy in Australia. Her publications demonstrate a strategic set of studies that work towards the identification of circulatory factors which contribute to neonatal brain injury and testing new clinical interventions. As lead research neonatologist, she led an international multi-disciplinary team of scientists and clinicians to perform the world’s first transhepatic fetal pulmonary valvuloplasty and atrial septal stenting in the fetal lamb as a potential treatment for hypoplastic right and left heart disease.

Associate Professor Claudia Nold

Dr Claudia Nold is a pharmacist by training with broad expertise in cytokine biology, inflammation and immunology. After her graduation from pharmacy school in 2000, she was awarded a competitive three-year PhD Fellowship by the Deutsche Forschungsgemeinschaft (the German NHMRC equivalent) and started her PhD at the Pharmazentrum Frankfurt, Germany. This fellowship entailed a 6-month tenure at the Institute of Asthma and Allergy at the Karolinska Institute, Stockholm, Sweden. From 2006 until 2009 she held a post-doctoral position in Denver, Colorado, USA in the laboratory of Professor Charles A. Dinarello, who first described the function of Interleukin 1.

Some of her achievements of this productive time included the description of anti-viral, endothelial and angiogenic properties of interleukin (IL-)32, and the important paper on the functional differences between monocytes and macrophages (200+ citations). In 2009, Dr Nold was recruited to The Ritchie Centre at Hudson Institute of Medical Research, and continued to publish at a very high level, revealing the powerful anti-inflammatory properties of IL-37. In 2011 she was awarded the Christina Fleischmann Award of the International Society of Interferon and Cytokine Research. This award recognizes young female investigators for notable contributions to basic or clinical research. The second achievement exemplifies the translational trajectory that is paramount to her laboratory: her team has almost completed the bedside-to-bench-and-back circuit with their work on interleukin 1 receptor antagonist (IL-1Ra) in bronchopulmonary dysplasia (BPD). There is an urgent medical need to find the first safe and effective treatment for BPD in the neonatal intensive care unit, and the Nold laboratory showed in a mouse model that IL-1Ra prevents the disease. The team is now planning a clinical trial to prove the concept in babies. As a result of these innovative programs, the Nold team has been awarded substantial grant funding and an international patent, and are collaborating with partners in the pharmaceutical industry.
Associate Professor Charles Barfield

Having started at Monash Medical Centre in 1990, Associate Professor Charles Barfield is Director, Monash Newborn. Along with Professor Victor Yu, Dr Andrew Ramsden and Dr Elizabeth Carse he was involved in the introduction of surfactant therapy, high frequency ventilation and nitric oxide therapy to babies in Monash Newborn. In the Ritchie Centre for Baby Health Research, as part of Professor Adrian Walker’s team, he used near infrared spectroscopy to study brain blood flow in the laboratory and then later in preterm babies in the NICU.

Associate Professor Michael Fahey

Head of Paediatric Neurology at Monash Medical Centre. The paediatric neurology unit and Monash Children’s Hospital is focused on developing treatments for neurological conditions. These are facilitated through collaborations with the Hudson Institute of Medical Research. The objective is to develop a pipeline of neuroprotective agents from basic science in animal models through to the bedside. Key agents include stem cells, antiepileptic therapies (ganaxolone) and anti-inflammatories (melatonin). We are fortunate to work with some of Australia’s leading neuroscientists and imaging experts. We have collaborations across Victoria, interstate and internationally. In addition, we have a number of industry partnerships which allow us to be lead sites for sponsored clinical trials, particularly for neurogenetic conditions.

Associate Professor Gillian Nixon

Associate Professor Gillian Nixon, a paediatric respiratory and sleep physician, is the head of Paediatric Sleep Research, Melbourne Children’s Sleep Centre. Her clinical practice at Monash Children’s Hospital is centred on the management of children with respiratory and sleep disorders, placing her in an ideal situation to raise clinical questions for research as well as to translate research into practice. With an academic appointment in the Department of Paediatrics, Associate Professor Nixon’s research is focussed on improvements in the diagnostic and treatment pathway for snoring and obstructive sleep apnoea in children, including developing simplified diagnostic tools and driving improvements in evidence-based treatment pathways. She has built cross-disciplinary collaborations and works with the state government on related quality improvement projects regarding the management of the large number of children with snoring and obstructive sleep apnoea, a condition with significant negative effects on learning and development.
Associate Professor Graeme Polglase

