Thorax Innovation (TORINO)

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Clinical and translational research requires significant support in the context of an increasingly competitive international context and the emergence of new health challenges. University/Hospital Departments (Départements Hospitalo-Universitaires, DHU) are formed on the basis of a specific theme, within a clearly defined university/hospital framework [1]. The creation of a DHU represents a major opportunity for the hospitals, universities and research bodies to gain visibility over the three dimensions of quality of care, teaching and research, thus reinforcing the appeal of the university/hospital site [1]. The Assistance Publique–Hôpitaux de Paris (AP–HP), Paris universities and French research bodies have selected a series of DHU in 2012/2013. Among them, the DHU TORINO (acronym for “Thorax Innovation”) is a multidisciplinary consortium composed of high-profile physicians and surgeons, educators, biologists, physiologists, epidemiologists, pharmacologists, and other healthcare providers joining forces to collectively improve care, education and research of major thoracic disorders and explore novel medical and surgical therapeutic avenues thereof.

The goal of TORINO is to improve healthcare, education and research – and ultimately cure – three major groups of thoracic diseases that represent a significant threat to society: chronic pulmonary vascular diseases and their associated cardiac consequences, thoracic cancer, and asthma. To achieve this goal, the proposed strategy is to:

- build and reinforce strong clinical networks and patient registries;
- improve understanding of these diseases based on multidisciplinary approaches, from research of environmental disease determinants through epidemiology, to the molecular mechanisms causing these diseases through basic science;
- discover new therapeutic targets and companion biomarkers/diagnostic tools in order to provide diagnostic solutions for patient subgroups;
- design and develop new approaches to treat – or stop the progression of – these diseases in a personalized medicine perspective;
- and support educational programs for MD, PhD and postdoctoral fellows in the TORINO environment.

The various partners offer the highest standard of modern medical and surgical healthcare in the TORINO fields. In this unique environment, graduate students, young postdoctoral fellows and all TORINO members will be exposed to cutting-edge developments in thoracic disease understanding, modeling of disease, drug discovery, medical and surgical therapeutic innovation, epidemiology and pharmacovigilance, through unique interdisciplinary networking and training.

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To this aim, TORINO will capitalize on a unique combination of expertise present within the Université Paris-Sud. This University is one of the two Paris Universities hosting a Faculty of Medicine, a Faculty of Pharmacy, a Cancer Institute and a Thoracic Surgical Centre. It is a true international leader in the three main clinical aspects of TORINO. First, our University has a recognized Thoracic Division at the Hôpitaux Universitaires Paris-Sud, AP–HP, hosting the French Referral Centre for Severe Pulmonary Hypertension, and a strong clinical research unit in the field of severe pulmonary hypertension. Second, the Institut Gustave Roussy, a leading academic cancer institute in Europe, has a pivotal role in thoracic cancer care, education and research. Third, the Centre Chirurgical Marie Lannelongue is a world-renowned thoracic surgical centre hosting a unique combination of expert surgeons, a tissue bank, an experimental surgery laboratory and a research unit devoted to pulmonary hypertension pathophysiology and clinical research in partnership with Inserm, AP–HP, and Université Paris-Sud. Fourth, our epidemiology division consists of renowned pulmonary epidemiology teams dedicated to the study of several large cohorts of major interests, with a particular emphasis on asthma research. Last, three doctoral schools allow doctoral and postdoctoral research in the fields of epidemiology, oncology and therapeutic innovation.

TORINO thus represents a driving force behind the university/hospital dynamics, creating a new synergism and helping to innovate and revolutionize site policy. TORINO represents a major opportunity for the Hospitals, the University and Inserm to gain visibility over the three dimensions of quality of care, teaching and research, thus strengthening the appeal of the university/hospital sites. In addition, TORINO will promote stronger links between AP–HP and major hospitals in the South Paris area, allowing cross talk to consolidate a unique European partner in the field.

In the present issue of Quarterly Medical Reviews, members of the DHU TORINO present updated information on key aspects of their current translational research ranging from asthma epidemiology and the impact of environmental factors [2,3] to pharmacovigilance in the setting of pulmonary arterial hypertension induced by drugs [4,5], surgical innovation in the field of tracheal transplantation [6] and various aspects of thoracic cancer management and its complications [7,8].

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References