

CURRICULUM VITAE

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Date of Birth: 4th September 1976

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Present Position

Assistant Researcher at the Institute of Hygiene and Tropical Medicine (IHMT), Global Health and Tropical Medicine (GHTM), THOP Unit, Lisbon Nova University (UNL), Portugal.

Education

2015 - 2022: Six year graduation in Medicine, Faculty of Medicine of the Lisbon University (FMUL).

2007: PhD in Biomedical Sciences (speciality Morphological Sciences) by the Faculty of Medicine of the Lisbon University (FMUL).

1995 – 2000: Five year graduation course in Biology, Genetic and Microbiology variant, Faculty of Sciences of the Lisbon University (FCUL).

Professional Experience

2013 - 2018: Post-doctoral fellow at the Medical Microbiology Unit of the Institute of Hygiene and Tropical Medicine (IHMT), Lisbon Nova University (UNL).

2007 - 2012: Post-doctoral fellow at the Parc de Recerca Biomédica de Barcelona (PRBB), Center for Genomic Regulation (CRG), Barcelona, Spain. Supervisor: Prof. Juan Valcárcel.

2001 - 2006: PhD Student at the Institute of Molecular Medicine (IMM), Lisbon Faculty of Medicine. Supervisor: Prof. Maria Carmo-Fonseca. PhD thesis title: "PABPN1 protein: Aggregation properties in an OPMD cellular model and a novel role in splicing".

6/2004 - 7/2004: Visiting PhD student at the Institute of Biochemistry of the Halle/Wittenberg University, Halle, Germany. Supervisor: Prof. Elmar Wahle. Subject: Mass-spectrometry of PABPN1 interacting proteins.

3/2004 – 4/2004: CSH course "Protein Characterization and Purification", Cold Spring Harbor Laboratory, Cold Spring Harbor, United States.

8/2002 – 12/2002: Visiting PhD student at the Institute of Biochemistry of the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland. Supervisor: Prof. Ulrike Kutay. Subject: Role of PABPN1 in mRNA export.

7/2000 – 12/2000: Visiting student at the Institute of Biochemistry of the Halle/Wittenberg University, Halle, Germany. Supervisor: Prof. Elmar Wahle. Subject: Biochemistry of RNA binding proteins.

9/1999 – 6/2000: Undergraduate student at the Institute of Histology and Embryology of the Lisbon Faculty of Medicine. Supervisor: Prof. Maria Carmo-Fonseca. Subject: Nucleocytoplasmic transport of the Hepatitis Delta Virus.