As an internationally recognised physiologist, Associate Professor Graeme Polglase is a leading authority on the role of pulmonary, cardiovascular, and cerebral circulation in organ inflammation and injury in preterm and compromised infants. A Monash University graduate completing his PhD in 2005, he was recruited to join the Department of Women’s and Infants’ Health, the University of Western Australia, Perth, WA, which was running the largest perinatal ovine research program in the world. Following his promotion to manager in 2008, Associate Professor Polglase took over primary responsibility for running all animal studies. In 2010, he joined The Ritchie Centre where he established the Perinatal Transition Research Group in 2011 to influence clinical practice in the management of preterm and compromised infant care. Translation of his findings continues to improve treatment outcomes as evidenced by his publications cited in Australian, European, and International resuscitation guidelines, and multiple invitations to speak at national and international clinical meetings. Recognised by the NHMRC with Early Career and Career Development Fellowships, Dr Polglase was also the inaugural recipient of the Rebecca L. Cooper Medical Research Fellowship, and received significant funding from the NIH. He has also received funding from the National Heart Foundation of Australia, Cerebral Palsy Alliance, and Financial Markets for Children. Premature birth is the single greatest cause of neonatal morbidity and mortality. Dr Polglase is working to improve the respiratory, cardiovascular, and neurological outcomes of infants born preterm. His findings continue to expand the understanding of how key events during fetal development, birth, and post-delivery influence the pulmonary, cardiovascular and cerebral systems of preterm babies. He hopes this work will reduce the incidence of organ inflammation and injury, in order to improve outcomes for some of our tiniest patients.
Associate Professor Suzie Miller

Associate Professor Suzie Miller is an ARC Future Fellow (2014-2017) and a member of The Ritchie Centre’s Fetal and Neonatal Research Theme. She is a fetal physiologist, who leads the Neurodevelopment and Neuroprotection Research Group. Associate Professor Miller undertook postdoctoral training in developmental neuroscience at University College London (UCL) with the Centre for Perinatal Brain Protection and Repair. She returned to Monash University in 2001, and in 2010 was recruited as a senior scientist and group leader to The Ritchie Centre. Associate Professor Miller has developed a comprehensive program of perinatal brain research, with established models of the principal causes of newborn brain injury – fetal growth restriction, intrauterine inflammation, preterm birth and birth asphyxia. Her group combines interrogation of the basic cellular pathways activated within the immature brain in response to common, but often devastating pregnancy or birth complications, and clinical application of therapies to prevent or repair newborn brain injury. This approach has led to the recent commencement of a world first human clinical trial at Monash Medical Centre to examine melatonin therapy to protect the developing brain in pregnancies compromised by fetal growth restriction and a trial to examine markers and protective strategies to address high rates of birth asphyxia in a low-resource (rural India) birth setting. Associate Professor Miller has been successful in securing over $5 million in NHMRC grants and philanthropic or other foundation grants. The latter includes grants from the Cerebral Palsy Alliance and a highly competitive start-up grant from the Bill and Melinda Gates Foundation Grand Challenges that is funding work in India. In November 2013, Associate Professor Miller was awarded an Australian Research Council Future Fellowship, the only successful Future Fellowship in the field of Paediatrics and Reproductive Medicine. She has also recently been awarded a prestigious Career Development Grant from the Cerebral Palsy Alliance of Australia.

Associate Professor Tim Moss

Associate Professor Tim Moss is a developmental physiologist and an expert in perinatology. He received his PhD from Monash University in 1999, before establishing the Women and Infants Research Foundation Perinatal Research Laboratories at the University of Western Australia as a leading international centre for perinatal research. Associate Professor Moss returned to Monash in 2007 and joined The Ritchie Centre at the Hudson Institute of Medical Research in 2010. His research is focussed on understanding how exposure to infection or inflammation in utero alters development of the fetus to affect health after birth. His group is also investigating ways to treat or prevent inflammation and its effects on newborns. Associate Professor Moss is a leader in perinatology. He is a Board Member of the International Fetal and Neonatal Physiological Society and occupies senior positions in the Perinatal Society of Australia and New Zealand. An accomplished scientific communicator, Associate Professor Moss has written for crikey.com, been interviewed on Melbourne’s 3RRR FM and provided expert opinion for New Scientist. He trained in science communication at The Alan Alda Centre for Communicating Science at Stony Brooke University (USA). He co-convenes BME3082 ‘Fetal and Neonatal Development’, which is consistently ranked by Monash University students in the top 7 per cent of all units taught at Monash University.
Associate Professor Philip Berger

