

The 11th European Symposium on Clinical Hemorheology, Rouen, France, 19–22 September 2000

Opening address

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President ESCH

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Ladies and gentlemen, dear colleagues, dear friends,

It is a great pleasure for me to open this 11th European Conference on behalf on the European Society of Clinical Hemorheology.

The organisation of this joint conference, with French vascular Societies, has been a challenging, demanding task and has required the teamwork of several individuals. I would particularly like to record our sincere thanks to the two presidents of the symposium, Professor G. Potron and H. Levesque and to Dr Ph. N'Guyen who are in charge of the scientific programme.

Clinical Hemorheology is a interface discipline that requires collaborations on many levels, between engineers and clinicians, between the physical and the life sciences and increasingly between academia and industry. But for the future some new scientific developments are to be considered. One of these new avenues concern the adaptation of tissues submitted to stresses. Traditionally hemorheology examined the structural/rheological properties of blood and blood vessel. But today increasingly interest is turning to mechanobiology: understanding how forces modulate biological processes. These mechanobiological processes contribute for example to the understanding of blood vessels remodelling during cardiovascular disorders (i.e., hypertension). To understand how mechanical stimulus produces a biological signal for cells to differentiate or a tissue to adapt we need to understand the signal transduction and the responses processes. These researches are now possible by recent technological advances particularly in molecular biology, genomic and cell imaging. During this meeting Professor Shyy lecture will give us an example of this new field of research.

An other new emerging area, which provides new opportunities for clinical hemorheology, is blood vessel engineering. This new emerging area concern the development of vessel substitutes and/or the postering of remodelling and regeneration with the purpose being to replace, repair, maintain and/or enhance tissue function. This new field is giving rise to the next generation of vascular implants and represent an opportunity for hemorheology.

Many other new clinical researches are also possible with the recent developments of tissue imaging and molecular biology (i.e.: cell adhesion, endothelial cell functions, tissue remodeling, cell engineering, *in vivo* study of rheological properties of blood vessels. . .).

This is in summary the future of clinical hemorheology and not only as today studies on rheological studies of blood during diseases.

In the course of our meeting, I will have the pleasure to present the Fåhræus Award to its 10th recipient, Professor Gustav Born to whom I wish to express my heartfelt congratulations.

Thank you and have a good stay in Rouen.

Rouen, September 19th, 2000