

Masaryk University, Faculty of Science  
University Campus Brno-Bohunice  
September 19, 2025

Number of listeners: 60

## Evaluation of the public lecture delivered by Dr. Jiri Kohoutek

### LECTURE TOPIC : REGULATION OF RNA POLYMERASE II ACTIVITY

— Dr. Jiří Kohoutek's public lecture was a captivating and easy-to-understand presentation that illustrated his complex insight into the field of molecular and cell biology. Dr. Kohoutek presented the role of transcription cyclin-dependent kinases and their cyclins in cellular processes in an engaging manner. The lecture was logically organized, beginning with a definition and then moving on to the central role of RNA polymerase II in the control of transcription in eukaryotic organisms. Dr. Kohoutek then reviewed the complex and often elusive functions of transcriptional cyclin-dependent kinases, particularly CDK9, CDK12 and CDK13, in regulating RNA polymerase II activity in various cellular systems and transgenic mouse models. He also discussed the promising therapeutic potential of selective CDK12 inhibitors, which can be used both in combination and as monotherapy to treat patients. These findings highlight the complex interplay between transcriptional regulation and cell signaling pathways and underscore the importance of CDKs as potential targets in precision medicine. The lecture concluded with a discussion on history of RNA polymerase field, current challenges and future directions in translating these molecular findings into clinical interventions.

Prior to the lecture, the habilitation thesis had been evaluated by three independent reviewers, who positively assessed the integrative approach, complex methodology and overall quality in terms of both content and style. In answering questions from the reviewers and the audience, Dr. Kohoutek demonstrated his deep expertise in the field of cell cycle regulation, thus confirming his qualification for the habilitation.

prof. RNDr. Vladimír Krýštof, Ph.D.

RNDr. Martin Pospíšek, Ph.D.

Prof. Vjačeslav Jurčenko, Ph.D., MSc.

prof. RNDr. Jan Šmarda, Ph.D.

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