Associate Professor Philip Berger’s work is directed at the respiratory system with a particular focus on control of breathing. The intention of all his research is to develop a rigorous mathematical understanding of how the system operates, and to use this knowledge to create new therapies and devices that effectively treat the respiratory disorders that bedevil humans right across the age spectrum, from the preterm newborn with recurrent apnea and profound arterial oxygen desaturation, to the adult with heart failure and repetitive central sleep apneas lasting half a minute or more.

Mr Ram Nataraja

Mr Ram Nataraja is a general paediatric surgeon, director of simulation at Monash Children’s Hospital, senior lecturer at Monash University and a clinical researcher. He has an interest in the minimally invasive techniques for both paediatric and neonatal surgery, including surgical robotics, and also in education and surgical training. Mr Nataraja co-ordinates two research streams in the department with a colleague; clinical paediatric surgical research and also simulation-based medical education (SBME) research. This research involves prospective Randomised Controlled Trials (RCTs) for common paediatric conditions, systematic reviews and also retrospective trials, many of which have been Monash University medical student led. There are currently four RCTs recruiting in the department.

He developed one of the first validated paediatric surgical laparoscopic bench trainers at Great Ormond Street Hospital in London over 15 years ago and continues to be at the forefront of innovation in surgical simulation-based learning. This includes novel techniques such as additive manufacturing.

The Paediatric Surgical Simulation Centre in the new Monash Children’s Hospital is the largest paediatric centre of its kind in Australasia and will also have a significant role in the international development and integration of simulation into surgical training. This includes work in SBME in both Australia, and also in a global health setting. Mr Nataraja is the country project lead for Myanmar with Monash Children’s Hospital International (MCHI) and has led multiple successful simulation-based education strips into the country over the last few years. He is also acting as a temporary adviser to the W.H.O. on SBME in transition economic countries.

As part of his academic appointment he co-ordinates all undergraduate and postgraduate paediatric surgery educational programmes at Monash Children’s Hospital, as well as being the co-chair of the MCH Simulation Service which he established in 2017.
Dr Alice Stewart

Dr Alice Stewart is a Consultant Neonatologist at Monash Newborn. Her interests are in interprofessional collaboration, health professional education and mentoring, and simulation-based training in human factors and teamwork. She jointly coordinates the Monash Newborn academic and simulation programs, and the Melbourne Neonatal Fellows Program. Dr Stewart is heavily involved in the activities of the Royal Australasian College of Physicians and is a member of the Basic Training Curricula Review and Research Projects Resource Development working groups.

Dr Peter Downie

Dr Peter Downie is Head of Unit, Paediatric Haematology-Oncology and Director of the Children's Cancer Centre at Monash Children’s Hospital. He is also a Senior Lecturer, Department of Paediatrics, Monash University. Dr Downie is a member of the leadership group for the Hudson Institute Paediatric Cancer Precision Medicine Program. This research is developing tumour tissue organoids that can be interrogated at a molecular and epigenetic level, with the aim of identifying and developing new targeted therapies for children with cancer. The primary focus of the research is on brain cancers, bone cancers, and other solid tumours of childhood.

Dr Downie’s early research focused on the effects of chemotherapy on fertility in pre-pubertal boys. After training in general paediatrics at the Royal Children’s Hospital (RCH), he was appointed Chief Resident and then Clinical Research Fellow in the Department of Haematology-Oncology. He was Consultant Paediatrician and Consultant Paediatric Haematologist-Oncologist at Queen’s Medical Centre, Nottingham before taking the position of Research Fellow, Pediatric Oncology, University of Chicago (Wyler Children’s Hospital), where he spent two years studying the biology and molecular signaling pathways involved in childhood leukaemias. On returning to Melbourne in 1994, he was appointed as a staff consultant in the Paediatric Oncology Unit of the Royal Children’s Hospital and took the position as Director of Clinical Oncology at RCH from 2007 until 2011. Dr Downie has previously held the positions of Chair of the Australian and New Zealand Children’s Oncology Group (ANZCHOG), and the Medical Director of the Victorian Paediatric Integrated Cancer Service (PICS). He is a member of the Australian Children's Cancer Trials executive, and a member of the Scientific Council for Cancer Council Victoria. Peter Downie is currently Medical Director of the PICS State-wide Long Term Follow-up Program, for survivorship, following childhood cancer.
Dr Kenneth Tan

