



Curriculum Vitae

Dr. Astrid Böhne



Dr. ASTRID BÖHNE

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born 23.03.1982, Germany

Steady relationship with Dr. Steffen Fehrmann, one
son Oskar J. Böhne (*25.09.915)

Positions Held

- SINCE 04/2016**
ZOOLOGICAL INSTITUTE
UNIVERSITY BASEL, SWITZERLAND
JUNIOR GROUP LEADER
Swiss National Science foundation Ambizione fellow,
Research, team management and teaching
- 01/2011 - 03/2016**
ZOOLOGICAL INSTITUTE
UNIVERSITY BASEL, SWITZERLAND
POSTDOCTORAL FELLOW
Independent research, teaching and project work in the
group of Walter Salzburger
- 01/2007-12/2010**
INST. FUNCTIONAL GENOMICS
ENS DE LYON, FRANCE
DISSERTATION
PhD supervised by Jean-Nicolas Volff, defended *summa
cum laude*
- 10/2006-12/2006**
PHYSIOLOGICAL CHEMISTRY I
UNIVERSITY WÜRZBURG, GERMANY
RESEARCH ASSOCIATE
Member of the BioFuture research group of Jean-Nicolas
Volff

Education

- 10/2003-10/2006**
UNIVERSITY WÜRZBURG, GERMANY
MASTER IN BIOLOGY
Master studies in genetics, biochemistry, virology and
immunology, final grade "very good"
- 09/2004-02/2005**
UNIVERSITY BARCELONA, SPAIN
INTERNSHIP IN GENETICS
Research project at the Departement of Genetics supervised
by Florenci Serras and Montserrat Corominas
- 09/2001-09/2003**
UNIVERSITY WÜRZBURG, GERMANY
BACHELOR IN BIOLOGY
General biology, chemistry and physics,
final grade "good"
- 09/1992-06/2001**
ADALBERT-STIFTER GYMNASIUM
CASTROP-RAUXEL, GERMANY
SECONDARY SCHOOL
Higher education with qualification for university studies
(Abitur), final grade "very good"

Teaching Experience

Courses given

Fall semester 2018 and 2019
UNIVERSITY BASEL, SWITZERLAND

Lecture with exercises "Evolutionary Genetics" for biology students (master)

since 2011
UNIVERSITY BASEL, SWITZERLAND

Blockcourse Zoology and Evolutionary Biology, wet lab and bioinformatics exercises for biology students (bachelor)

2005-2006
UNIVERSITY WÜRZBURG, GERMANY

Undergraduate laboratory practicals in biochemistry and molecular biology for students in medicine and dentistry

Supervision of students

PhD students, University of Basel, Switzerland

since 09/2016

- Nicolas Lichilin Ortiz, Thesis *The role of sex determination in an adaptive radiation of cichlid fishes*

since 04/2016

- Athimed El-Taher, Thesis *Transcriptome evolution in Lake Tanganyika cichlids*, co-supervision with Walter Salzburger

2011-2013

- Corina Heule, Thesis *The genetics of sexual development in East African cichlid fishes*

Master students, University of Basel, Switzerland

2014-2015

- Carolin Göppert

2015

- Thibault Lorin, exchange student ENS de Lyon, France

2014-2016

- Marisa Zubler, co-supervision with Walter Salzburger

2013

- Benjamin Herran, exchange student ENS de Lyon, France

Master students, ENS de Lyon, France

2010

- Domitille Chalopin, co-supervision with Jean-Nicolas Volff

2008-2010

- Amandine Darras

2007

- Karim Madani

Research Stays

01/2015
UNIVERSITY of TEXAS, AUSTIN USA

Project on hormone status of sex reversed fish with Hans A. Hofmann

03/2014 - 04/2014
UNIVERSITY of OREGON, EUGENE USA

Collaboration to investigate the sex chromosomes in *Astatotilapia burtoni* with John H. Postlethwait

07/2013 & 07-08/2011
MPULUNGU, ZAMBIA

Fieldwork at Lake Tanganyika sampling site, fish catching, and tissue dissection

04/2008 & 12/2008
CIRAD MONTPELLIER, FRANCE

Transcriptome library construction and study of gene candidates, with Helena D'Cotta and Jean-François Baroiller

02/2008 & 12/2008
INRA RENNES, FRANCE

Investigating candidate gene expression in rainbow trout with Yann Guiguen and Julien Bobe

