Rushad Pavri, PhD

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Research Institute for Molecular Pathology (IMP)
Vienna Biocenter (VBC)
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EDUCATION

1999-2005 PhD in Biochemistry from The University of Medicine and Dentistry of New Jersey, New Jersey, USA

1997-1999 MSc in Biotechnology from Madurai Kamaraj University, Madurai, India

1994-1997 BSc from St. Xavier's College, University of Mumbai, Mumbai, India

POSITIONS HELD

2006-2011 Postdoctoral fellow at The Rockefeller University, New York, USA.

2011-2012 Research associate at The Rockefeller University, New York, USA.

2013-present Group Leader, Research Institute for Molecular Pathology (IMP), Vienna, Austria

PEER-REVIEWED PUBLICATIONS

2022

Peycheva, M., Neumann, T., Malzl, D., Nazarova, M., Schoeberl, U. and **Pavri, R**. DNA replication timing directly regulates the frequency of oncogenic chromosomal translocations. **Science** 377, 6612 (2022). DOI: 10.1126/science.abj5502

2021

Appel, LM., Franke, V., Bruno, M., Grishkovskaya, I., Kasiliauskaite, A., Kaufmann, T., Schoeberl, UE., Puchinger, MG., Kostrhon, S., Ebenwaldner, C., Sebesta, M., Beltzung, E., Mechtler, K., Lin, G., Vlasova, A., Leeb, M., **Pavri, R.,** Stark, A., Akalin, A., Stefl, R., Bernecky, C., Djinovic-Carugo, K., Slade, D. PHF3 regulates neuronal gene expression through the Pol II CTD reader domain SPOC. **Nature Communications**. 12(1):6078 (2021). DOI: 10.1038/s41467-021-26360-2

2020

Fitz, J., Neumann, T., Steininger, M., Wiedemann, E-M., Cantoran Garcia, A., Athanasiadis, A., Schoeberl, U. and **Pavri, R**. Spt5-mediated enhancer transcription directly couples enhancer activation with physical promoter interaction. **Nature Genetics** 52, 505–515 (2020). DOI: 10.1038/s41588-020-0605-6

2018

Fitz, J., Neumann, T. and **Pavri, R**. Regulation of RNA polymerase II processivity by Spt5 is restricted to a narrow window during elongation. **EMBO J** 37, 97965 (2018). DOI: 10.15252/embj.201797965

2017

Pavri, R. R loops in the regulation of antibody gene diversification. **Genes** 8, 154 (2017). DOI: 10.3390/genes8060154

2016

Wiedemann, E-M., Peycheva, M. and **Pavri, R**. DNA Replication Origins in Immunoglobulin Switch Regions Regulate Class Switch Recombination in an R Loop-Dependent Manner. **Cell Reports** 17, 2927–2942 (2016). DOI: 10.1016/j.celrep.2016.11.041

2014

Qian, J., Wang, Q., Dose, M., Pruett, N., Kieffer-Kwon, K., Resch, W., Liang, G., Tang, Z., Mathé, E., Benner, C., Dubois, W., Nelson, S., Vian, L., Oliveira,T., Jankovic, M., Hakim, O., Gazumyan, A., **Pavri, R.,** Awasthi, P., Song, B., Liu, G., Chen, L., Zhu, S., Feigenbaum, L., Staudt, L., Murre, C., Ruan, Y., Robbiani, D. F., Pan-Hammarstrom, Q., Nussenzweig, M. C., and Casellas, R. B Cell Super-Enhancers and Regulatory Clusters Recruit AID Tumorigenic Activity. **Cell** 159, 1524-37 (2014). DOI: 10.1016/j.cell.2014.11.013

Wang, Q., Oliveira, T., Jankovic, M., Silva, I. T., Hakim, O., Yao, K., Gazumyan, A., Mayer, C. T., **Pavri, R.**, Casellas, R., Nussenzweig, M. C. and Robbiani, D. F. Epigenetic targeting of

Activation-Induced Cytidine Deaminase. **Proc Natl Acad Sci** 111, 18667-72 (2014). DOI: 10.1073/pnas.1420575111

2011

Pavri, R. and Nussenzweig, M. C. AID targeting in antibody diversity. **Advances in Immunology** 110, 1-26 (2011). DOI: 10.1016/B978-0-12-387663-8.00005-3

