



To whom it may concern.

It is about 15 years ago that I first met dr. Pellegrino and discovered that we had mutual interests in the mechanics of the respiration. Since then we have met about twice yearly at conferences of the American Thoracic Society and the European Respiratory Society. Furthermore we have worked together on the ATS/ERS task force (Standardization of lung function measurements, where dr. Pellegrino was in charge of one of the most important papers : " Interpretative strategies for lung function tests" that serves as a world-wide guideline in the diagnoses and grading of respiratory function abnormalities.

Dr Riccardo Pellegrino is a skilled scientist with main interests in pulmonary mechanics. His understanding of the respiratory function has been invaluable in the standardization work.

Dr Pellegrino went to a good school in the sense that in the period from 1991- 1994 he was an assistant professor at Pulmonary Section, Baylor College of Medicine, in Houston, where he worked with professor J.R. Rodarte, who gave him inspiration and a solid foundation in respiratory mechanics.

Over the last 20 years he has been coauthor on a considerable number of papers in highly esteemed international journals like the European Respiratory Journal, the Journal of Applied Physiology, and the American Journal of Respiratory and Critical Care Medicine . He has been the first author of a little less than half of them.

His main interest has been to study the effect of a deep breath on lung mechanics and airway responsiveness. It is an old observation that a deep breath in normal people has a bronchodilation effect, which is often absent in asthmatic subjects. This was assumed to be due to the inability of the small airways to dilate when they were constricted. On the other hand a deep breath is important for regulation of airway smooth muscle tone. This was studied both before and after the bronchoconstrictor methacholine was given and it was shown that both the effects of deep breaths and other factors played a part in constriction of the airways. Most of the concepts have been presented in a review article by Brusasco and Pellegrino in the Journal of Applied Physiology in 2003.

Another series of studies have dealt with the modifying effect of lung volume on airway responsiveness involving chest strapping and changing body posture. It was found that decreasing lung volumes led to increasing airway responsiveness, probably due to a larger contractile potential for the airway smooth muscles.

In relation to this it is understandable that poorly ventilated parts of the lung, because of local bronchoconstriction are more likely to close off completely, and less likely to open up with a deep inhalation than normally ventilated parts of the lung. This phenomenon may also explain that a non-uniform deposition of aerosols in the airways have effects depending on the size of the airways. A further investigation of this may involve the use of the forced oscillation technique (FOT), and is planned in future studies.

Apart from the peer reviewed publications, dr. Pellegrino has given 10-20 invited lectures annually and written a number of chapters in books.

The overall conclusion is that dr Pellegrino is a well qualified scientist that fully deserves promotion to full professor within his field.

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