André F. Rendeiro

Curriculum Vitae

✉ *arendeiro@cemm.oeaw.ac.at*
andre-rendeiro.com

Current position

2014-present **PhD student**, *CeMM Research Centre for Molecular Medicine of the Austrian Academy of Sciences*, Vienna, Austria, Christoph Bock's lab.

Education

2012-2014 **Masters in Molecular and Cell Biology**, *University of Aveiro*, Portugal.

2008-2012 **Bachelor in Biology**, *University of Aveiro*, Portugal.

Experience

Scientific Activity

2014-present **PhD student**, *CeMM Research Centre for Molecular Medicine of the Austrian Academy of Sciences, Vienna, Austria*, Christoph Bock's lab.

2013-2014 **The role of E2F regulation and H3K79 methylation in *Oikopleura dioica*'s cell cycle modes**, *Sars International Centre for Marine Molecular Biology, Bergen, Norway*, Eric Thompson's lab.

I investigated the molecular mechanisms of alternative cell cycle modes (particularly endocycles) in the chordate *Oikopleura dioica* by performing ChIP-seq on transcription factors involved in cell cycle regulation. I also studied the role of H3K79me on cell cycle regulation through functional studies on its methyltransferase, Dot1.

2011-2012 **Identification of cis-regulatory elements in *Nematostella vectensis* using ChIP-seq**, *Dept. of Molecular Evolution and Development, University of Vienna, Austria*, Uli Technau's lab.

I performed ChIP-seq of chromatin modifications and other regulatory proteins over several developmental stages of *Nematostella vectensis*, constructed a map of chromatin states and predicted cis-regulatory elements genome-wide. I also tested the function of some of these regions *in vivo* in a reporter assay.

2010-2011 **Tol2-mediated zebrafish transgenesis for studies in protein mistranslation**, *RNA Biology Laboratory, Biology Department, University of Aveiro, Portugal*, Manuel Santos' lab.

I created transgenic zebrafish that were used as a model for studies in neurodegeneration through protein aggregation. This was caused by increasing the level of translational error (mistranslation) during endogenous protein synthesis. I learned to build plasmid constructs, microinject them in zebrafish and screen for phenotypes.

2009-2010 **Transciptome studies with microarrays in heat-shocked yeast**, *RNA Biology Laboratory, Biology Department, University of Aveiro, Portugal*, Manuel Santos' lab.

I was involved in the analysis of microarray expression data from yeast under various treatments. I learned to pre-process, normalize and explore data programmatically to detect significant differential gene expression, clustering genes and exploring their ontology across conditions.

Publications

Peer reviewed

1. André F. Rendeiro*, Christian Schmidl*, Jonathan C. Strefford*, Renata Walewska, Zadie Davis, Matthias Farlik, David Oscier, Christoph Bock. 2016. **Chromatin accessibility maps of chronic lymphocytic leukemia identify subtype-specific epigenome signatures and transcription regulatory networks**. Nature Communications, 7-15. 2016. doi:10.1038/ncomms11938
2. Christian Schmidl*,André F. Rendeiro*, Nathan C Sheffield, Christoph Bock. 2015. **ChIPmentation: fast, robust, low-input ChIP-seq for histones and transcription factors**. Nature Methods. doi:10.1038/nmeth.3542
3. Michaela Schwaiger, Anna Schönauer, André F. Rendeiro, Carina Pribitzer, Alexandra Schauer, Anna Gilles, Johannes Schinko, David Fredman, and Ulrich Technau. 2015. **Evolutionary conservation of the eumetazoan gene regulatory landscape**. Genome Research, 1–12. 2014. doi:10.1101/gr.162529.113

* *equal contributions*

Non-peer reviewed

1. André F. Rendeiro, Pavla Navratilova, Eric Thompson (2014). **Chromatin preparation for ChIP-seq in *Oikopleura dioica***. figshare. http://dx.doi.org/10.6084/m9.figshare.884562

Communications

Conference talks

1. Michaela Schwaiger, Anna Schönauer, André F. Rendeiro, Carina Pribitzer, Alexandra Schauer, Anna Gilles, Johannes Schinko, David Fredman, and Ulrich Technau. **Evolutionary conservation of the eumetazoan gene regulatory landscape**. *XVIII Portuguese Genetics Society Meeting*, June 2013. Porto, Portugal

Conference posters

1. André F. Rendeiro, Christian Schmidl, Jonathan C. Strefford, Renata Walewska, Zadie Davis, Matthias Farlik, David Oscier, Christoph Bock. **Large-scale chromatin profiling uncovers heterogeneity of molecular phenotypes and gene regulatory networks of chronic lymphocytic leukemia**. *2016 Young Scientist Association PhD symposium*, May 2016. Vienna, Austria. https://dx.doi.org/10.6084/m9.figshare.3479528.v1
2. André F. Rendeiro, Christian Schmidl, Jonathan C. Strefford, Renata Walewska, Zadie Davis, Matthias Farlik, David Oscier, Christoph Bock. **Large-scale chromatin profiling uncovers heterogeneity of molecular phenotypes and gene regulatory networks of chronic lymphocytic leukemia**. *2016 Keystone Symposia on Chromatin and Epigenetics*, March 2016. Whistler, Canada. https://dx.doi.org/10.6084/m9.figshare.3479528.v1
3. Anna Schönauer, André F. Rendeiro, Michaela Schwaiger, Ulrich Technau. **Identification of cis-regulatory elements in the sea anemone *Nematostella vectensis***. *Evonet Symposium*, September 2012, Vienna Austria. http://dx.doi.org/10.6084/m9.figshare.107026

Skills

Computational

Programming languages: Python, R, Perl, C/C++ *In this order of proficiency*

Web development: HTML, CSS, PHP, Javascript, Django, Wordpress

Bioinformatics: ChIP-seq/ATAC-seq/DNase-seq data analysis; gene expression data analysis (microarray and RNA-seq); *de novo* transcriptome assembly and annotation; algorithm implementation

Molecular Biology

Techniques: Zebrafish chemical screening, Chromatin imunoprecipitation (ChIP), Library preparation, Western and Northern blotting, PCR, qRT-PCR, SDM PCR, molecular cloning, zebrafish and *Nematostella* microinjection, immunohistochemistry/fluorecence and confocal microscopy

Advanced courses

2015 3rd Machine learning for personalized medicine summer school - University of Sheffield

2011 Scientific writing course - University of Aveiro

Awards/Scholarships

2016 **Science and Art competition award of the 2016 YSA PhD symposium**.
Young Scientist association of the Medical University of Vienna

2016 **Scientific poster award on the 2016 YSA PhD symposium**.
Young Scientist association of the Medical University of Vienna

2013-2014 **Erasmus studies mobility program scholarship**.
European Commission

2011-2012 **Erasmus intership mobility program scholarship**.
European Commission

2009-2010 **'Integration into Research' Grant**.
Science and Technology Foundation - Portugal

Associative/Administrative positions

2016- Junior member of the European Hematology Association

2010-2012 Member of the Biology department counsel, University of Aveiro

2009-2011 Member of the undergraduate Biology committee, University of Aveiro

Languages

Portuguese	Native speaker	
English	Very good	*Fluent*
Spanish	Conversational	
German	Basic	*Basic words and phrases only*
French	Basic	*Basic words and phrases only*

Other interests

- Classical singing
- Choir conducting
- Literature
- Coding websites and web apps
- Opera
- Piano
- Cinema