Publications

- Quina AS., **Tavanez JP.**, Mathias ML. "Genetic variation at the p53 locus of two ecologically divergent *Microtus* pine voles: identification of molecular markers for species assignment". *Integr Zool.* 2021, Nov 9.doi: 10.1111/1749-4877.12607.
- **Tavanez JP.**, Caetano R., Branco C., Brito I., Pereira AM., Vassilevskaia T., Quina AS., Cunha C. "Hepatitis Delta virus interacts with splicing factor SF3B155 and alters pre-mRNA splicing of cell cycle control genes". *FEBS J.* 2020, 287:3719-3732.
- Alves C., Cheng H., **Tavanez JP.**, Casaca A., Gudima S., Roder H., Cunha C. "Structural and nucleic acid binding properties of hepatitis delta virus small antigen". *World J Virol.* 2017 May 12; 6(2): 26-35.
- Cunha C., **Tavanez JP.**, Gudima S. "Hepatitis delta virus: A fascinating and neglected pathogen". *World J Virol.* 2015 Nov 12;4(4):313-22.
- **Tavanez JP.**, Quina AS., Cunha C. "Virus and noncoding RNAs: stars in the host-virus interaction game". *Future Virology.* 2014 Dec 9(12), 1077-1087.
- Berndt H., Harnisch C., Rammelt C., Stohr N., Zirkel A., Dohm J., Himmelbauer H., **Tavanez JP.**, Huttelmaier S., Wahle E. "Maturation of mammalian H/ACA box snoRNAs: PAPD5-dependent adenylation and PARN-dependent trimming". *RNA.* 2012 May;18(5):958-72.
- **Tavanez JP.**, Madl T., Kooshapur H., Sattler M., Valcárcel J. "hnRNP A1 Proofreads 3' Splice Site Recognition by U2AF". *Mol Cell.* 2012 Feb 10;45(3):314-29.
- **Tavanez JP.**, Valcárcel J. "A splicing mastermind for EMT". *EMBO J.* 2010 Oct; 6;29(19):3217-8.
- **Tavanez JP.**, Bengoechea R., Berciano MT., Lafarga M., Carmo-Fonseca M., Enguita FJ. "Hsp70 chaperones and type I PRMTs are sequestered at intranuclear inclusions caused by polyalanine expansions in PABPN1". *PLoS One.* 2009 July; 29; 4(7):e6418.
- **Tavanez JP.**, Calado P., Braga J., Lafarga M., Carmo-Fonseca M. "In vivo aggregation properties of the nuclear poly(A)-binding protein PABPN1". *RNA.* 2005 May;11(5):752-62.
- Calapez A., Pereira HM., Calado A., Braga J., Rino J., Carvalho C., **Tavanez JP.**, Wahle E., Carmo-Fonseca M. "The motion of messenger ribonucleoprotein complexes in the nucleus of living cells is ATP-dependent and temperature-sensitive". *J Cell Biol.* 2002 Dec 9;159(5):795-805.
- Lafarga M., Berciano MT., Pena M., Mayo I., Castano JG., Bohmann D., Rodrigues JP., **Tavanez JP.**, Carmo-Fonseca M. "The clastosome: a sub-type of nuclear body enriched in 19S and 20S proteasomes, ubiquitin and protein substrates of the proteasome". *Mol Biol Cell.* 2002 Aug 1; 13(8): 2771-2782.
- **Tavanez JP.**, Cunha C., Silva MC., David E., Monjardino J. and Carmo-Fonseca M. "The Hepatitis Delta Virus shuttles between the nucleus and the cytoplasm". *RNA.* 2002 May; 8(5):637-46.

Teaching and supervision

Tavanez JP. Teaching of "Molecular and Cell Biology", Master's in Biomedical Sciences. IHMT, UNL (2014-present).

Tavanez JP. Teaching of "New Approaches in Cell Biology", "Applications in Molecular Biology" and "Applications in Microbiology", PhD in Biomedical Sciences. IHMT, UNL (2017-present).

Tavanez JP. Teaching of "RNA-Technology", Master's in Molecular Biology and Genetics. Faculty of Sciences of the Lisbon University (2014-2020).

Tavanez JP. "RNA-Protein Interactions in pre-mRNA Splicing", EURASNET Course. Teaching. Centre for Genomic Regulation (CRG), Barcelona, July 2009.

Tavanez JP. "Virology module", GABBA doctoral program. Teaching. Faculty of Pharmacy, Lisbon University, January 2003.

Tavanez JP. "mRNA biogenesis module", GABBA doctoral program. Teaching. Institute of Molecular Medicine (IMM), Lisbon Faculty of Medicine (2002 – 2005).

Mentoring activities

Supervision of the Master's Student Renata Bento Cunha in the project "Exosomes as a potential novel mechanism for HDV transmission independent of HBV infection". Master's in Biomedical Sciences, IHMT, UNL, 2019/2021.

Supervision of the Master's Student Ana Pereira in the project "Potential of the farnesyl-transferase inhibitor Lonafarnib in the therapeutics of HDV infection". Master's in Biomedical Sciences, IHMT, UNL, 2018/2019.

Supervision of the Master's Student Inês Brito in the project "Whole genome transcriptomic alterations in HDV-induced Hepatocellular Carcinoma". Master's in Biomedical Sciences, IHMT, UNL, 2017/2018.

Supervision of the Master's Student Rafael Caetano in the project "The role of the tumor suppressor RBM5 protein in Hepatocellular Carcinoma". Master's in Biomedical Sciences, IHMT, UNL, 2016/2017.

Supervision of the Master's Student Maryna Tsishkovska in the project "Prenylation inhibitors as a novel therapeutic strategy for effective treatment of HDV infection". Master's in Biomedical Sciences, IHMT, UNL, 2016/2017.

