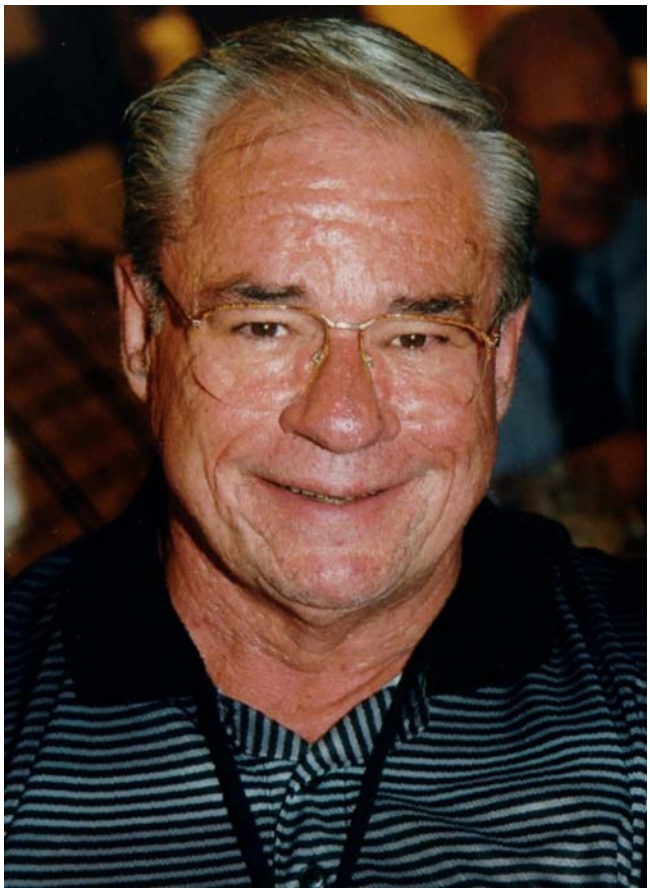
Obituary: Michael Ernest Nesheim, February 5, 1945 – June 4, 2011



On June 4, 2011 Michael Ernest Nesheim, a colleague of much renown in the field of thrombosis, haemostasis and fibrinolysis, passed away after a brief battle with cancer.

Michael received his Ph.D. from the University of Minnesota in 1977 in the field of metabolic biochemistry. Unfortunately for Michael, while working to complete his doctoral thesis his funding was cut. Since Michael had a young family to support, he accepted a job as a half time technician in the laboratory of Kenneth Mann, who at the time was studying prothrombin at the Mayo clinic in Rochester Minnesota. During this initial period in the Mann lab, Michael was constantly encouraged by Ken to complete his dissertation and find a suitable postdoctoral position. During Christmas break, while both Michael and Ken were working late, Michael entered Ken's office with a tube gel containing a single band. This band represented the successful isolation of factor V and in response to this news Ken declared that Michael had found a postdoctoral position. In the following years Michael continued to research factor V and the prothrombinase complex. Among his many achievements were the isolation and characterization of factor V (1), its activation by thrombin to fVa (2), the formation and function of prothrombinase and the development of an empirically validated mathematical model that described the kinetics of the membrane bound complex (3). His efforts were rewarded by his selection as the

first recipient of the Edward C. Kendall Mayo Clinic Alumni Association Research Award (1981).

Michael moved to Kingston, Ontario in 1984 to start his individual research program at Queen's University. He quickly rose through the ranks at Queen's, and in 1989 was promoted to full Professor of Biochemistry and Medicine. While Michael continued to conduct research on the prothrombinase complex, most of his research at Queen's was devoted to the field of fibrinolysis. Michael described the kinetics of plasminogen activation by tPA (4), the importance of Lys-plasminogen as an intermediate in plasminogen activation (5), and characterized and quantified the contribution of plasmin-modified fibrin as a cofactor in this process (6). Arguably though, Michael's biggest scientific achievement came in 1996 when he described the isolation and characterization of the Thrombin Activatable Fibrinolysis Inhibitor, or TAFI (7). Subsequently, he identified the mechanism by which TAFI attenuates fibrinolysis (8) and described the consequences of TAFI activation during the process of fibrinolysis.

Michael was an outstanding mentor and teacher who thoroughly enjoyed this aspect of his career. Michael's passion was in mathematics and he was pleased to pass on his vast knowledge. Students from all over campus including those in the biochemistry, chemistry, pathology, pharmacology and medicine departments sought his help in modeling their data. Many benefited from his passion for mathematics and his ability to apply it to biological systems. Michael's enthusiasm for science inspired those who worked with him.

Michael's contributions to research on coagulation and fibrinolysis earned him a Distinguished Career Award at the XXIInd Congress of the International Society on Thrombosis and Haemostasis (ISTH; Boston, 2009) and in 2010 he was invited to deliver a plenary lecture on the Biochemistry of TAFI at the 20th Congress of the International Society on Fibinolysis and Proteolysis (ISFP) in Amsterdam. Michael was also an active member in the research community. He served as a member of the Editorial Board of the Journal of Biological Chemistry, reviewed manuscripts for numerous journals and funding agencies and served as a Council Member of the ISFP (2008 – 2011) and a co-chair on the Fibrinolysis Scientific and Standardization committee of the ISTH (2001 – 2011). In recognition of his numerous contributions, the ISFP Council has named a plenary lecture at the 21st Congress of the ISFP (Brighton, 2012) after Michael.

Michael's kind nature, patience, aptitude and enthusiasm for science and ability to tell an entertaining story or joke made him a popular person wherever he traveled. He will certainly be missed.

References

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Written by the Colleagues and Friends of Michael Nesheim.