

**Airway Obstructive Disease:
from Genetics to Perspectives in Treatment**

Naples (Italy), June 10th - 11th, 2005

Organized by
**CLINICA DI MALATTIE DELL'APPARATO RESPIRATORIO
DIPARTIMENTO DI SCIENZE CARDIO-TORACICHE E RESPIRATORIE
FACOLTÀ DI MEDICINA E CHIRURGIA
SECONDA UNIVERSITÀ DEGLI STUDI DI NAPOLI
A.O. "V. MONALDI" - NAPOLI**

**DIVISIONE DI MALATTIE RESPIRATORIE E ALLERGICHE
AZIENDA OSPEDALIERA AD ALTA SPECIALITÀ DI RILIEVO NAZIONALE
A. CARDARELLI - NAPOLI**

FONDAZIONE INTERNAZIONALE MENARINI

Royal Continental Congress Center
Via Partenope, 38

Friday, June 10th, 2005 - Morning

08.30 Welcome addresses

Session I - Epidemiology and risk factors

President: **C. Giuntini** (Pisa, I)

Chairpersons: **L. Allegra** (Milan, I)
G. Girbino (Messina, I)

09.00 **D. Olivieri** (Parma, I)
Natural history of bronchial obstruction in asthma and COPD.
The evolution of knowledge

09.20 **G. Viegi** (Pisa, I)
Epidemiology of asthma and COPD

09.40 **G.W. Canonica** (Genoa, I)
Gene-environment interaction as determinant of asthma phenotypes

10.00 **M. Luisetti** (Pavia, I)
Gene-environment interaction as determinant of COPD phenotypes

10.20 **C. Mapp** (Ferrara, I)
Occupational exposure and obstructive airway disease

10.40 *Discussants:* **A. Bianco** (Naples, I), **G. Pelaia** (Catanzaro, I)

11.00 Coffee break

Session II - Cellular and molecular mechanisms in asthma and COPD

- President: **G. Ciappi** (Rome, I)
- Chairpersons: **M. Caputi** (Naples, I)
N. Crimi (Catania, I)
- 11.30 **C.P. Page** (Londra, UK)
Novel mechanisms contributing to bronchial hyperresponsiveness
- 11.50 **J. Lötvall** (Göteborg, S)
Involvement of the bone marrow in the initiation and maintenance of airway inflammation in asthma and COPD
- 12.10 **L.M. Fabbri** (Ferrara, I)
Role of chemokines in cellular recruitment and activation in asthma and COPD
- 12.30 *Discussants:* **C. Vancheri** (Catania, I), **A. Vatrella** (Naples, I)
- 12.50 Lunch

Friday, June 10th, 2005 - Afternoon

Session III - Airway remodeling in obstructive pulmonary disease

- President: **L. Carratù** (Naples, I)
- Chairpersons: **S. Centanni** (Milan, I)
R. Maselli (Catanzaro, I)
- 14.30 **M. Saetta** (Padua, I)
Inflammation and remodeling in asthma and COPD
- 14.50 **V. Brusasco** (Genoa, I)
Functional consequences of airway remodeling in asthma and COPD
- 15.10 **P. Paggiaro** (Pisa, I)
Functional evaluation of asthma and COPD. The problem of the airway remodeling
- 15.30 *Discussants:* **C. Calabrese** (Naples, I), **A. Chetta** (Parma, I)
- 15.50 Coffee break

Session IV - Relationships between inflammation and infections

- President: **F. Bariffi** (Naples, I)
- Chairpersons: **E. Pozzi** (Pavia, I)
C. Saltini (Rome, I)
- 16.10 **P.J. Barnes** (London, UK)
Regulation of inflammatory genes in COPD
- 16.30 **D. Bassetti** (Genoa, I)
Role of bacteria as exacerbation factors in asthma and COPD
- 16.50 **A. Papi** (Ferrara, I)
Role of viruses as exacerbation factors in asthma and COPD

- 17.10 **G.U. Di Maria** (Catania, I)
Infection-induced airway neurogenic inflammation in asthma and COPD
- 17.30 *Discussants:* **R. Cioffi** (Caserta, I), **A. Sanduzzi** (Naples, I)
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Saturday, June 11th, 2005 - Morning

Session V - New trends in treatment of airway obstructive disease (1st part)

