

Thrombosis Innovator to Receive Stratton Medal

Dr. Jack Hirsh wrote the book on thrombosis. Quite literally. The text, *Thrombosis: Everything You Need to Know*, is just one of 18 he has authored, in addition to 224 book chapters, 308 abstracts, and 614 articles over the course of his accomplished career. Today, his legacy of achievement will be recognized with the Henry M. Stratton Medal, one of the most prestigious honors bestowed by the American Society of Hematology (ASH). The award, named after the late Henry Maurice Stratton, is presented to “an individual whose contributions to hematology are well recognized and have taken place over a period of several years.”

Dr. Hirsh has dedicated his career to studying various aspects of thromboembolic disorders. His work has had a wide-ranging impact on this field and has set the standard for diagnosis and treatment. Perhaps his most significant work involves anticoagulants like heparin and warfarin.

Throughout his research, Dr. Hirsh has sought to develop safer, more effective, and more cost-effective anticoagulants. These drugs, commonly referred to as “blood thinners,” decrease blood clotting by counteracting the effects of vitamin K, a necessary component of blood coagulation. Heparin is one such anticoagulant, and, with approximately 33 million tons or 500 million doses consumed every year, is one of the most widely used. Although heparin has been studied extensively since its discovery in 1916, it still presents challenges to investigators. One such challenge has been the risk of excessive bleeding posed by the drug. Dr. Hirsh encountered this problem during the 1970s while studying heparin delivery methods in an experimental rabbit model.

“By chance, we noted that a fragment of heparin which was about a third the size of standard heparin produced less bleeding for an equivalent anti-clotting effect. This was followed by 10 years of experimental work... to work out the mechanism of this promising effect,” Dr. Hirsh writes.

This incidental discovery led to the creation of low-molecular-weight heparins, or LMWHs, which revolutionized the field. Because of the lowered risk associated with LMWHs, it became possible to administer the drug outside of a hospital setting and without extensive laboratory monitoring. Drug companies seized the news and developed several new LMWHs during the 1980s. Dr. Hirsh and his colleagues were heavily involved in testing these new treatments. They conducted several clinical trials, all confirming that the new drugs were not only safer, but also more effective than traditional heparin. Dr. Hirsh notes that “they are the first new class of blood thinners to be developed to treat patients with abnormal clotting since heparin and warfarin were introduced approximately 50 years ago.”

Dr. Hirsh has had similar success in his study of warfarin, another common anticoagulant. Although warfarin started out as a poison and, accordingly, features a somewhat misanthropic history, it has been transformed over the past half-century into a powerful piece of medication. Like heparin, the benefits of warfarin do not come without some risks, specifically the chance of excessive bleeding. Recognizing this issue, Dr. Hirsh began searching for a low-dose warfarin treatment that maintained the drug’s effectiveness while severely reducing the risk for the patient. When his treatment regime succeeded, it presented another significant advancement for the field and quickly became the standard.

Through his extensive work with anticoagulants like heparin and warfarin, Dr. Hirsh has succeeded in making treatment for thromboembolytic disorders both easier and safer, a major victory for doctors and patients alike. He has also established a thrombosis program at McMaster University that has been pre-eminent in thrombosis research for over three decades, and was a founding senior scientist, as well as Vice President, of Research of Vascular Therapeutics, Inc. Taken together with his research diagnostic techniques for thromboembolic disorders and the use of aspirin in heart attack and stroke treatment and prevention, it clarifies how impressive Dr. Hirsh’s career has been.

His career has taken him around the world, from his start at the University of Melbourne Medical School to residency at Royal Melbourne Hospital in Victoria, Australia, across the globe to a research fellowship at Washington University in St. Louis, to a brief stay in London, England, to his present home in Ontario, Canada. It is in Canada, where he has worked since 1970, that he has come into prominence, holding several positions at McMaster University as well as in several pharmaceutical companies. He currently serves as Professor Emeritus in the Department of Medicine at McMaster University, and Medical Coordinator, Intellectual Property and Commercialization, to the Faculty of Health Sciences at McMaster and the Hamilton Health Services Corporation, as well as Vice-President of Research at Inflazyme, Inc.

In addition to his professional career, Dr. Hirsh has a history of service at ASH, of which he has been a member since 1970. He has served on the editorial board of *Blood*, and as Chairman of the Subcommittee on Hemostasis, as well as a member of the Council on Thrombosis, and, most recently, the Scientific Committee on Thrombosis and Vascular Biology. He has been previously honored by the Society, receiving a Distinguished Service Award in 1987, and, in 1996, delivering the Ham-Wasserman Lecture at the 38th ASH Annual Meeting, coincidentally also held in Orlando.

Today, ASH will once again reward a career that has had profound and lasting implications for those suffering from thrombosis and its effects. The Stratton Medal will be awarded to Dr. Jack Hirsh during the Presidential Symposium, held today at 10:30 a.m. in Halls B3-B4.