Professional Trainings

- since 2016** ● Educational development, certificate "Hochschuldidaktik", methods of teaching and learning, 70 hours total
UNIVERSITY BASEL, SWITZERLAND
- 21/03/2017 – 22/03/2017** ● SIB Swiss institute of bioinformatics course *Introduction to Python programming*
SIB BASEL, SWITZERLAND
- 26/09/2016 – 28/09/2016** ● Training for software suite GATK (Genome Analysis Toolkit), SIB Swiss Institute of Bioinformatics and BROAD Institute
SIB BASEL, SWITZERLAND
- 2016** ● Competitive career development program *Antelope Professorship*
UNIVERSITY BASEL, SWITZERLAND
- 09/02/2015 – 12/02/2015** ● Leadership course *Die wichtigsten Führungsinstrumente anwenden und kennen*
UNIVERSITY BASEL, SWITZERLAND
- 18/03/2015 – 19/03/2015** ● Statistical training *Statistical techniques for genomics and life sciences*
SIB BASEL, SWITZERLAND
- 09/2012 – 04/2014** ● Academic networking program to support career development *Deutschschweiz 7*
UNIVERSITY LAUSANNE, SWITZERLAND
- 15/10/2012 – 17/10/2012** ● Course with lectures and hands-on computer sessions *Advanced NGS course: RNA-seq data analysis*
NBIC AMSTERDAM, NETHERLANDS
- 06/06/2012 – 09/06/2012** ● Workshop with presentations and group discussions *Evolution of sex determination mechanisms*
LA SAGE, SWITZERLAND
- 08/01/2012 – 21/01/2012** ● Course with lectures and computer labs *Workshop on Genomics*
CESKY KRUMLOV, CZECH REPUBLIC
- 23/01/2012 – 25/01/2012** ● Bioinformatics course *Programming R and Bioconductor for genomic data*
CESKY KRUMLOV, CZECH REPUBLIC
- 06/05/2011** ● Bioinformatics course *Next Generation Sequencing: de novo genome assembly*
SIB LAUSANNE, SWITZERLAND
- 03/05/2015 – 12/05/2010** ● EMBO course with lectures and computer labs *Computational Molecular Evolution*
IMBG IRAKLIO, GREECE
- 22/02/2008** ● Hands on training *Transgenesis techniques in fish*
CNRS, GIF-SUR-YVETTE, FRANCE

Management & Administration

- since 2016**
SIB and sciCORE BASEL, SWITZERLAND
Administration
Member of recruitment committee for staff positions at sciCORE and SIB Swiss Institute of Bioinformatics
- since 2012**
UNIVERSITY BASEL, SWITZERLAND
Internal Science Day Organisation
Concept development and organisation of the Salzburger group's annual scientific meeting
- 06/2014**
SAN JUAN, PUERTO RICO, USA
Symposium Organisation
Thematic development, abstract selection and chairing of the symposium *The Order of Things: How genome structure evolves* with Ingo Braasch and Walter Salzburger, SMBE Society of Molecular Biology and Evolution meeting
- 10/2013**
HANNOVER, GERMANY
Conference Organisation
Fund raising, concept development, talk selection and coordination of the Volkswagen Foundation Evolution symposium *The Vast World of Evolution* with Olivia Roth
- 2007 – 2008**
ENS LYON, FRANCE
Internal Meeting Organisation
Concept development and chairing of the young researcher meeting for PhD students and postdocs of the IGFL
- 2007 – 2008**
ENS LYON, FRANCE
Administration
Concept and planning including negotiation with construction company of the fish facilities for the IGFL

Languages

German: mother tongue
English and French: fluent
Spanish: basics

Bioinformatics

High performance computing, data analysis in a UNIX environment, programming in R and Python

International Collaborations

- Jean-Francois Baroiller and Helena D’Cotta, CIRAD, Montpellier, France
- Thorsten Schwede, Thierry Sengstag and Geoffrey Fucile, sciCORE and SIB, University of Basel, Switzerland
- Hans A. Hofmann, University of Texas at Austin, USA
- David Penman, Institute of Aquaculture, University of Sterling, UK
- Etienne Bezault, University of the French West Indies and Guiana, Pointe-à-Pitre, Guadeloupe
- Olivia Roth, Helmholtz Centre for Ocean Research Kiel GEOMAR, Germany
- John H. Postlethwait, University of Oregon, Eugene, USA
- Ingo Braasch, Michigan State University, Michigan, USA
- Manfred Scharl, University of Würzburg, Germany
- Yann Guiguen & Julien Bobe, INRA, Rennes, France
- Catherine Ozouf-Costaz, National Museum of Natural History, Paris, France

