Preface

The 19th Annual International Workshop on Surfactant Replacement has attracted about 250 scientists of many specialties (neonatology, pediatrics, physiology, anesthesiology, molecular biology, clinical genetics, surface chemistry, and others) from all over the world. They meet to exchange their latest clinical observations and insights, as well as their ideas and visions on how to translate their studies into clinical practice – ‘from bench to bedside’ – to improve treatment and outcome of their patients. They meet as well to discuss future goals of research – ‘from bedside back to bench’.

The broad range of contributions presented at this meeting becomes obvious if we look at the main presentations. In the opening lecture on ‘Plasma membrane stress failure in ventilator-injured lungs’ given by Rolf Hubmayr (Rochester) the mechanisms of cell wounding and repair and their importance for development and progression of ventilator-induced lung injury are discussed together with new concepts for pharmacological intervention. Sam Hawgood (San Francisco) gives the 7th Nils W. Svenningsen Memorial Lecture entitled ‘Surfactant protein B: Structure and function’, focusing on the interaction of this protein with surfactant lipid membranes and its essential role during neonatal lung adaptation. ‘Genetic mechanisms of surfactant deficiency’ (with special reference to the hydrophobic proteins) are reviewed by Lawrence Noguee (Baltimore) and ‘Host defence functions of pulmonary surfactant’ components (especially SP-A and SP-D) by Joe Rae Wright (Durham). Guidelines for oxygen therapy in preterm babies are discussed by Win Tin (Middlesbrough), and principles for clinical management of SARS in pediatric patients are presented by Pak C. Ng on the basis of recent experience in Hong Kong. Olaf Dammann (Hannover) analyses relationships between lung and brain injury in preterm infants with particular reference to bronchopulmonary dysplasia, white

matter damage and cerebral palsy. Mechanisms regulating surfactant secretion are reviewed by Paul Dietl (Innsbruck) in his invited lecture on ‘The pulmonary consequences of a deep breath revisited’.

The spectrum of this workshop is further expanded by free communications on several important topics including treatment of meconium aspiration syndrome with exogenous surfactant, new methods to administer surfactant to patients with RDS and ARDS, the use of stable isotopes for in vivo studies of surfactant metabolism, and new biophysical methods for analyzing surfactant function.

The 19th International Workshop on Surfactant Replacement is held in Vienna, a traditional place for science and art. It is not by chance that the Vienna Secession with its leitmotif ‘To each time its art, to art its freedom’ has been chosen as the motto of this meeting. When founded in 1897 by a group of progressive artists, it was the declared aim ‘to find new ways of aesthetic expression that would reflect modern life’. The same principles should apply to science: we need free and open-minded discussion, ideas and contributions to bring us further along, and we need the determination to link visions to reality, to put the new ideas into practice.

We are happy for the opportunity to have the Proceedings of the Workshop published in *Biology of the Neonate* and wish to thank Mrs Eva Hendig, Stockholm, for skilful assistance during the editing of the manuscripts.

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