

## COMMENTARY TO HABILITATION THESIS<sup>1</sup>

**Name of the habilitation thesis: Role of transcription cyclin-dependent kinases and their cyclins in cellular processes**

**Name and surname of the applicant: Jiří Kohoutek**

The list of ten original research articles and three reviews below denotes selected peer-reviewed articles in support of my contributions to the topic of this thesis. The majority of articles were published in Q1 journals.

**[1]**<sup>2</sup> BARBORIC, Matjaz, Jiri KOHOUTEK, Jason P. PRICE, Dalibor BLAZEK, David H. PRICE and B. Matija PETERLIN. Interplay between 7SK snRNA and oppositely charged regions in HEXIM1 direct the inhibition of P-TEFb. The EMBO journal. 2005, 24(24), 4291–4303. (JCR 2005; IF = 10,1; Q1 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
30	0	15	20

**[2]** BLAZEK, Dalibor, Matjaz BARBORIC, Jiri KOHOUTEK, Irena OVEN and B. Matija PETERLIN. Oligomerization of HEXIM1 via 7SK snRNA and coiled-coil region directs the inhibition of P-TEFb. Nucleic Acids Research. 2005, 33(22), 7000–7010. (JCR 2005; IF = 7,5; Q1 – Biochemistry & Molecular Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
20	0	20	10

**[3]** KOHOUTEK, Jiri, Dalibor BLAZEK and B. Matija PETERLIN. Hexim1 sequesters positive transcription elongation factor b from the class II transactivator on MHC class II promoters. Proceedings of the National Academy of Sciences. 2006, 103(46), 17349–17354. (JCR 2006; IF = 9,6; Q1 – Multidisciplinary Sciences)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
60	0	70	50

**[4]** KOHOUTEK, Jiri. P-TEFb- the final frontier. Cell Division. 2009, 4, 19. (JCR 2009; IF = 4,0; Q2 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
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<sup>1</sup> The commentary must correspond to standard expectations in the field and must include a brief characteristic of the investigated matter, objectives of the work, employed methodologies, obtained results and, in case of co-authored works, a passage characterising the applicant's contribution in terms of both quality and content.

<sup>2</sup> Bibliographic record of a published scientific result, which is part of the habilitation thesis.

0	0	100	100
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**[5]** BLAZEK, Dalibor, Jiri KOHOUTEK, Koen BARTHOLOMEEUSEN, Eric JOHANSEN, Petra HULINKOVA, Zeping LUO, Peter CIMERMANCIC, Jernej ULE and B. Matija PETERLIN. The Cyclin K/Cdk12 complex maintains genomic stability via regulation of expression of DNA damage response genes. *Genes & Development*. 2011, 25(20), 2158–2172. (JCR 2011; IF = 11,6; Q1 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
30	0	30	40

**[6]** KOHOUTEK, Jiri and Dalibor BLAZEK. Cyclin K goes with Cdk12 and Cdk13. *Cell Division*. 2012, 7, 12. . (JCR 2012; IF = 3,4; Q2 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
0	0	50	50

**[7]** PACULOVÁ, Hana, Juraj KRAMARA, Šárka ŠIMEČKOVÁ, Radek FEDR, Karel SOUČEK, Ondřej HYLSE, Kamil PARUCH, Marek SVOBODA, Martin MISTRÍK and Jiří KOHOUTEK. BRCA1 or CDK12 loss sensitizes cells to CHK1 inhibitors. *Tumour Biology: The Journal of the International Society for Oncodevelopmental Biology and Medicine*. 2017, 39(10), 1010428317727479. (JCR 2017; IF = 4,6; Q2 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
10	80	40	50

**[8]** PACULOVÁ, Hana and Jiří KOHOUTEK. The emerging roles of CDK12 in tumorigenesis. *Cell Division*. 2017, 12, 7. (JCR 2017; IF = 4,6; Q2 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
0	30	35	50

**[9]** KOHOUTEK, Jiri, Qintong LI, Dalibor BLAZEK, Zeping LUO, Huimin JIANG and B. Matija PETERLIN. Cyclin T2 Is Essential for Mouse Embryogenesis. *Molecular and Cellular Biology*. 2009, 29(12), 3280–3285. (JCR 2009; IF = 6,1; Q1 – Biochemistry & Molecular Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
70	0	70	60

**[10]** OVEN Irena, BRDICKOVA Nada, KOHOUTEK Jiri, VAUPOTIC Tomas, NARAT M and Peterlin B. Matija. AIRE recruits P-TEFb for transcriptional elongation of target genes in medullary thymic epithelial cells. *Molecular and cellular biology*. 2007, 27(24). (JCR 2007; IF = 6,4; Q1 – Biochemistry & Molecular Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
20	0	10	10

**[111]** NOVÁKOVÁ, Monika, Marek HAMPL, Dávid VRÁBEL, Jan PROCHÁZKA, Silvia PETREZSELYOVÁ, Michaela PROCHÁZKOVÁ, Radislav SEDLÁČEK, Michaela KAVKOVÁ, Tomáš ZIKMUND, Jozef KAISER, Hsien-Chia JUAN, Ming-Ji FANN, Marcela BUCHTOVÁ and Jiří KOHOUTEK. Mouse Model of Congenital Heart Defects, Dysmorphic Facial Features and Intellectual Developmental Disorders as a Result of Non-functional CDK13. *Frontiers in Cell and Developmental Biology*. 2019, 7, 155. . (JCR 2019; IF = 5,1; Q2 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
10	80	60	50

**[121]** HAMPL, Marek, Nela JANDOVÁ, Denisa LUSKOVÁ, Monika NOVÁKOVÁ, Tereza SZOTKOWSKÁ, Štěpán ČADA, Jan PROCHÁZKA, Jiri KOHOUTEK and Marcela BUCHTOVÁ. Early embryogenesis in CHDFIDD mouse model reveals facial clefts and altered cranial neurogenesis. *Disease Models & Mechanisms*. 2024, 17(6), dmm050261. (JCR 2023; IF = 4,0; Q2 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
10	10	10	15

**[131]** JANSOVA, Denisa, Marketa KONCICKA, Anna TETKOVA, Renata CERNA, Radek MALIK, Edgar DEL LLANO, Michal KUBELKA and Andrej SUSOR. Regulation of 4E-BP1 activity in the mammalian oocyte. *Cell Cycle*. 2017, 16(10), 927–939. (JCR 2023; IF = 8,1; Q1 – Cell Biology)

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
0	10	20	15