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# RAMIN SHIEKHATTAR

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CV

PARTICIPANT AT:

## CODING AND NON-CODING FUNCTIONS OF THE GENOME BARCELONA CONFERENCE ON EPIGENETICS AND CANCER

**October, 29<sup>th</sup>-30<sup>th</sup>, 2015, Barcelona**

**Ramin Shiekhattar**, Academic Director of the Oncogenomic Core Facility, Chief of Division of Cancer Genomics and Epigenetics, Director of the Cancer Epigenetics Research Program, Professor of Biochemistry & Molecular Biology and Professor at Dr. John T. Macdonald Foundation Department of Human Genetics, University of Miami, Miami, Florida

Dr. Ramin Shiekhattar recently joined the University of Miami Miller School of Medicine as Professor in the Departments of Human Genetics and Biochemistry & Molecular Biology. He is also the Director of the Cancer Epigenetics Research Program, Chief of the Division of Cancer Genomics and Epigenetics as well as the academic Director of the Oncogenomic Core Facility. Dr. Shiekhattar obtained his Ph.D. degree from the University of Kansas and completed his postdoctoral training at UMDNJ. Dr. Shiekhattar's laboratory has made a number of important contributions over the past years in identifying and characterizing important mediators of epigenetic regulation and noncoding RNA processing that contribute to cancer development. Importantly, laboratories' recent work has begun to explore a class of long noncoding RNAs (lncRNAs) that behave similar to transcriptional enhancers. The laboratory is interested in deciphering the function of this class of lncRNAs in the context of relevant models of development and disease, using state of the arts genomics and proteomics approaches. These data will be coupled with the development of novel computational methods to decipher the lncRNA "code" that helps to define the role of enhancer RNAs in development and disease

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ABSTRACT

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### **Biogenesis and Mechanism of Action of Enhancer RNAs**

Enhancers are distal regulatory elements that mediate tissue- and temporal-specific gene expression during development. Recent evidence has revealed that active enhancers are transcribed and that such enhancer RNAs (eRNAs) play an important role in transcriptional activation. We show that the metazoan-specific RNA polymerase II (RNAPII)-associated complex, Integrator, is recruited to enhancers and super-enhancers in a stimulus-dependent manner. Functional depletion of Integrator subunits diminished the signal-dependent induction of eRNAs at enhancers and super-enhancers. Global nuclear run-on and RNAPII profiling demonstrated that Integrator regulates the maturation (3'-end processing) of eRNAs. We show that the production of mature eRNAs require the catalytic activity of Integrator complex. We propose a role for Integrator in biogenesis of eRNAs in metazoans.

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