Dr Kenneth Tan is a Consultant Neonatologist in Monash Newborn, Senior Lecturer with the Department of Paediatrics, Monash University and honorary staff member of the Hudson Institute of Medical Research. He trained in Melbourne before pursuing specialist training in the United Kingdom. As paediatrics lecturer at the University of Leeds, he undertook research on fuzzy logic control in the NICU for which he was awarded a PhD. Dr Tan’s research interest in engineering applications in the NICU began with collaboration with biomedical engineers at McMaster University in Canada and continues within the Monash Institute of Medical Engineering. Dr Tan is an active member of the Australian and New Zealand Neonatal Network and sits on the practise improvement committee which fits with his other interests of data analytics and statistical modelling for quality improvement in the NICU. He is a collaborator on NHMRC-funded multi-centre randomised controlled trials such as ProPREMS, BOOST-II and N3RO. He is also a long-time author with the Cochrane Neonatal Review Group with numerous published systematic reviews.

Dr Rebecca Lim

Deputy Head of The Ritchie Centre, Dr Rebecca Lim leads the Regenerative Medicine and Cellular Therapies group. She has been a Chief Investigator on seven federally funded National Health and Medical Research Council grants and attracted over $4 million in competitive funding since 2010. Dr Lim is a CI on two registered cell therapy clinical trials where her basic scientific research is being translated to the bedside. Her research is focused on translating discoveries around regenerative medicine and cell therapies to clinically useful outcomes. In recent years, her team has uncovered key immunological events that are critical to the success of amnion cell mediated lung repair in the settings of adult and neonatal lung disease. Dr Lim’s team has shown that amnion cells trigger endogenous repair processes by activating the adult stem cell niches and recruiting distal progenitor sites to the area of injury to aid repair. She is interested in the impact of ageing on endogenous stem cells and how they interact with the innate immune system during injury and wound healing. Dr Lim’s work has recently extended into the area of extracellular vesicle research where she is investigating the regenerative potential of stem cell derived exosomes. She is an inventor on two patents in this area. Her work has been showcased at the BIO SPARK Showcase in 2016 and has been attracting significant investor interest.
Dr Atul Malhotra

Dr Atul Malhotra is a Consultant Neonatologist at Monash Newborn and research scientist at The Ritchie Centre, Hudson Institute of Medical Research. A senior lecturer in the Department of Paediatrics, Monash University, he is also the recipient of a Royal Australasian College of Physicians Foundation Research Fellowship. His research focuses on improving respiratory and neurological outcomes of high-risk infants and understanding and treating brain injury related to high risk perinatal conditions. Dr Malhotra has been instrumental in the translation of several preclinical therapies from the laboratory to the clinic and is heavily involved in the education and simulation activities of the unit.

Dr Justin Brown

Dr Justin Brown is a paediatric endocrinologist at Monash Children's Hospital and Senior Lecturer in the Department of Paediatrics. He is the Curriculum and Assessment Lead for Children’s Health, within the Bachelor of Medical Science and Doctor of Medicine. As a member of the Assessment Working Group and the Medicine Curriculum Committee, Dr Brown interacts with other disciplines in Year 4C and all years of the Medicine course to help deliver the best course for Monash University students. He has been a contributor to the Australian Collaboration for Clinical Assessment in Medicine (ACCLAIM) which seeks to benchmark assessments across Australian Medical Schools. Dr Brown has research interests in bone health and weight management. He runs a metabolic bone clinic and bone health collaborations, both paediatric and adult, within Monash Health to improve the health of patients with thalassaemia, cerebral palsy and spina bifida. As a member of the Australasian Paediatric Endocrine Group bone and mineral subcommittee he has contributed to a consensus statement on the use of bisphosphonates in children and adolescents. Dr Brown runs a multidisciplinary weight management clinic for children and adolescents, and has collaborated with the Department of Nutrition and Dietetics for the SNAC study investigating appetite hormones in paediatric obesity. He is a coinvestigator on an NHMRC funded study, in conjunction with the University of Sydney and Westmead Children's Hospital. The RCT will assess whether modified alternate day fasting may be more sustainable and lead to greater weight loss than daily energy restriction.

