

SUMMARY

Experienced RNA and molecular biologist with ~16 years of research experience. Primary interests in RNA biology with a focus on RNA modifications and inflammatory diseases. Broad range of analytical and technical skills. Self-motivated, with critical thinking, multi-tasking abilities and a thorough attention to detail. Ability to view problems from multiple perspectives and thus able to handle challenging projects. Proven team worker, with strong experience in national and international collaborations. Recently focusing on my own research team and coordinating an interdisciplinary research consortium that aims to improve treatments for IBD patients from bench to bedside.

INFORMATION

Name:	Cornelia Vesely PhD
Date of Birth:	30th September 1983, Salzburg, Austria
Citizenship:	Austrian
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EDUCATION

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| 2009 - 2013 | PhD in Molecular Biology at the University of Vienna (International Doctoral Program in RNA Biology).
Thesis Projects: <i>Effects of RNA editing on microRNA abundance and processing.</i> & <i>Regulation of the dynamic expression of DROSHA in Xenopus leavis development.</i> |
| 2006 - 2009 | DI (Master) in Biotechnology at the University of Natural Resources and Life Sciences (BOKU), Vienna.
Thesis Project: <i>Identification and characterization of phosphorylation sites of protein phosphatase 2A (PP2A) B-type subunits.</i> |

COURSES

- 2013/2014 Associate Degree: “**Quality assurance in the chemical laboratory**”, Montanuniversität Leoben, Austria
- 2011 “**EMBO Practical Course on Analysis of High Throughput Sequencing Data**” EMBL-EBI Hinxton, UK
- 2011 “**Special statistics in biomedicine**”, Center for Integrative Bioinformatics, Vienna, Austria

EXPERIENCE

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| 08.2019-08.2023 | Project coordinator & Principal Investigator , Medical University of Vienna, Center for Anatomy and Cell Biology; |
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Topic: *Epitranscriptomic changes in inflammatory bowel diseases.*

02.2016-07.2018 **Postdoc**, Medical University of Vienna, Center for Anatomy and Cell Biology

Project: *ADAR1 RNA substrates and innate immunity*

Including 2 parental leaves:

- 08.2018 – 07.2019 (*21.09.2018)

- 01.2017 – 10.2017 (*06.03.2017)

04.2014-01.2016 **Postdoc**, CCRI (Children's Cancer Research Institute), Group: Leukemia Biology

Project: *Genomic and transcriptional characterization of P2RY8-CRLF2-positive childhood acute lymphoblastic leukemia.*

12.2013-03.2014 **Postdoc**, University of Vienna

Project: *Transcriptomic changes upon ADAR1 deficiency.*

KEY SKILLS

- **Project management** of an interdisciplinary research consortium (personnel and budget management and reporting experience)
- **Expertise:** RNA biology, RNA editing, microRNA, RNA binding proteins, Cell signaling, Leukemia biology and inflammatory diseases.
- **Scientific writing** and **peer reviewing** of scientific articles. Grant writing.
- Team player, well organized, determined, reliable, multitasking ability, able to work under pressure.

GRANTS

- FWF Zukunftskolleg (Young independent researcher group), 2019: 3 years grant for four Postdocs on a highly innovative, interdisciplinary topic. Coordinator role.
- KAPSCH Next-Generation Sequencing Grant, 2015
- Vienna Biocenter PhD Award, 2014

PUBLICATIONS

Farhat A, Radhouani M, Deckert F, Zahalka S, Pimenov L, Fokina A, Hakobyan A, Oberndorfer F, Brösamlen J, Hladik A, Lakovits K, Meng F, Quattrone F, Boon L, **Vesely C**, Starkl P, Boucheron N, Menche J, van der Veecken J, Ellmeier W, Gorki AD, Campbell C, Gawish R, Knapp S. *An aging bone marrow exacerbates lung fibrosis by fueling profibrotic macrophage persistence.* Sci Immunol. 2025 Mar 28;10(105): eadk5041. doi: 10.1126/sciimmunol.adk5041.

Flanagan K, Gassner K, Lang M, Ozelyte J, Hausmann B, Crepaz D, Pjevac P, Gasche C, Berry D, **Vesely C***, Pereira FC*. *Human-derived microRNA 21 regulates indole and L-tryptophan biosynthesis transcripts in the gut commensal Bacteroides thetaiotaomicron.* mBio. 2025 Mar 12;16(3): e0392824. doi: 10.1128/mbio.03928-24.