2010

Pavri, R., Gazumyan, A., Jankovic, M., Di Virgilio, M., Klein, I., Ansarah-Sobrinho, C., Resch, W., Yamane, A., Reina San-Martin, B., Barreto, V., Nieland, T. J., Root, D. E., Casellas, R., and Nussenzweig, M. C. Activation Induced Cytidine Deaminase targets DNA at sites of RNA Polymerase II stalling by interaction with Spt5. **Cell** 143, 122-133 (2010). DOI: 10.1016/j.cell.2010.09.017

2006

Pavri, R., Zhu, B., Li, G., Trojer, P., Mandal, S., Shilatifard, A., Reinberg, D. Histone H2B monoubiquitination functions cooperatively with FACT to regulate elongation by RNA Polymerase II. **Cell** 125, 703-717 (2006). DOI: 10.1016/j.cell.2006.04.029

2005

Pavri, R., Lewis, B., Kim, T-K., Dilworth, F., Erdjument-Bromage, H., Tempst, P., de Murcia, G., Evans, R., Chambon, P., Reinberg, D. PARP-1 confers specificity in a retinoid signaling pathway via direct modulation of Mediator. **Molecular Cell** 18, 83-96 (2005). DOI: 10.1016/j.molcel.2005.02.034

PREPRINTS (currently in revision)

2022

Costea, J., Schoeberl, U. E., Malzl, D., Von der Linde, M., Fitz, J., Makharova, M., Goloborodko, A., **Pavri, R.** A de novo transcription-dependent TAD boundary underpins critical multiway interactions during antibody class switch recombination. bioRxiv . 2022.04.26.489407

Schoeberl, U. E., Fitz, J., Froussios, K., Valieris, R., Makharova, M., Ourailidis, I., Bauer, B., Neumann, T., Wiedemann, E., Steininger, M., Garcia, A. C., Mastrovito, M., Mouquet, H., Tojal Da Silva, I., **Pavri, R.** Somatic hypermutation spectra are independent of the local transcriptional and epigenetic landscape. bioRxiv . 2022.05.21.492925

AWARDS

2007-2010 Irvington Institute Postdoctoral Fellowship of the Cancer Research Institute.

1999-2000 J.N. Tata Scholarship and J. Tata Gift Award (1999-2000).

GRANTS

2021-2023 Standalone grant P35396 for €400,000 from the Austrian Science Fund (FWF) titled, "Role of chromatin topology in antibody somatic hypermutation."

2018-2022 Standalone grant (P32043-B) for €400,000 from the Austrian Science Fund (FWF) titled, "The Role of Spt5 in enhancer-mediated gene regulation."

2016-2020 Standalone grant (P29163-B26) for €350,000 from the Austrian Science Fund (FWF) titled, "The role of DNA replication in B cell genome instability."

INVITED TALKS

2023 (scheduled)

- Department of Immunology, Institut Pasteur, Paris, France

2022

- Meeting on Antibody Diversification and DNA deaminases in Immunity and Cancer, Quebec City, Canada

2021

- School of Immunology & Microbial Sciences, King's College London, London, UK
- EMBL Symposium: Friend or Foe: Transcription & RNA meet DNA Replication & Repair, Heidelberg, Germany
- Medical University of Vienna, Center for Anatomy and Cell Biology, Vienna, Austria

2019

- Sir William Dunn School of Pathology, Oxford, UK
- The Blizard Institute, Queen Mary University London, London, UK
- MRC London Institute of Medical Sciences, London, UK

2018

- Meeting on DNA and RNA Editing by AID/APOBEC Proteins, Ma'ale HaHamisha, Israel
- Memorial Sloan Kettering Cancer Center, New York, USA
- Max Delbrück Center for Molecular Medicine, Berlin, Germany

2016

- Meeting on “Comparative Biomedicine - Key Pathways in Infection and Cancer”, Ludwig Boltzmann Institute, Vienna, Austria

2015

- MRC Laboratory of Molecular Biology, Cambridge, United Kingdom
- Max Perutz Labs, Vienna, Austria
- Keystone Meeting on “Golden Anniversary of B cell Discovery”, Banff, Canada
- The Columbia University, Dept of Microbiology & Immunology, New York, USA

OTHER SCIENTIFIC ACTIVITIES

- Reviewed grants for ERC, ANR (France), MRC (UK) and Wellcome Trust (UK)
- Reviewed ad hoc for Nature Genetics, Molecular Cell, eLife, Cell Reports, The Journal of Experimental Medicine, Genome Research, PLoS Biology and Frontiers in Immunology
- Member of PhD theses committees within Austria and in Europe
- Member of selection committees for hiring group leaders and heads of research facility