BOOK REVIEW

D. F. Rogers and L. E. Donnelly
Human Airway inflammation. Sampling techniques and analytical protocols
Totowa, New Jersey: Humana Press, 2001.

The pathogenesis of asthma and of chronic obstructive pulmonary disease (COPD) is based on an inflammatory reaction. The study of this process is of interest not only to research but also to clinical practice as in more than a few cases evaluation of the different elements that take part in this reaction, such as various cells (lymphocytes, mastocytes), cytokines adn exhaled gases, is required. Obtaining the necessary verified information on some of the techniques to use in these studies is sometimes difficult. Rogers and Donelly's book explains in detail how these techniques should be performed and contains contributions by well-known experts. The subjects discussed range from methods for sample collection to the determination of the various elements involved in inflammation, all of wich are prefaced by a concise reminder of the mechanisms involved in this process written by the prestigious researcher Stephen T. Holgate.

In summary, the usefulness of this volume is due to the fact that the collection techniques detailed here involve biopsy and sampling of airway liquids such as sputum and exhaled gases such as nitric oxide. Also provided is a full range of methods for the isolation and characterization of cells and for the measurement of many of the major inflammatory markers, along with protocols for measuring the inflammatory mediators and enzymes releases during lung inflammation. Each user-friendly method contains all the essential step-by-step elements the researcher must navigate from sample collection to analysis, and includes notes on how to avoid problems. Among the more advanced techniques are the measurement of exhaled hydrocarbons and F_2, isoprostanes, granulocyte pharmacodynamics in whole blood measured by flow cytometry, and tracing mediator trafficking in eosinophils using confocal microscopy.

Comprehensive and highly practical, the methods presented in this book provide today's basic and clinical researchers with all the major techniques for investigating airway inflammation, and powerfully illuminate many novel targets for emerging drugs.

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