Service as Reviewer for

- Swiss National Science Foundation
- Aquatic Living Resources
- Biological Reviews
- Biology Letters
- BMC Evolutionary Biology
- Comparative Biochemistry and Physiology
- Developmental Dynamics
- Evolutionary Biology
- G3 Genes Genomes Genetics
- Gene
- Genetica
- General and Comparative Endocrinology
- Genome Biology and Evolution
- Genomics
- Heredity
- Hydrobiologia
- International Journal of Evolutionary Biology
- International Journal of Molecular Sciences
- Journal of Experimental Biology
- Journal of Experimental Zoology Part B
- Molecular and Cellular Endocrinology
- Molecular Biology and Evolution
- Molecular Ecology
- Naturwissenschaften
- PeerJ
- PLoS Genetics
- PLoS One
- Polar Biology
- Reproduction
- Scientific Reports

Invited Talks & Seminars

- 04/2018** ● Re-occurrence, common ancestry and novelty: Sex chromosome evolution in cichlid fishes. 8th International symposium on the biology of vertebrate sex determination.
KONA, HAWAII
- 09/2017** ● Conservation, recycling or novelty? Sex determination in East African cichlid fishes. Conference Cichlid Science.
PRAGUE, CZECH REPUBLIC
- 06/2017** ● Conservation, recycling or novelty? Sex determination in East African cichlid fishes. Evolution Conference.
PORTLAND, USA
- 06/2017** ● Sex determination in fish - endless novelty, recycling or limited options? Invited seminar.
UNIVERSITY TRIER, GERMANY
- 03/2017** ● Conservation, recycling or novelty? Sex determination in East African cichlid fishes. Conference ESSDV First European symposium on sex determination in vertebrates.
DINARD, FRANCE
- 03/2016** ● Sex determination in teleost fish - endless novelty or limited options? Seminar series Ecology and Evolution
UNIVERSITY BERN, SWITZERLAND
- 01/2015** ● Genetic sex determination in East African cichlids: comparative transcriptomics and hints for an XX-XY system in *Astatotilapia burtoni*. Invited seminar.
UNIVERSITY of TEXAS, AUSTIN, USA
- 09/2014** ● Genetic sex determination in East African cichlids: comparative transcriptomics and hints for an XX-XY system in *Astatotilapia burtoni*. Conference Sex determination and differentiation in fishes: genes, environment, behavior.
LISBON, PORTUGAL
- 04/2014** ● An evolutionary perspective on sex determination. Invited seminar.
UNIVERSITY of OREGON, EUGENE, USA
- 06/2014** ● Sex determination in East African cichlids: Evolutionary novelty vs conservation. SBE Society of molecular biology and evolution meeting.
SAN JUAN, PUERTO RICO, USA
- 12/2013** ● An evolutionary perspective on sex determination. Symposium Marine evolutionary genetics.
GEOMAR KIEL, GERMANY
- 09/2012** ● Comparative Sexomics in African cichlids from Lake Tanganyika. Conference Cichlid Science.
LEUVEN, BELGIUM
- 06/2012** ● The evolution of sex determination and sexual differentiation of cichlid fishes of Lake Tanganyika, East Africa. Workshop Evolution of sex determination mechanisms.
LA SAGE, SWITZERLAND

Invited Talks & Seminars

- 11/2008**
LYON, FRANCE ● Sex determination and sex chromosome evolution in the platyfish *Xiphophorus maculatus*. Conference Integrative post genomics.
- 06/2008**
LYON, FRANCE ● Molecular evolution of the sex-determining region of the platyfish *Xiphophorus maculatus*. Conference GDRE-RA Comparative genomics.
- 03/2007**
MONTPELLIER, FRANCE ● Diversity of sex determination in fish: Positional cloning of the sex-determining gene of the platyfish *Xiphophorus maculatus*. Conference Sex determination & differentiation in vertebrates.