- President: **E. Catena** (Naples, I)
- Chairpersons: **V. De Rose** (Turin, I)
M. Pistolesi (Florence, I)
- 09.00 **P.F. Pignatti** (Verona, I)
Asthma pharmacogenetics
- 09.20 **G. D'Amato** (Naples, I)
New immunological approaches for the treatment of asthma
- 09.40 **M. Cazzola** (Naples, I)
Predictors of the outcome of asthma and COPD
- 10.00 *Discussants:* **G. Mazzearella** (Naples, I), **M. Sofia** (Naples, I)
- 10.20 Coffee break

Session VI - New trends in treatment of airway obstructive disease (2nd part)

- President: **R. Zuin** (Padua, I)
- Chairpersons: **M.P. Foschino-Barbaro** (Foggia, I)
S.A. Marsico (Naples, I)
- 10.50 **V. Bellia** (Palermo, I)
Effects of aging on the responsiveness to treatment in patients with asthma and COPD
- 11.10 **P. Zannini** (Milan, I)
Surgical therapy in airway obstructive disease
- 11.30 **C.F. Donner** (Veruno-NO, I)
New trends in therapy of airway obstructive disease:
importance of rehabilitation and nutrition
- 11.50 *Discussants:* **C. Marzo** (Naples, I), **C.M.E. Tranfa** (Naples, I)
- 12.10 Concluding remarks
- 12.30 Lunch
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Airway obstructive diseases, including bronchial asthma and COPD (chronic obstructive pulmonary disease), are one of the main causes of morbidity and mortality in both industrialized and developing countries, with major social and economic implications. The global data relative to all continents, published by the World Health Organization, indicate that there are currently 150 million asthmatic patients, while the prevalence of COPD relative to both sexes and all age groups, published by the GOLD guidelines, is between 7.33 and 9.34 cases per 1.000 inhabitants. These

figures, however, according to many important studies, may not reflect the real epidemiological dimensions of the problem. The overall health cost for asthma and COPD is much higher than the total of the economic resources employed for all the patients affected by two very widespread infectious diseases in the world, like AIDS and tuberculosis. In the next few decades, epidemiological projections forecast a further increase in the incidence and prevalence of asthma and COPD.

Asthma and COPD share an inflammatory pathogenic substratum, deriving from complex interactions between predisposing genetic factors and environmental factors. In this connection, the use of modern research methods like molecular genetics, "cDNA microarray" technology and proteomics is helping scientists to pinpoint the identity, structure and profile of expression of the genes responsible for individual susceptibility to asthma and COPD. In the case of asthma, in particular, the many genetic studies carried out in the last few years have made it possible to identify a large number of candidate genes, probably involved in the many pathogenic aspects of the disease. As regards COPD, however, the predisposing factors of a genetic nature are, with the exception of α -1 antitrypsin deficit, less well-known. Our acquisitions in the field of genetics are essential for an understanding of the relationship between the patient and the environment and the factors that enable the pathological phenotype to express. Studies of cellular and molecular biology, with cyto- and histopathological studies made on the fluid of broncho-alveolar lavages, on induced expectorate and on bronchial biopsies are providing a substantial contribution to characterization of the inflammatory response and specifying the actual mechanisms involved in asthma and COPD. Also, enormous progress has been made in the understanding of the exact nature of the phenomena of structural remodeling of the walls of the respiratory tract, which occur in these two diseases.

An understanding of the specific genetic, cellular and molecular characteristics is also indispensable to explain the phenotype diversity, as regards clinical expression, natural history and response to therapy observed in patients affected by asthma or COPD. Furthermore, the increased understanding of the molecular bases of these pathologies has important implications in the therapeutic field, especially as regards the development of new lines of research relative to pharmacological and immuno-therapeutic strategies, in the sphere of which a concrete example is already available in the form of monoclonal anti-IgE antibodies as well as specific antagonists of chemokine receptors. In addition, increased knowledge in the field of genetic pharmacology will make it possible to develop a more individualized approach based on the specific characteristics of each patient.

Serafino A. Marsico and Gennaro D'Amato
Co-Presidents of the Meeting

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Serafino Antonio Marsico Direttore Clinica di Malattie dell'Apparato Respiratorio Dipartimento di Scienze Cardio- Toraciche e Respiratorie Facoltà di Medicina e Chirurgia II Università degli Studi di Napoli Ospedale "V. Monaldi-Camaldoli" Napoli	Gennaro D'Amato Direttore Divisione di Malattie Respiratorie e Allergiche Azienda Ospedaliera ad Alta Specialità di Rilievo Nazionale "A. Cardarelli" Napoli
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