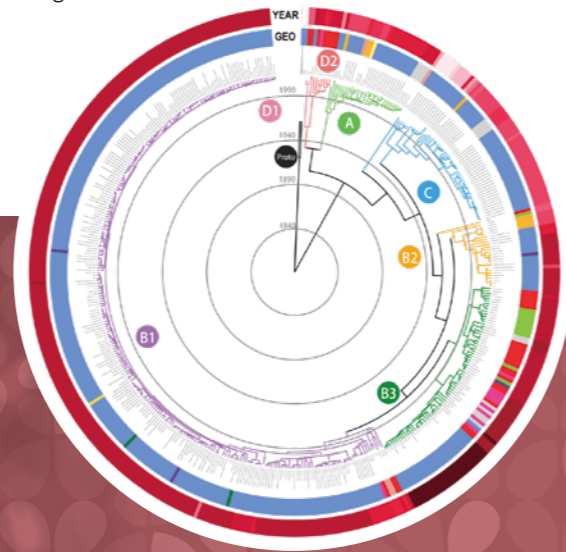


Haematology and Oncology

After opening of Hong Kong Children's Hospital, the clinical service of paediatric oncology unit at Prince of Wales Hospital has relocated to the new Hong Kong Children's Hospital. Our team conducts clinical and translational research in leukaemia and stem cell transplantation. We have been the local coordinating centre for various multinational collaborative studies in the past two decades and extended the multicentre research network with paediatric oncology centres in mainland China in recent years. Ongoing research includes (i) multi-centre clinical trials on leukaemia and lymphoma as well as haemophilia; (ii) molecular basis of leukaemogenesis and pharmacogenetics on chemotherapy tolerance; (iii) mechanisms of haematopoietic stem cell homing, engraftment and mobilisation; and (iv) development of novel targeted therapies for childhood leukaemia.

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Clinical haematology and oncology

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Basic and translational oncology



香港中文大學醫學院
Faculty of Medicine
The Chinese University of Hong Kong

Paediatrics

Our Department has twelve clinical academic staff with research interests in paediatric and child health topics, ranging from the basic science of stem cells, microbiome and respiratory viruses to clinical research on neonatology, clinical genetics, allergic diseases and sleep-disordered breathing. Our flagship research programmes regularly attract substantial research funding from the Research Grants Council, Food and Health Bureau, Innovative and Technology Commission, non-governmental organisations as well as pharmaceutical and nutritional companies. The Department is a core member of the Hong Kong Hub of Paediatric Excellence (HK HOPE), which is the university-level, multi-faculty and interdisciplinary research institute for coordinating paediatric and child health research. Key basic, translational and clinical research activities of HK HOPE take place at the Hong Kong Children's Hospital, Prince of Wales Hospital and the CUHK main campus.

DEPARTMENT OF PAEDIATRICS

Virology and Respiratory Epithelial Cell Biology

On-going research projects under this theme include (i) the investigation of human rhinovirus diversity in non-asthmatic and asthmatic children and the associated outcomes; (ii) tissue tropism and the pathogenesis of human rhinovirus C in the human respiratory tract (an *in vitro* and *ex vivo* study); (iii) the role of rhinovirus in remodelling human airway epithelial and immune cells; and (iv) the establishment of animal models for human rhinovirus in collaboration with the Pulmonary Center of the Boston University School of Medicine in the United States.

In collaboration with University Medical Center Utrecht (UMCU), our team established the CUHK-UMCU Joint Research Laboratory of Respiratory Virus and Immunobiology in March 2017. This joint laboratory focuses on the development of human respiratory epithelial spheroid and well-differentiated nasopharyngeal epithelial cell models for studying respiratory viral infections and, thereafter, performing translational research on personalised medicine.

