SYMPOSIUM

Introduction: Physiological Cross Talk: Nonhemostatic Physiological Effects of Hemostasis-Related Components

BRADFORD S. SCHWARTZ* AND KENNETH L. BARKER†

*College of Medicine at the University of Illinois at Urbana-Champaign, Urbana, Illinois 61801; and †State University of New York, Upstate Medical University, Syracuse, New York 13210

Hemostasis is an elegantly balanced process that involves both intracellular and extracellular components that control blood clot formation and breakdown within precise narrow limits. Experiments involving transgenic animal models and various *in vitro* and *in vivo* physiological systems reveal that many hemostasis-related components are also essential participants in a variety of physiological and developmental processes. Although these nonhemostatic systems may be merely using existing hemostasis-related enzymes and cellular constituents to carry out independent alternative functions, a more global consideration indicates that these components may participate in responses that result in a broad and coordinated physiological response to systemic physiological perturbations. The purpose of this symposium was to describe and highlight a variety of cross-disciplinary observations to increase the awareness of investigators outside the immediate field of hematology about model systems that may provide insight to their studies and to highlight important physiological systems in which cross talk between systems appears to be of broader importance.

The symposium, entitled *Physiological Cross Talk: Nonhemostatic Physiological Effects of Hemostasis-Related Components,* was held at the annual FASEB Experimental Biology meeting on Sunday April 18, 2004, in Washington, DC. The Society for Experimental Biology and Medicine (SEBM) is grateful to Bradford S. Schwartz, M.D., for organizing this symposium. The speakers were David J. Loskutoff, Ph.D., Professor of Cell Biology at The Scripps Research Institute; Daniel A. Lawrence, Ph.D., Professor of Surgery and of Physiology at the University of Maryland School of Medicine (formerly of the Jerome H. Holland Laboratory of the American Red Cross); Jay L. Degen, Ph.D., Professor of Pediatrics at the Children's Hospital Research Foundation and University of Cincinnati College of Medicine; and Jerry Ware, Ph.D., Professor of Physiology and Biophysics at the University of Arkansas for Medical Sciences (formerly of The Scripps Research Institute). Each speaker has been joined by colleagues to author the following set of up-to-date and informative concepts and overviews of the topics they presented at the symposium.

Information contained in the proceedings of this symposium will be of particular interest to those who study aspects of (i) cell adhesion and detachment in relation to wound healing, tissue remodeling, and metastasis of cancer cells; (ii) physiological and pathological conditions of the brain, including synaptic plasticity, learning and behavior, cerebral ischemia, dementia, seizures, multiple sclerosis, and regulation of permeability of the blood–brain barrier; (iii) coordinated cross-regulation, repair, and related pathologies of hemostatic and inflammatory responses following physical, chemical, microbial, and immunological insults; and (iv) cellular events involved in membrane movement and cytoplasmic partitioning in physiological processes, such as release of the contents of neurosecretory granules, and in pathologies involved in various neurodegenerative diseases, schizophrenia, and cancer. It is our hope that this symposium will stimulate the cross-disciplinary interest and awareness and the collaboration of a diverse group of scientists with their hematology and vascular biology colleagues.

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