André F. Rendeiro

Curriculum Vitae

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

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.

Thesis

Title *Regulation of Oikopleura dioica's alternative cell cycle modes*

Supervisor Professor Eric Thompson

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

Experience

Scientific Activity

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 (E2F). I also studied the role of histone 3 lysine 79 methylation 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 gene ontology across treatments.

Awards/Scholarships

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

Publications

Peer reviewed

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**. Genome Research, 1–12. doi:10.1101/gr.162529.113

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. 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 data analysis; gene expression data analysis (microarray and RNA-seq); *de novo* transcriptome assembly and annotation; genetic variant detection and annotation; implementation of Hidden Markov Models (HMM) methods	

Molecular Biology

Techniques	Chromatin imunoprecipitation (ChIP), Illumina library preparation, PCR, qRT-PCR, SDM PCR, molecular cloning, zebrafish and *Nematostella* microinjection, immunohistochemistry/fluorecence and confocal microscopy, Western and Northern blotting	

Advanced courses

2011	Scientific writing course (Maria Dornelas - University of St. Andrews)	

Associative/Administrative positions

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