Renee WY CHAN | reneewy@cuhk.edu.hk ✉

“ Our clinical, teaching and research facilities are located within the Prince of Wales Hospital, the main teaching hospital affiliated with the Chinese University of Hong Kong, and the recently opened Hong Kong Children's Hospital. As a department, we strive to improve the health and well-being of infants, children and adolescents through providing comprehensive health care, educating health professionals at both the undergraduate & postgraduate levels, and advancing knowledge through innovative research. Our Department is an internationally recognised centre for research in Allergy, Haematology & Oncology, Neonatology, Sleep Disorders and Virology in particular. We are committed to participating in the growth of world-class research through interdisciplinary & international collaboration, aimed at translating knowledge into better health outcomes & quality of life. ”

Albert Martin LI Man Chim
Chairman



Neonatology

Our neonatal research programme is based at the neonatal unit of the Prince of Wales Hospital, which includes the largest level III neonatal intensive care unit in Hong Kong. We have clinical and research collaborations with overseas units, and are a member of the Australian New Zealand Neonatal Network. Our clinical and basic science researchers collaborate closely on several important areas in neonatology. The main areas of research include (i) neonatal sepsis and necrotising enterocolitis diagnostics and pathogenesis, (ii) microbiome of the preterm infant, (iii) data-driven neonatal clinical research, and (iv) prenatal and early-life heavy metal exposure and clinical outcomes.

Simon LAM | hshslam@cuhk.edu.hk ✉



Clinical Genetics

In collaboration with the Departments of Obstetrics and Gynaecology and Chemical Pathology, we established a clinical genetics centre in 2013 — the first-ever, self-financed expanded newborn screening programme for over 30 inborn errors of metabolism. This programme quickly attracted wide recognition from local doctors and the public. We are currently receiving 500 referrals for this innovative programme every month, which allows us to generate funding for expanding our work in this emerging research theme of our Department.

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Clinical genetics and metabolic diseases

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Prenatal diagnosis and clinical genetics



Sleep and Respiratory Medicine

Our research in Sleep Medicine began in 2003 with the establishment of a cohort of children along the sleep-disordered breathing (SDB) spectrum. In the years since then, we have investigated the epidemiology, basic mechanisms, complications and treatment outcomes of SDB. Recently, we have also started to focus on the importance of adequate sleep in pre-schoolers, adolescents and children with special needs. Having received world-wide recognition for our work, our team continues to attract funding support from major grant agencies.

Our work in Respiratory Medicine includes the surveillance of pneumococcal carriage in the paediatric community, burden of bronchiolitis, evaluation of efficacy of Respiratory Syncytial Virus (RSV) prophylaxis in at-risk infants, infant wheeze and its association with nutritional status, and lung function deficits in various medical conditions, as well as the establishment of a normal reference of spirometry and peak oxygen consumption in children and adolescents.

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Sleep medicine

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Respiratory research

Allergy

Our asthma and allergy team has established one of the largest biobanks for archiving human DNA, serum, plasma, urine, stool, exhaled breath and environmental dust samples collected from thousands of subjects in the Chinese population. The team carries out laboratory and analytical work to unravel genetic and environmental determinants of longitudinal changes in lung function and airway inflammation in asthmatic children. From this cohort of children, they are also obtaining clinical materials for a series of genomic and genetic projects for asthma and eczema. Additionally, we are among the pioneers in Asia-Pacific monitoring asthma via exhaled breath analysis.

Our team is also active in researching an improved diagnosis and immunotherapy treatment for food allergies. We make use of the next-generation sequencing platform to investigate the evolution of microbiome at different body sites in early-life and their interactions with the host to modulate the susceptibility for various allergic diseases. The team has also identified a number of seromarkers, biophysical and psychological assessment tools and therapeutic options for childhood eczema. Beyond this, we are lead collaborators in several large international research consortia, such as The International Study of Asthma and Allergies in Childhood (ISAAC) and the EuroPrevall study group, with the goal of uncovering the environmental and genetic determinants of asthma, food allergies and related atopic conditions.

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Asthma and allergy epidemiology