



INTEG-RNA

INTEGRATION OF RNA BIOLOGY FOR NEXT- GENERATION SCIENTISTS

H2020-WIDESPREAD-2020-5

Project Number: 952541



D5.6 Final impact assessment report on CEITEC MU scientific excellence

Work Package: WP5
Deliverable due date: 31/12/2023
Responsible partner: MU
Editors: Eva Dubská
Deliverable number: D22
Deliverable type: Report
Dissemination level: Public
Created: 19/12/2022
Version: 1.0

1 STATEMENT

CEITEC's Strategy and R&D Support Office set the baseline for the 3 main KPIs related to the scientific excellence of the project outputs (publications of involved researchers from CEITEC MU in T10, publications realized in cooperation between Twinning partners, publications in Q1 where the first author is a PhD student from CEITEC MU whose supervisor belongs to the Twinning research team) and 3 KPIs that count Twinning activities realized during the project (number of outgoing ESR secondments, number of outward researchers secondments, number of inward researchers secondments).

Based on these indicators, INTEG-RNA had a significant role in increasing CEITEC scientific excellence through a strong publication record in prestigious journals, collaborative efforts with Twinning partners, and active involvement of Ph.D. students. The secondment activities reflect a dynamic and collaborative research environment, facilitating the exchange of knowledge and expertise within the consortium. These outcomes collectively contribute to the overall success of the Twinning project in fostering scientific excellence and advancing the field of research.

The details are provided in the following sections of the deliverable.

1.1 PUBLICATIONS

RGLs involved in INTEG-RNA from CEITEC MU (Mary Anne O'Connell, Štěpánka Vaňáčková, Peter Lukavsky, Dalibor Blažek, Panagiotis Alexiou (replaced by Vojtěch Bystrý), Karel Říha, Jiří Fajkus, Marek Mráz and Helene Robert Boisivon) produced **102 publications** from January 2021 - November 2023 (source: Web of Science Core Collection, document type: Article, Review or Letter). The RGLs are affiliated to the CEITEC MU. (Note: 99 publications were in journals with defined impact factor and average JIF percentile)

33 % of publications were in T10 journals, **4 %** of publications were realized in cooperation between Twinning partners and **55 %** of publications were in Q1. **6 %** of publications were in Q1 where the first author is Ph.D. student from CEITEC MU whose supervisor belongs to Research Groups involved in INTEG-RNA (and RGL is a co-author of publication).

In numbers of publications

- publications of involved researchers from CEITEC MU in T10: **34**
- publications realized in cooperation between Twinning partners: **4**
- publications in Q1 where the first author is a Ph.D. student from CEITEC MU whose supervisor belongs to the Twinning research team: **6**

1.2 SECONDMENTS AND INTERNSHIPS

Unfortunately, the outgoing problems with COVID during the 1st reporting period affected the start of secondments and internships. No one was allowed to join another lab last year due to measures that were applied by national governments and by the director of CEITEC MU. We resumed the secondments and internships in spring 2022.

In numbers of secondments:

- number of outgoing ESR secondments: 16
- number of outward researchers secondments: 4
- number of inward researchers secondments: 2

Table 1. ESR secondments

Secondee	Hosting institution	Term
Alžběta Kusová	IMB	07.03.2022 -13.03.2022
Praveenkumar Rengaraj	EMBL	17.07.2022-07.08.2022
Juan Francisco Sanchez Lopez	JGU	05.09.2022-07.10.2022
Karolína Trachtová	EMBL	06.11.2022-12.11.2022
Terézia Kurucová	EMBL	06.11.2022-12.11.2022
Qiupei Du	UEDIN	29.01.2023-10.03.2023
Pedro Zeni	EMBL	10.10.2023-29.10.2023
Tomáš Reigl	EMBL	02.07.2023-29.07.2023
Janka Melicherová	EMBL	01.09.2023-30.09.2023
Jiří Rudolf	JGU	06.10.2023-06.11.2023
Anna Rudolfová	IMB	06.10.2023-06.11.2023
Karolína Trachtová	UEDIN	18.06.2023-25.06.2023
Dagmar Al Tukmachi	UEDIN	18.06.2023-25.06.2023
Terézia Kurucová	EMBL	5.11.2023-25.11.2023
Praveenkumar Rengaraj	EMBL	03.12.2023-06.12.2023
Karolína Černovská	EMBL	13.11.2023-24.11.2023