Poster Presentations

- 04/2018**
KONA, HAWAII ● Diversity of sex determination systems in Lake Tanganyika cichlid fishes, El Taher A (presenter), Boileau N, Ronco F, Lichilin Ortiz N, Salzburger W, **Böhne A**. 8th International symposium on the biology of vertebrate sex determination.
- 04/2018**
KONA, HAWAII ● Characterising genetic sex determination during developmental stages and adulthood in *Astatotilapia burtoni* (family *Cichlidae*), Lichilin Ortiz N (presenter), El Taher A, Weber A, Rajkov J, Fucile G, Sengstag T, Salzburger W, **Böhne A**. 8th International symposium on the biology of vertebrate sex determination.
- 09/2017**
PRAGUE, CZECH REPUBLIC ● Allele specific expression of sex chromosomes in early developmental stages of *Astatotilapia burtoni* males. Lichilin Ortiz N (presenter), El Taher A, Fucile G, Sengstag T, Salzburger W, **Böhne A**. Conference Cichlid Science.
- 09/2017**
PRAGUE, CZECH REPUBLIC ● Diversity versus disparity: Dissecting eco-morphological patterns of the Lake Tanganyika cichlid radiation. Ronco F (presenter), Boila A, Indermaur A, Buescher HH, Matschiner M, **Böhne A**, Salzburger W. Conference Cichlid Science.
- 09/2017**
PRAGUE, CZECH REPUBLIC ● Transcriptome diversity in Lake Tanganyika cichlid fishes. El Taher A (presenter), Boileau N, **Böhne A**, Salzburger W. Conference Cichlid Science.
- 02/2017**
BERN, SWITZERLAND ● Occurrence and evolution of six sexual development genes in Lake Tanganyika cichlid species, Lichilin Ortiz N (presenter), Fucile G, Sengstag T, Salzburger W, **Böhne A**.

Poster Presentations

- Biology17, annual Swiss conference on ecology, evolution, systematics and conservation.
- 09/2016** ● Variations of a theme: sex determination in East African cichlids. **Böhne A (presenter)**, Wilson CA, Postlethwait JH, Salzburger W. Annual conference of the Deutsche Zoologische Gesellschaft DZG.
KIEL, GERMANY
- 09/2014** ● Evolution of sex differences in cichlid fishes. Göppert C (presenter), Salzburger W, **Böhne A**. Conference Sex determination and differentiation in fishes: genes, environment, behavior.
LISBON, PORTUGAL
- 05/2013** ● From comparative transcriptomics to the understanding of sexual development in East African cichlid fishes. **Böhne A (presenter)**, Salzburger W. Conference Jacques Monod Recent advantages on the evolution of sex and genetic systems.
ROSCOFF, FRANCE
- 06/2012** ● The evolution of sex determination and sexual differentiation in the species-flock of cichlid fishes of Lake Tanganyika, East Africa. **Böhne A (presenter)**, Heule C, Salzburger W. SMBE Society of molecular biology and evolution meeting.
DUBLIN, IRELAND
- 06/2011** ● Sex determination and differentiation in cichlids. **Böhne A (presenter)**, Heule C, Salzburger W. Conference Genetics, epigenetics and evolution of sex chromosomes of the French society of genetics.
PARIS, FRANCE
- 07/2010** ● Phylogenetic characterization and expression analysis of *makorin* genes: an ancient gene family with gonad specific expression. **Böhne A (presenter)**, Darras A, D’Cotta H, Baroiller JF, Galiana-Arnoux D, Volff JN. SMBE Society of molecular biology and evolution meeting.
LYON, FRANCE
- 07/2010** ● Identification of a sex-linked gene encoding an hAT dimerisation domain protein in the sex-determining region in the platyfish. Tomaszewicz M (presenter), **Böhne A**, Scharl M, Galiana-Arnoux D, Volff JN. SMBE Society of molecular biology and evolution meeting.
LYON, FRANCE
- 07/2010** ● Initial characterization of transposable elements in the pseudo-tetraploid genome of the rainbow trout *Oncorhynchus mykiss*. Chalopin D (presenter), Genet C,
LYON, FRANCE

