

Noncoding RNAs in normal physiology and disease

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Abstract

Although only less than 2% of the human genome encodes protein coding genes, more than 75% are transcribed into RNAs. This noncoding genome and the encoded noncoding RNA transcripts have recently become a major focus of biomedical research. A relatively novel class of noncoding RNAs represent the long noncoding RNAs (lncRNAs), which are defined just by the fact that they are more than 200 nucleotides in length and not encoding any proteins. lncRNAs have very diverse molecular and physiological functions, which are difficult to categorize. Hence, each lncRNA gene has to be carefully studied on a case-by-case basis to characterize its biological role. So far, lncRNAs have been shown to regulate various cellular processes important for development, normal physiology and disease. In this talk, a short overview of lncRNA biology and functions is given, as well as an example of the study of a highly conserved lncRNA critical for genome stability, tissue homeostasis and aging.

Short Bio:

Florian Kopp is an Assistant Professor of Clinical Pharmacy in the Department of Pharmaceutical Sciences at the University of Vienna, Austria. Before being appointed at the University of Vienna, Florian studied Pharmacy at the Ludwig-Maximilian-University Munich, Germany, where he also completed a PhD in Pharmaceutical Biotechnology in the laboratory of Prof. Dr. Ernst Wagner. He then performed a postdoctoral training in the laboratory of Prof. Dr. Joshua Mendell in the Department of Molecular Biology at the University of Texas Southwestern Medical Center in Dallas, USA. His research has been focused on the molecular functions of noncoding RNAs in normal physiology and disease as well as on their therapeutic implications.