

Wednesday, April 5th 2017, 11:00
EPFL, School of Life Sciences, lecture room SV1717



Prof. Dr. Thomas R. Cech
University of Colorado, Boulder, USA

“Long Noncoding RNAs and Epigenetic Gene Silencing”

Dr. Cech's current research interests focus on the study of the structure and mechanism of long noncoding RNAs and RNA-protein complexes, including telomerase and complexes that regulate transcription. Moreover, the Cech laboratory is interested in telomeric DNA-protein complexes that cap the ends of human chromosomes and are involved in the regulation of telomerase. Dr. Cech's group aims at understand the detailed mechanism of these systems and how their misregulation contributes to diseases, including cancer.

After his Ph.D. in chemistry from the University of California, Berkeley and postdoctoral research at the Massachusetts Institute of Technology, Dr. Cech joined the faculty of the University of Colorado Boulder in 1978. In 1982 Dr. Cech and his research group discovered self-splicing RNA in Tetrahymena, providing the first exception to the long-held belief that biological reactions are always catalyzed by proteins. Because RNA can be both an information-carrying molecule and a catalyst, perhaps a primordial self-reproducing system consisted of RNA alone. Dr. Cech became a Howard Hughes Medical Institute investigator in 1988 and Distinguished Professor of Chemistry and Biochemistry in 1990. From 2000-2009, he served as president of the Howard Hughes Medical Institute, the largest private biomedical research organization in the U.S.A. In April 2009, Dr. Cech returned to full-time research and teaching at the University of Colorado Boulder, where he also directs the BioFrontiers Institute.

Dr. Cech's work has been recognized by many national and international awards and prizes, including the Heineken Prize of the Royal Netherlands Academy of Sciences (1988), the Albert Lasker Basic Medical Research Award (1988), the Nobel Prize in Chemistry (1989), and the National Medal of Science (1995). In 1987 Dr. Cech was elected to the U.S. National Academy of Sciences and also awarded a lifetime professorship by the American Cancer Society.