Poster Presentations

- Brunet F, Galiana-Arnoux D, **Böhne A**, Guiguen Y, Volff JN. SMBE Society of molecular biology and evolution meeting.
- 11/2009** ● **LYON, FRANCE** *Swimy* - a new type of transposable element with a possible role in sex determination. **Böhne A (presenter)**, Darras A, Galiana-Arnoux D, Brunet F, Volff JN. Conference Integrative post genomics
- 09/2009** ● **MARSEILLE, FRANCE** Fish need pairs of old SOX, dating back from the teleost specific whole genome duplication. Brunet F (presenter), Galiana-Arnoux D, Darras A, Schultheis C, **Böhne A**, Volff JN. Evolutionary Biology meeting.
- 07/2009** ● **PITTSBURGH, PENNSYLVANIA, USA** Differential duplication, inactivation and loss of a gonad-specific gene on vertebrate sex chromosomes. Bobe J (presenter), Schultheis C, **Böhne A**, Galiana-Arnoux D, Sémon M, Volff JN. Conference of the Society for the study of reproduction.
- 11/2008** ● **TOURS, FRANCE** Diversity of sex determination and sexual development in fish: Functional and evolutionary analysis of the *Swimy* gene family. **Böhne A (presenter)**, Schultheis C, Sémon M, Galiana-Arnoux D, Guiguen Y, Bobe J, Schmidt C, Schartl M, Volff JN. Conference organised by INRA.
- 06/2008** ● **BARCELONA, SPAIN** Sexy evolution: A new type of vertebrate sex-determining gene candidate on the Y chromosome of the platyfish. **Böhne A (presenter)**, Schultheis C, Galiana-Arnoux D, Guiguen Y, Mahé S, Bobe J, Zhou Q, Froschauer A, Schmidt C, Ségurens B, Couloux A, Bernard-Samain S, Schartl M, Volff JN. SMBE Society of molecular biology and evolution meeting.
- 06/2008** ● **BARCELONA, SPAIN** Differential duplication, inactivation and loss of a gonad-specific gene on vertebrate sex chromosomes. Schultheis C (presenter), **Böhne A**, Sémon M, Galiana-Arnoux D, Schmidt C, Froschauer A, Brunet F, Zhou Q, Ségurens B, Couloux A, Bernard-Samain S, Ozouf-Costaz C, Schartl M, Volff JN. SMBE Society of molecular biology and evolution meeting.
- 07/2007** ● **AMSTERDAM, THE NETHERLANDS** Sex determination and cancer in fish: molecular dissection of the sex chromosomes of the platyfish *Xiphophorus maculatus*. **Böhne A**, Schultheis C, Schmidt C, Zhou Q, Froschauer A, Selz Y, Ozouf-Costaz C, Dettai A, Ségurens B,

Poster Presentations

09/2006
NOORDWIJK, THE NETHERLANDS

Couloux A, Bernard-Samain S, Chilmonczyk S, Brunet F, Galiana-Arnoux D (presenter), Nanda I, Schmid M, Schartl M, Volff JN. Conference Zebrafish genetics and development.

Melanoma formation in the fish *Xiphophorus*: analysis of melanocortin receptors types 4 and 1. Selz Y (presenter), Froschauer A, Hoffmann C, Zhou Q, Schmidt C, Schultheis C, Braasch I, **Böhne A**, Schartl M, Volff JN. Conference Perspectives in melanoma X and the Third international melanoma research.

08/2006
PRAGUE, CZECH REPUBLIC

Diversity of sexual development in fish: molecular and functional analysis of the sex-determining region of the platyfish *Xiphophorus maculatus*. Schultheis C (presenter), **Böhne A**, Selz Y, Schmidt C, Zhou Q, Froschauer A, Braasch I, Matschl S, Dettai A, Ozouf-Costaz C, Ségurens B, Couloux A, Bernard-Samain S, Schartl M, Volff JN. Conference of the European society for evolutionary developmental biology.

Contacts for Professional References

- Prof. Walter Salzburger, Zoological Institute, University of Basel, Switzerland, phone +41 (0)61 207 03 03, walter.salzburger@unibas.ch
- Prof. Catherine Peichel, Institute of Ecology and Evolution, University of Bern, Switzerland, phone +41 (0)31 631 30 22, catherine.peichel@iee.unibe.ch
- Prof. Manfred Scharl, Institute for Physiological Chemistry, University of Würzburg, Germany, phone +49 (0)931 318 4148, phch1@biozentrum.uni-wuerzburg.de
- Prof. Hans Hofmann, Department of Integrative Biology, Institute for Cellular & Molecular Biology, Institute for Neuroscience, The University of Texas at Austin, USA, phone +1 512 475 6754, hans@utexas.edu