



## Tribute to Merton Bernfield



**In Memoriam 1938–March 18, 2002**

Merton Bernfield grew up in Chicago and graduated from the University of Illinois in 1959. That same year he married Audrey, his high school sweetheart, close companion and wife of over 40 years. After earning an M.D. degree from the University of Illinois in 1961, Mert completed a pediatrics residency at Cornell followed by postdoctoral work with Marshall Nirenberg at NIH. He then spent two years in Clifford Grobstein's lab at UCSD. These experiences, together with his ability to "think outside the box" molded his lifelong interests in research, especially in developmental biology. His commitment to putting his knowledge into practice as a pediatrician led him to take the position of Chief Resident in Pediatrics at Stanford University (1967), where he also built his own laboratory research team and directed the Stanford Program in Human Biology (1977–80), thus commencing his ambitious dream of a career combining research, practice and education. At Stanford he rapidly rose to

the rank of full professor (1975), receiving an endowed professorship (1977). During the 1970's Mert's lab made landmark discoveries that provided a fundamental understanding of the process of epithelial morphogenesis. It was this work that led Mert to the finding that glycosaminoglycans in the basement membrane are major players in morphogenesis and thus to his long love of proteoglycans. In the 1980's his research team isolated, characterized and cloned the first of the syndecans, placing Mert and his people at the heart of the proteoglycan field. In 1989 Mert moved his lab to Harvard where he became the director of the Joint Program in Neonatology. Here, the lab developed the syndecan story with a focus on defining many of the functional characteristics of this family of molecules. Mert applied his atypical and rigorous thinking to the involvement of syndecans in a wild assortment of processes including appetite control, leukocyte behavior, cancer, wound healing, bacterial

virulence, growth factor regulation, and of course, embryonic development. His pioneering work was critical in laying the foundation for the explosion in heparan sulfate proteoglycan research. This legacy continues in the numerous contributions of over 50 successful students and postdocs that he mentored, a great source of well-deserved pride.

Throughout his career Mert played vital leadership roles in many academic arenas, including major service in scientific review panels, academic review boards, editorial boards and scientific societies, especially the American Society for Cell Biology and Society of Developmental Biology (of which he was President in 1991). His scholarship and overall contributions to medical research and education were recognized by his election to the Institute of Medicine of the National Academy of Sciences in 1996. But Mert's interests and influence went beyond science. His character was expressed in deep love for his family, outrageous humor, and "tough love" for trainees and colleagues. Mert suffered no fools but was dedicated to and always available for family, friends and colleagues. Anyone who knew Mert understood that a conversation with him would

include a lively update on the latest pursuits of family members, impassioned reflections on the state of the world and quality of the wine being imbibed, hilarious anecdotes and commentaries about good times with friends, trips to wonderful corners of the world, and the irony of life.

A favorite quotation of Mert's was: "Make no small plans." He didn't, and we in the proteoglycan field have certainly benefited from his determination to follow that advice. We will miss him.

Ralph Sanderson and Bryan Toole

The 1995 photograph of Mert on a mountain top in Nepal was sent to us by Audrey as one of Mert's favorite photographs. We believe it exemplifies his courageous character and reinforces our memory of him as one to respect and honor for his science and as a fine person of great content.

Jeremiah Silbert and Geetha Sugumaran