Expanding Our Understanding of Children's Interstitial Lung Disease

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IN THE LAST DECADE, our understanding of children with Interstitial lung disease (ILD) has continued to grow fueled by collaborative multidisciplinary interactions between pediatric pulmonologists, radiologists, pathologists, neonatologists, and families. There have been critical events and people that have created this successful march forward.

Early leaders included Dr. Bettina Hilman, to whom this series is dedicated, Dr. Leland Fan, Dr. Claire Langston, Dr. Ernest Cutz, and Dr. Annick Clément to name just a few. They provided early and persistent voices to bring recognition to these children with difficult to diagnose and treat diffuse lung disease. In fact, 2 National Institutes of Health (NIH) workshops were supported by the National Heart, Blood and Lung Institute (NHLBI) in 1988 and 1989 to bring broader understanding to children with ILD. These workshops laid the conceptual framework for a multidisciplinary approach to studying young children and infants with ILD. Unfortunately, with limited funds these large-scale multidisciplinary efforts did not materialize. However, Hilman, Fan, Langston, Clement, and Cutz continued forward by publishing their observations, mentoring the next generation of physicians and scientists in pediatric ILD, and drawing attention to the needs of these children. These persistent pioneers paved the way for our current successes in pediatric ILD!

Fast forward almost 15 years and critically compelling events occurred to rekindle interest in disorders specific to infants and young children with ILD. New disease causing surfactant mutations were described in children by Larry Nogee and his colleagues. Ernest Cutz and colleagues in Toronto described Pulmonary Interstitial Glycogenosis (PIG) and Deterding, Fan, and Langston reported Neuroendocrine Cell Hyperplasia of Infancy (NEHI). Animal models of disease and lung growth and development enhanced our understanding of pulmonary molecular processes. With these activities as a backdrop, a NIH and Office of Rare Disease (ORD) conference grant was submitted and funded in 2004 that supported the initiation of the current Children's Interstitial Lung Disease (chILD) Research Network and the Children's Interstitial Lung Disease (chILD) Foundation (www.childfoundation.us). Essential to this success was the support of the NIH

funded Rare Lung Diseases Consortium (RLDC) and the Lymphangioleiomyomatosis (LAM) Foundation. I am personally indebted to the encouragement provided by Dr. Bruce Trapnell and Dr. Frank McCormack and the LAM Foundation to write the NIH/ORD conference grant and their inclusion of Pediatric ILD into the RLDC. The RLDC was invaluable in providing early support for the chILD Research Network to meet and learn from our adult colleagues.

The last decade has seen significant advances in our understanding of chILD. I am delighted that Dr. Harold Farber, the editor of *Pediatric Allergy, Immunology, and Pulmonology*, requested this special edition on children with ILD and that leaders in the field of chILD agreed to provide exceptional insights through roundtable discussions, interviews, and superb manuscripts. This collection of articles provides the most up-to-date and in-depth information ever reported in one place on chILD. The spectrum of chILD is reviewed by Dr. Deterding in children less than 2 years of age,¹ and Dr. Vece and Dr. Fan review ILD in older children and adolescents.² Dr. Dishop³ and Dr. Guillermin⁴ provide state-of-the-art chILD reviews on diagnostic pathology and imaging, respectively, with exceptional figures to illustrate examples of different disorders. Dr. Nogee reports on the genetic basis of children's interstitial lung disease and provides useful guidance about how to recognize and pursue appropriate genetic evaluation for these disorders.⁵ Dr. Glasser, Dr. Hardie, and Dr. Hagood provide intriguing comments about the pathogenesis of ILD from childhood into adulthood and how they might relate.⁶ Another key article is provided by McDougal and Gettys describing the importance of education and the collaboration between family foundations and physicians.⁷ The entire chILD series should provide major benefit to both physician and patient communities in their search for accurate information.

It has been a personal pleasure for me to serve as Co-Guest Editor with my mentor Dr. Leland Fan and to work with leaders in chILD and the chILD Foundation, who along with the children who suffer from chILD inspire me to passionately pursue systems of care and clinical research to improve the lives of children and families living with chILD.

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²Children's Interstitial Lung Disease Research Network (CHILDRN).

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