

PASSING OF PIONEERS

Professor Carla Marchetti, M.D. (1948-2001)

The memory of Prof. Carla Marchetti, Full Professor of Histology at the University of Pavia is as vivid as ever amongst colleagues and friends who knew her personally. Carla Marchetti passed way after a long and terminal disease which she faced unflinchingly and with great courage. She died at the early age of 53 and was a person of great interior wealth.

As a young researcher at the Institute of Normal Human Anatomy, she joined a small group that founded the Institute of General Histology and Embryology in 1972. She was to share her academic life with them for thirty years. By her constant endeavours and commitment, Carla Marchetti contributed significantly to the development as well as scientific and academic progress of the Institute of General Histology and Embryology of the University of Pavia.

In her scientific work, Carla Marchetti carried out important field research on initial lymph vessels and their important role. She demonstrated the role of these vessels from both a morphological and functional point of view and related it to the presence in the endothelium of agents regulating the transit of liquids, macromolecules and cells. Carla Marchetti was able to bring together a highly motivated research group, which in a short space of time attained international acclaim.

Her research in lymphology spanned over twenty-years: starting from her initial work on the localization, identification and

distribution of the small lymphatic vessels of the heart, she was to publish extensively on the ultrastructure of the lymphatics in the other organs. These morphological studies, both in adults and during development, defined the histological and cytological characteristics of the lymph vessels in the myocardium, salivary glands, skin, diaphragm and dental pulp. In the course of her studies, she was able to describe the characteristics of the lymphatic endothelium involved in transendothelial transport and the interaction between the endothelial cells. She highlighted the complexity and plasticity of this exchange with particular reference to intercellular junctional systems. In this research, conducted under different physiological and experimental conditions, the dynamics of lymphatic structures and the role of intercellular junctions in regulating the activity of lymphatic vessels emerged clearly. By analyzing dynamic events, she was therefore able to relate their morphology to transendothelial transport mechanisms and to lymphogenesis in body organs.

Also of great interest was her research with the objective of histochemically characterizing the microfilaments anchoring the lymph epithelium to the extracellular matrix. By studying the ultrastructural localization of the elastin surrounding lymph vessels in human organs, Carla Marchetti demonstrated, also quantitatively, that the elastin component associated to the microfilaments was distributed differently

according to the organ. From the overall results she gathered, Carla Marchetti was able to formulate the hypothesis that elastic fibers did not play a fundamental role in lymphogenetic mechanisms.

In the latter period of her research on lymphology, Carla Marchetti focused on identifying structures and molecules having a specific function in the dynamics of endothelial cells. In a series of studies conducted under both normal and experimental conditions on the localization of the Weibel-Palade bodies, endothelin-1, nitric oxide synthetase and multimerin, all potentially vaso-active substances, Carla Marchetti showed how these substances actively regulated the endothelium in relation to lymphogenesis and lymph drainage.

Carla Marchetti also expressed her qualities through her lecturing. She constantly dedicated her energies to her students and stimulated enthusiasm for scientific research.

In this brief commemoration we would like to express our sincerest thanks to all the colleagues and friends who esteemed and appreciated Carla Marchetti for her professional qualities and held her in high esteem, and who, in witnessing her gentleness sustained by a strong and tenacious character, perceived great human virtue.

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