Preface

In the last last 20 years, the efficacy of exogenous surfactant for the prevention and treatment of neonatal respiratory distress syndrome has been confirmed in several extensive clinical trials, and surfactant therapy has now become an indispensable part of the routine management of babies with immature lungs. There is also accumulating experimental and clinical evidence that surfactant therapy may improve gas exchange and pulmonary compliance in various forms of inflammatory lung disease including meconium aspiration syndrome and bacterial pneumonia, and that surfactant may have both anti-inflammatory and anti-oxidative properties. Several research teams have contributed to the rapid development in this field. One of these is the Collaborative European Multicenter Study Group, originally formed to provide a framework for large international clinical trials of surfactant therapy. This group met for the first time in Amsterdam in 1986 and has now expanded into an international 'family' of neonatologists and basic scientists from all over the world. This year the group held its 15th Annual Meeting at a very special venue, the historical island of Kos, where Hippocrates laid out his principles for medical practice that have had considerable impact on clinical medicine for many centuries, and which, as far as ethics are concerned, are still valid today. Hippocrates believed that man was made up of four elements and that the lungs were designed for transportation of one of these, 'pneuma' (air), to the body. Surfactant was not part of this theory. However, Hippocrates understood, some 2,400 years ago, that imbalance between fluids in the body with overrepresentation of, for example, mucus or bile, could cause problems. Today, it is true that too much mucus, plasma protein or bilirubin in the airspaces may interfere with surfactant function. No doubt this represents a new level of understanding in relation to the ancient Greek concepts, but it is not that drastically different.

Twenty years is a short time in relation to the period between Hippocrates' life and today. However, developments in science have accelerated significantly in recent years and today new ideas and knowledge are generated at a pace that would have been difficult to imagine for the ancient Greeks, and which is often difficult to handle even for present-day research workers. In recent years, a number of the important problems in the field of surfactant research have been solved and new problems have been identified. These issues relate to the physiological role of the surfactant-associated proteins, the identification of new targets for surfactant therapy, the role of surfactant in the defence system of the lung and lung liquid homeostasis, the possible use of surfactant with other therapeutic interventions such as high-frequency ventilation and liquid ventilation, the development of new surfactant substitutes for clinical use, and the tailoring of these new surfactant preparations for use in various forms of lung injury. Several of these issues are discussed in these Proceedings, which also includes the 3rd Nils W. Svenningsen Memorial Lecture given by H. William Taeusch on the topic 'Treatment of acute (adult) respiratory distress syndrome: The Holy Grail of surfactant therapy'.

The ancient Greeks called scientific meetings symposia which literally means 'meeting with a drink', implying that intellectual discussions should be entertaining and enjoyed under pleasant conditions. The Workshop at Kos was organized according to these principles and, although we cannot describe the delightful atmosphere of the Greek archipelago, we are happy to share the information presented at this meeting with the readers of *Biology of the Neonate*.

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