特別講演

2025年7月11日(金) 9:30 ~ 10:20 第1会場（文化会館棟 1F 大ホール）

特別講演3（II-SL3）

座長：三谷 義英（三重大学医学部附属病院 周産母子センター）

[II-SL3-1]

The Dawn and the Future Direction of Pediatric Cardiology and Cardiovascular Surgery Research

○Marlene Rabinovitch (Department of Pediatrics, Stanford University School of Medicine, California)

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[II-SL3-1] The Dawn and the Future Direction of Pediatric Cardiology and Cardiovascular Surgery Research

○Marlene Rabinovitch (Department of Pediatrics, Stanford University School of Medicine, California)

キーワード：pulmonary hypertension、bioengineering、genetics

I have been privileged to have participated in the dawn of Pedatric Cardiology and Cardiac Surgery for newborns with complex congenital heart disease (CHD), and recently, I have been given the opportunity to engage in the future of CHD through my Directorship of the Basic Science and Engineering (BASE) Initiative of the Children's Heart Center at Stanford.. In Medical School at McGill University, Montreal, I witnessed the first open heart operation by Dr. Tony Dobell in an infant with a ventricular septal defect, and during my fellowship at Children's Hospital, Boston, Dr Castaneda, pioneered one stage repair of tetralogy of Fallot in infancy. The first Norwood procedure for hypoplastic left heart was performed by Dr. Bill Norwood. Postoperative pulmonary hypertension was a life-threatening problem for children with even simple CHD and Dr. Alex Nadas, Chief of Cardiology encouraged me to pursue a research fellowship with Dr. Lynne Reid in Pathology. We applied morphometric techniques to lung biopsy tissue to assess growth and developmental changes in the pulmonary circulation and correlated these features with hemodynamic outcome. Despite PAH crises, vascular disease in young infants was mild and reversible with normal hemodynamics one year later, and this led to more successful management of PAH crises. Subsequent work in cellular and molecular biology at the Hospital for Sick Children Toronto, focused on the role of elastase in the pathogenesis of PAH and elastase inhibitors as a therapy for PAH and a variety of cardiovascular disorders. At Stanford we applied genetics to better understand PAH pathogenesis leading to additional therapeutic avenues. As BASE Director, we recruited and supported 4 outstanding scientists who are transforming the care of children with CHD by genetics, genomic technologies, genetic and tissue engineering.