Dr Tony Lewis

Dr Tony Lewis has been Deputy Director at Monash Newborn for several years and maintains a small after-hours commitment with the Paediatric Infant Perinatal Emergency Retrieval service. Following his undergraduate years at WITS Medical School, South Africa, and his military service where he developed an interest in aviation medicine and casualty evacuation, he trained as a pathologist and worked as a medical microbiologist. Dr Lewis retrained as a general paediatrician in New Zealand where he developed an interest in neonatal retrievals and later completed his neonatal training at the Mater and Royal Women’s Hospitals in Brisbane.
Dr Rupert Hinds

Dr Rupert Hinds is a paediatric gastroenterologist. With an academic appointment in the Department of Paediatrics, his responsibilities are predominantly related to construction, maintenance and review of the curriculum and examinations as well as including a prominent role in undergraduate teaching. Dr Hinds’s clinical practice at Monash Children’s Hospital encompasses all aspects of paediatric gastroenterology with particular responsibility for nutrition and hepatology. This broad spectrum of practice allows him to be ideally placed to consider clinical questions for research and to translate research into practice directly. The Department of Gastroenterology at Monash Children’s Hospital has forged strong links with collaborators at the Royal Children’s Hospital, Melbourne as well as the Hudson Institute of Medical Research. Dr Hinds’s areas of clinical and preclinical research within our department includes mucosal immunology, inflammatory bowel disease and the gut microbiome.

Dr Ed Giles

Dr Ed Giles is a consultant paediatric gastroenterologist at Monash Children’s Hospital and lead for Paediatric Inflammatory Bowel Disease (PIBD) at Monash. He is a Research Fellow in the department of paediatrics and has an appointment in the Centre for Innate Immunity and Infectious Disease at the Hudson Institute for Medical Research. Dr Giles is the paediatric representative on the research committee for the Gastroenterological Society of Australia. His current laboratory research projects include exploring the microbiota in PIBD, and developing small intestinal organoids (“mini-guts”) for laboratory study. Dr Giles has established the first young adult IBD clinic in Australia and his clinical research focuses on transition to adult services.

Dr Ina Rudloff

Dr Ina Rudloff is a postdoctoral researcher in the Nold laboratory at The Ritchie Centre, Hudson Institute of Medical Research and the Department of Paediatrics. Focusing on cytokine biology and inflammation, she currently investigates the function, regulation and therapeutic potential of the interleukin (IL) 1 family members IL-1 receptor antagonist (IL-1Ra) and the more recently discovered IL 37 and IL 38. With a strong interest in promoting the translation of basic science into applied interventional immunology, Dr Rudloff also explores the role of these cytokines in diseases that affect the health of newborn babies. Using human samples and applying clinically relevant disease models, her ultimate aim is to discover novel, urgently needed treatment options for diseases such as bronchopulmonary dysplasia (BPD), pulmonary hypertension (PH) and systemic lupus erythematosus (SLE).
Dr Elizabeth Carse

Dr Elizabeth Carse is a Consultant Neonatologist at Monash Newborn and heads the Growth and Development Clinic which carries out long term neurodevelopmental follow-up of extremely preterm and high-risk babies. The Clinic is actively involved in state-wide collaborative studies of the health, education and quality of life of extremely preterm and other high-risk babies when they reach school age and continuing through to early adult life. It also participates in national and international studies examining the effects of new maternal medications and new NICU treatments on later outcomes of the most vulnerable babies.

Dr Risha Bhatia

Dr Risha Bhatia is a Consultant Neonatologist with Monash Newborn. Her clinical and research interests lie in neonatal respiratory physiology in particular in optimising non-invasive respiratory support for which she was awarded a PhD from the University of Melbourne, newborn resuscitation and neonatal retrieval. Dr Risha Bhatia has a special interest in health care ethics and is actively involved in the quality and educational activities of the unit.

Dr Lisa Walter

Dr Lisa Walter is a research fellow in the Infant and Child Health research group at the Ritchie Centre, Hudson Institute of Medical Research and the Department of Paediatrics. The main focus of her research is sleep in children, including children with conditions such as sleep disordered breathing and most recently cancer. Dr Walter is currently investigating light therapy to improve sleep and quality of life in children with acute lymphoblastic leukaemia.