Supervision of the Master's Student Filipa Silva in the project "Hepatitis Delta Virus and splicing alterations". Master's in Biomedical Sciences, IHMT, UNL, 2015/2016.

Supervision of the Erasmus Student Piotr Szczepanowski in the project "HDV and Hepatocellular Carcinoma - role of signalling pathways". IHMT, UNL, 2015.

Supervision of the Erasmus Student Patrycja Chudzicka in the project "HDV and Hepatocellular Carcinoma – novel pharmacological therapies". IHMT, UNL, 2015.

Supervision of the undergraduate biology student Inês Antunes in the project "Role of SKIP in splicing – SKIP interacts with several splicing factors". IMM, FMUL, 2003/2004.

Fellowships

2/2013 – 10/2018: Post-Doctoral Fellow of the "Fundação para a Ciência e a Tecnologia" (FCT).

9/2006 - 12/2008: Long term Post-Doctoral Fellow of the European Molecular Biology Organization (EMBO).

1/2001 - 12/2004: PhD Fellow of the "Fundação para a Ciência e a Tecnologia" (FCT).

7/2000 – 12/2000: Short term fellow of the "Deutsche Forschungsgemeinschaft" (DFG).

9/1999 - 6/2000: Fellow of the "Programa de Desenvolvimento Educativo para Portugal" (PRODEP).

Project participation

"Whole genome analysis of pre-mRNA splicing alterations in HDV-induced hepatocellular carcinoma"
Fundação para a Ciência e a Tecnologia, PTDC/SAU-INF/29971/2017.

Coordinator: João Paulo Tavanez.

"Regulation of alternative pre-mRNA splicing during cell differentiation, development and disease"
Consolider Project RNAREG, Spanish Ministry of Science and Innovation, 2010-2011.

Coordinator: Juan Valcárcel; Member of team: João Paulo Tavanez.

"How do cells become cancerous?"

Association for International Cancer Research (AICR), 2007-2010.

Coordinator: Juan Valcárcel; Member of team: João Paulo Tavanez.

"TRI-EX: Oculopharyngeal muscular dystrophy – a paradigm to investigate new pharmaco-therapeutic approaches to trinucleotide expansion diseases and muscular dystrophies."

Funded by European Union, QLRT-2001-01673, 2002-2005.

Coordinator: Maria Carmo-Fonseca; Member of team: João Paulo Tavanez.

Scientific Awards

- Honorable Mention from the “2ª edição dos Prémios Janssen Inovação”, 2018.
- Research Grant “Grupo de Investigação Cancro Digestivo (GICD)/Bayer” First Prize, 2016.
- Long term Post-Doctoral Fellow of the European Molecular Biology Organization (EMBO), 2006.
- Pfizer Investigation First Prize with the work “Oculopharyngeal Muscular Dystrophy: molecular analysis of PABPN1 protein aggregation process”, Lisbon, Portugal, 2002.
- Young Investigator First Prize in the 5th Reunion of the Portuguese Society of Human Genetics with the work “PolyA binding activity of PABPN1 protein involved in Oculopharyngeal Muscular Dystrophy”, Aveiro, Portugal, 2001.
- Ricardo Jorge First Prize in Public Health with the work “Hepatitis Delta Virus: Transport between the nucleus and the cytoplasm; Implications in therapy”, Lisbon, Portugal, 2001.
- Laura Ayres First Prize in Microbiology and Pathogenesis with the work “Hepatitis Delta Virus: Transport between the nucleus and the cytoplasm; Implications in therapy”, Lisbon, Portugal, 2001.

Main areas of expertise

Medicine; Biomedical Sciences; Molecular Biology; Laboratorial Sciences; Cancer Biology; Microbiology and Genetics; Scientific Writing.

Current Research Interests

Gene expression regulation. RNA metabolism. Splicing and alternative splicing regulation. Alternative splicing in viral-induced hepatocellular carcinoma. Non-coding RNA biology. Identification and development of novel anti-tumoral drugs. RNA-based therapeutics.