Table 2. Researchers secondments

Secondee	Hosting institution	Term
Lucie Bozděchová	JGU	20.2.2022-18.3.2022
Vojtěch Bystrý	EMBL	06.11.2022-12.11.2022
Vojtěch Bystrý	UEDIN	31.07.2023-06.08.2023
Karla Plevová	EMBL	13.11.2023-24.11.2023

Table 2. Inward researchers secondments

Secondee	Sending institution	Term
Stefan Bresson	UEDIN	18.6.2023-28.6.2023
Jule Nieken	UEDIN	18.6.2023-28.6.2023

2 ANNEX 1 – List of publications

The list of publications (2021 - November 2023) in alphabet order:

- (1) Agathangelidis, A.; Chatzidimitriou, A.; Gemenetzi, K.; Giudicelli, V.; Karypidou, M.; Plevova, K.; Davis, Z.; Yan, X.-J.; Jeromin, S.; Schneider, C.; Pedersen, L. B.; Tschumper, R. C.; Sutton, L.-A.; Baliakas, P.; Scarfò, L.; Van Gastel, E. J.; Armand, M.; Tausch, E.; Biderman, B.; Baer, C.; Bagnara, D.; Navarro, A.; Langlois De Septenville, A.; Guido, V.; Mitterbauer-Hohendanner, G.; Dimovski, A.; Brieghel, C.; Lawless, S.; Meggendorfer, M.; Brazdilova, K.; Ritgen, M.; Facco, M.; Tresoldi, C.; Visentin, A.; Patriarca, A.; Catherwood, M.; Bonello, L.; Sudarikov, A.; Vanura, K.; Roumelioti, M.; Skuhrova Francova, H.; Moysiadis, T.; Veronese, S.; Giannopoulos, K.; Mansouri, L.; Karan-Djurasevic, T.; Sandaltzopoulos, R.; Bödör, C.; Fais, F.; Kater, A.; Panovska, I.; Rossi, D.; Alshemmari, S.; Panagiotidis, P.; Costeas, P.; Espinet, B.; Antic, D.; Foroni, L.; Montillo, M.; Trentin, L.; Stavroyianni, N.; Gaidano, G.; Francia Di Celle, P.; Niemann, C.; Campo, E.; Anagnostopoulos, A.; Pott, C.; Fischer, K.; Hallek, M.; Oscier, D.; Stilgenbauer, S.; Haferlach, C.; Jelinek, D.; Chiorazzi, N.; Pospisilova, S.; Lefranc, M.-P.; Kossida, S.; Langerak, A. W.; Belessi, C.; Davi, F.; Rosenquist, R.; Ghia, P.; Stamatopoulos, K. Higher-Order Connections between Stereotyped Subsets: Implications for Improved Patient Classification in CLL. *Blood* 2021, 137 (10), 1365–1376. <https://doi.org/10.1182/blood.2020007039>.
- (2) Agrawal, R.; Jiri, F.; Thakur, J. K. The Kinase Module of the Mediator Complex: An Important Signalling Processor for the Development and Survival of Plants. *JOURNAL OF EXPERIMENTAL BOTANY*, 2021, 72, 224–240. <https://doi.org/10.1093/jxb/eraa439>.
- (3) Agrawal, R.; Sharma, M.; Dwivedi, N.; Maji, S.; Thakur, P.; Junaid, A.; Fajkus, J.; Laxmi, A.; Thakur, J. K. MEDIATOR SUBUNIT17 Integrates Jasmonate and Auxin Signaling Pathways to Regulate Thermomorphogenesis. *PLANT PHYSIOLOGY*, 2022, 189, 2259–2280. <https://doi.org/10.1093/plphys/kiac220>.
- (4) Ahmadli, U.; Kalidass, M.; Khaitova, L. C.; Fuchs, J.; Cuacos, M.; Demidov, D.; Zuo, S.; Pecinkova, J.; Mascher, M.; Ingouff, M.; Heckmann, S.; Houben, A.; Riha, K.; Lermontova, I. High Temperature Increases Centromere-Mediated Genome Elimination Frequency and Enhances Haploid Induction in Arabidopsis. *Plant Communications* 2023, 4 (3), 100507. <https://doi.org/10.1016/j.xplc.2022.100507>.
- (5) Arpas, T.; Jelinkova, H.; Hrabovsky, S.; Orsulova, M.; Vrzalova, Z.; Navrkalova, V.; Brhelova, E.; Bryjova, L.; Bulikova, A.; Ondrouskova, E.; Sejnohova, M.; Folber, F.; Sedová, P.; Mayer, J.; Pospisilova, S.; Jarosova, M.; Doubek, M. Very Rare Near-haploid Acute Lymphoblastic Leukemia Resistant to Immunotherapy and CAR-T Therapy in 19-year-old Male Patient. *Clinical Case Reports* 2022, 10 (3), e05545. <https://doi.org/10.1002/ccr3.5545>.