Kleinova R, Rajendra V, Leuchtenberger AF, Lo Giudice C, **Vesely C**, Kapoor U, Tanzer A, Derdak S, Picardi E, Jantsch MF. *The ADAR1 editome reveals drivers of editing-specificity for ADAR1-isoforms* Nucleic Acids Res. 2023 May 22;51(9):4191-4207. doi: 10.1093/nar/gkad265.

Goldeck M, Gopal A, Jantsch MF, Mansouri Khosravi HR, Rajendra V, **Vesely C**. *How RNA editing keeps an I on physiology*. Am J Physiol Cell Physiol. 2022 Nov 1;323(5):C1496-C1511. doi: 10.1152/ajpcell.00191.2022

Vesely C, Jantsch MF. An I for an A: *Dynamic Regulation of Adenosine Deamination-Mediated RNA Editing*. Genes (Basel). 2021 Jul 1;12(7):1026. doi: 10.3390/genes12071026.

Pereira FC, Wasmund K, Cobankovic I, Jehmlich N, Herbold CW, Lee KS, Sziranyi B, **Vesely C**, Decker T, Stocker R, Warth B, von Bergen M, Wagner M, Berry D. *Rational design of a microbial consortium of mucosal sugar utilizers reduces Clostridiodes difficile colonization*. Nat Commun. 2020 Oct 9;11(1):5104. doi: 10.1038/s41467-020-18928-1.

Altav F*, **Vesely C***, Sheikh AM, Munir R, Shah STA, Tariq A. Modulation of ADAR mRNA expression in patients with congenital heart defects. PLoS One, 2019 Apr 30; 14(4). doi: 10.1371/journal.pone.0200968

Vesely C*, Frech C*, Eckert C, Cario G, Mecklenbräuker A, Zur Stadt U, Nebral K, Kraler F, Fischer S, Attarbaschi A, Schuster M, Bock C, Cavé H, von Stackelberg A, Schrappe M, Horstmann MA, Mann G, Haas OA, Panzer-Grümayer. *Genomic and transcriptional landscape of P2RY8-CRLF2-positive childhood acute lymphoblastic leukemia*. Leukemia, 2017 Jul; 31(7): 1491-1501. doi: 10.1038/leu.2016.365

Daryabeigi A, Woglar A, Baudrimont A, Silva N, Paouneskou D, **Vesely C**, Rauter M, Penkner A, Jantsch M, Jantsch V. *Nuclear Envelope Retention of LINC Complexes Is Promoted by SUN-1 Oligomerization in the Caenorhabditis elegans Germ Line*. Genetics, 2016 Jun; 203(2): 733-748. doi: 10.1534/genetics.116.188094

Mannion NM, Greenwood SM, Young R, Cox S, Brindle J, Read D, Nellåker C, **Vesely C**, Ponting CP, McLaughlin P, Jantsch MF, Dorin J, Adams IR, Scadden ADJ, Öhman M, Keegan LP and O'Connell MA. *The RNA-editing enzyme ADAR1 controls innate immune responses to RNA*. Cell Reports, 2014 Nov; 9(4): 1482-1494. doi: 10.1016/j.celrep.2014.10.041

Vesely C, Tauber S, Sedlazeck FJ, Tajaddod M, von Haeseler A, Jantsch MF. *ADAR2 induces reproducible changes in sequence and abundance of mature microRNAs in the mouse brain*. Nucleic Acids Research, 2014 Oct; 42(19): 12155-12168. doi: 10.1093/nar/gku844

Muggenheimer D*, **Vesely C***, Tian N, Yongfeng J, Nimpf S, Jantsch MF. *DROSHA protein levels are translationally regulated during Xenopus oocyte maturation*. Mol. Biol. Cell, 2014 Jul 1; 25(13): 2094-2104. doi: 10.1091/mbc.E13-07-0386

Vesely C*, Tauber S*, Sedlazeck FJ, von Haeseler A, Jantsch MF. *Adenosine deaminases that act on RNA induce reproducible changes in abundance and sequence of embryonic miRNAs*. Genome Research, 2012 Aug; 22(8): 1468-1476. doi: 10.1101/gr.133025.111.

Jantsch MF and **Vesely C** (2011) *Chapter 7: RNA Binding Domains and RNA Recognition by RNA-Editing Machineries*. RNA Binding Proteins, Landes Bioscience

* ... contributed equally