

# MBL SPECIAL LECTURE SERIES

Monday, June 27, 2011 • 9 AM • Lillie Auditorium



## *The Kensal E. van Holde Lecture in Physiology*

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# *How do big cells solve geometry problems?*

TIMOTHY MITCHISON, *Department of Systems Biology, Harvard University*

Dr. Mitchison is deputy chair of the Department of Systems Biology and the Hasib Sabbagh Professor of Systems Biology at Harvard University. He received his B.Sc. in Biochemistry from Oxford University, UK, in 1980, and his Ph.D. from the University of California, San Francisco in Biochemistry and Biophysics in 1984. He joined the faculty of Pharmacology at UCSF in 1987, rose to full professor at UCSF, and then moved to Harvard Medical School in 1997. At HMS he co-founded the Institute of Chemistry and Cell Biology with Stuart Schreiber, a noted Harvard chemist. This was one of the first academic labs to implement high-throughput screening to find small molecule drug leads. Mitchison and Schreiber discovered several important small molecule tools, notably monastrol, a small molecule inhibitor of cell division that led to a new class of experimental anti-cancer drug. This class ultimately failed in the clinic, and Mitchison is currently conducting research using mouse cancer models to understand why, and lay the foundation for improved future drugs.

Dr. Mitchison was a founding member of the Harvard Medical School Department of Systems Biology, which started in 2004. He is currently vice-chair of the department, and co-chair of the Ph.D. program in Systems Biology, which is a cross-campus collaboration with the Harvard Faculty of Arts and Sciences. He was elected a Fellow of the Royal Society in 1997 and a member of the American Association of Arts and Sciences in 2008. In 2010 he served as President of the American Society of Cell Biology.

### **ABOUT THE KENSAL E. VAN HOLDE LECTURESHIP IN PHYSIOLOGY**

Kensal E. van Holde received B.S. and Ph.D. degrees from the University of Wisconsin. Trained as a physical chemist, his early interests lay in the synthetic polymer field, which led to initial employment in industry. Dr. van Holde returned to academia in 1957, as an assistant professor at the University of Illinois. There he met J. Woodland Hastings, who asked him to join the faculty of the MBL Physiology course in 1962. Dr. van Holde served as a course faculty member for five years, and later as course director from 1977 to 1981.

Dr. van Holde's experiences in the Physiology course marked a turning point in his career. The enthusiasm of the staff and students at the MBL fired an excitement for biological research that dominated all of his subsequent work. Indeed, the two major themes of his career—the structure and function of oxygen transport proteins, and the fine structure of chromatin—both had their seeds in work conducted at the MBL.

This fascination with the MBL and a love for Woods Hole has led the van Holde family to return nearly every summer for more than 40 years. During that time Dr. van Holde has served on both the Board of Trustees and Executive Committee of the MBL. He is also a member of the American Academy of Arts and Sciences and the National Academy of Sciences.