- (6) Attuluri, V. P. S.; Sánchez López, J. F.; Maier, L.; Paruch, K.; Robert, H. S. Comparing the Efficiency of Six Clearing Methods in Developing Seeds of Arabidopsis Thaliana. *Plant Reprod* 2022, 35 (4), 279–293. <https://doi.org/10.1007/s00497-022-00453-4>.
- (7) Bencurova, P.; Baloun, J.; Hynst, J.; Oppelt, J.; Kubova, H.; Pospisilova, S.; Brazdil, M. Dynamic miRNA Changes during the Process of Epileptogenesis in an Infantile and Adult-Onset Model. *Sci Rep* 2021, 11 (1), 9649. <https://doi.org/10.1038/s41598-021-89084-9>.
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- (9) Cairo, A.; Vargova, A.; Shukla, N.; Capitaio, C.; Mikulkova, P.; Valuchova, S.; Pecinkova, J.; Bulankova, P.; Riha, K. Meiotic Exit in Arabidopsis Is Driven by P-Body-Mediated Inhibition of Translation. *SCIENCE*, 2022, 377, 629–634. <https://doi.org/10.1126/science.abo0904>.
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- (11) Cavallin, I.; Bartosovic, M.; Skalicky, T.; Rengaraj, P.; Demko, M.; Schmidt-Dengler, M. C.; Drino, A.; Helm, M.; Vanacova, S. HITS-CLIP Analysis of Human ALKBH8 Reveals Interactions with Fully Processed Substrate tRNAs and with Specific Noncoding RNAs. *RNA* 2022, rna.079421.122. <https://doi.org/10.1261/rna.079421.122>. student Cavallin (supervisor Š. Vaňáčková) Johannes Gutenberg Univ Mainz, Inst Pharmaceut & Biomed Sci IPBS, D-55128 Mainz, Germany
- (12) Covelo-Molares, H.; Obrdlik, A.; Postulkova, I.; Dohnalkova, M.; Gregorova, P.; Ganji, R.; Potesil, D.; Gawryski, L.; Varjosalo, M.; Vanacova, S. The Comprehensive Interactomes of Human Adenosine RNA Methyltransferases and Demethylases Reveal Distinct Functional and Regulatory Features. *NUCLEIC ACIDS RESEARCH*, 2021, 49, 10895–10910. <https://doi.org/10.1093/nar/gkab900>. student Covelo-Molares (supervisor Š. Vaňáčková)
- (13) Dave, Z.; Vondálová Blanářová, O.; Čada, Š.; Janovská, P.; Zezula, N.; Běhal, M.; Hanáková, K.; Ganji, S. R.; Krejci, P.; Gömöryová, K.; Peschelová, H.; Šmída, M.; Zdráhal, Z.; Pavlová, Š.; Kotašková, J.; Pospíšilová, Š.; Bryja, V. Lyn Phosphorylates and Controls ROR1 Surface Dynamics During Chemotaxis of CLL Cells. *Front. Cell Dev. Biol.* 2022, 10, 838871. <https://doi.org/10.3389/fcell.2022.838871>.
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Giassa, I.-C.; Alexiou, P. Bioinformatics and Machine Learning Approaches to Understand the Regulation of Mobile Genetic Elements. *BIOLOGY-BASEL*, 2021, 10. <https://doi.org/10.3390/biology10090896>.
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- (36) Hrabovsky, S.; Vrzalova, Z.; Stika, J.; Jelinkova, H.; Jarosova, M.; Navrkalova, V.; Martenek, J.; Folber, F.; Salek, C.; Horacek, J. M.; Pospisilova, S.; Mayer, J.; Doubek, M. Genomic Landscape of B-Other Acute Lymphoblastic Leukemia in an Adult Retrospective Cohort with a Focus on BCR-ABL1-like Subtype. *Acta Oncologica* 2021, 60 (6), 760–770. <https://doi.org/10.1080/0284186X.2021.1900908>.
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