

Claudius Frank Kratochwil, PhD

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EDUCATION

- 07/2008 – 04/2013 **PhD in Neurobiology, Friedrich Miescher Institute, Basel, Switzerland**
"Transcriptional and epigenetic regulation of neuronal migration and circuitry development in the murine hindbrain"
Supervisor: Prof. Dr. Filippo Rijli – Date: 25.April 2014 – Grade: 6.0 (6.0=best); summa cum laude
- 09/2007 – 07/2008 **Diploma (Master) thesis, Albert-Ludwigs-University Freiburg, Germany**
"Characterization of the catecholaminergic circuitry in zebrafish"
Supervisor: Prof. Dr. Wolfgang Driever
- 10/2004 – 08/2008 **Diploma studies in biology, Albert-Ludwigs-University Freiburg, Germany**
Main subjects: Developmental Biology, Neurobiology, Animal Physiology, Neuropathology
Grade: 1.0 (1.0=best)
- 08/2003 – 05/2004 **Civilian service, Youth-Centre Freiburg-Haslach, Germany**
Alternative civilian service as option to compulsory military service
- 08/1994 – 06/2003 **University entrance qualification (Abitur), AKG Bensheim, Germany**
Main subjects: Mathematics, Biology

ACADEMIC APPOINTMENTS

- 03/2016 – 02/2019 **Principal investigator (temporary position, DFG funded), Faculty of Biology & Zukunftskolleg, University of Konstanz, Germany**
- 07/2013 – 02/2016 **Postdoctoral fellow, Faculty of Biology & Zukunftskolleg, University of Konstanz, Germany**
Host: Prof. Dr. Axel Meyer
- 07/2008 – 06/2013 **Doctoral student, Friedrich Miescher Institute, Basel, Switzerland**
Advisor: Prof. Dr. Filippo Rijli
- 09/2007 – 07/2008 **Diploma (Master) thesis, Albert-Ludwigs-University Freiburg, Germany**
Advisor: Prof. Dr. Wolfgang Driever
- 10/2006 – 07/2007 **Internship, Institute for Biology, Albert-Ludwigs-University Freiburg, Germany**
Supervisor: Prof. Dr. Wolfgang Driever
- 08/2006 – 10/2006 **Internship, Neuroscience Center, University of Helsinki, Finland**
Supervisor: Prof. Dr. Eero Castrén
- 03/2006 – 04/2006 **Internship, Neuropathology Department, University Hospital Freiburg, Germany**
Supervisor: Prof. Dr. Benedikt Volk
- 08/2005 – 10/2005 **Internship, Max Planck Institute for Brain Research, Frankfurt, Germany**
Supervisor: Prof. Dr. Ralf Galuske / Prof Dr. Wolf Singer

RESEARCH GRANTS (external)

2017 – 2021	DFG Scientific Networks Grant – “ <i>The role of interaction structure in eco-evolutionary dynamics</i> ”, German Research Foundation (DFG), FA 1420/3-1 <i>with D. Farine, C. Nadell, K. Gotanda, K. Laskowski, P.O. Montiglio</i>	72'900 €
2016 – 2019	DFG Research Grant – “ <i>Evolution of transcriptional regulation as motor of morphological diversification in cichlid fishes</i> ”, German Research Foundation (DFG), KR 4670/2-1	325'600 €
2016 – 2019	B.-W. Elite Program for Postdocs – “ <i>Uncovering the molecular mechanisms underlying the repeated evolution of adaptive color patterns in cichlid fishes</i> ”, Baden-Württemberg Stiftung	110'000 €
		508'500 €

RESEARCH GRANTS (internal)

2017	Interdisciplinary projects programme – Zukunftskolleg, University of Konstanz	10'000 €
2017	Young Scholar Fund – University of Konstanz	10'000 €
2017	Co-Funding Program – Zukunftskolleg, University of Konstanz	8'300 €
2017	Third party funding reward – University of Konstanz	1'800 €
2016 – 2017	Co-Funding Program – Zukunftskolleg, University of Konstanz	12'000 €
2016	Investment Program for Research – Zukunftskolleg, University of Konstanz	48'800 €
2016	Young Scholar Fund – University of Konstanz	23'000 €
2015 – 2016	Interim Grant – Zukunftskolleg, University of Konstanz	32'700 €
2015	Reinvestment Program – University of Konstanz (<i>with J. Woltering</i>)	9'700 €
2015	Student Assistance Program – Zukunftskolleg, University of Konstanz	4'400 €
2014	Co-Funding Program – Zukunftskolleg, University of Konstanz	10'000 €
2014	Co-Funding Program – Zukunftskolleg, University of Konstanz (<i>with J. Torres-Dowdall</i>)	1'000 €
2014	Student Assistance Program – Zukunftskolleg, University of Konstanz	1'800 €
2013 – 2015	Research Allowance – Zukunftskolleg, University of Konstanz	6'000 €
2013	Co-Funding Program – Zukunftskolleg, University of Konstanz	2'500 €
		182'000 €

AWARDS AND FELLOWSHIPS

2013 – 2015	Marie Curie Zukunftskolleg Incoming Fellowship (ZIF-MC) Marie-Curie Program / Zukunftskolleg Konstanz, Grant no. 291784	~72'000 €
2013 – 2015	Early Postdoc.Mobility Fellowship Swiss National Science Foundation, Grant no. SNSF P2BSP3_148629	~55'000 €
2008 – 2013	Scholarship “International PhD Program” Friedrich Miescher Institute & Novartis Research Foundation, Basel	~150'000 €
		~277'000 €

PROFESSIONAL MEMBERSHIPS (societies, faculties, programs)

- 2016 – Member, German Zoological Society / Deutsche Zoologische Gesellschaft (DZG)
- 2015 – Faculty Member, International Max Planck Research School (IMPRS) for Organismal Biology, Max Planck Institute for Ornithology and University of Konstanz, Germany
- 2015 – Fellow, Baden-Württemberg Elite Program
- 2014 – Principal Investigator, KoRS Chemical Biology graduate school, University of Konstanz, Germany
- 2014 – Member, Society for Molecular Biology and Evolution (SMBE)
- 2014 – Member, German Genetics Society / Gesellschaft für Genetik (GfG)
- 2013 – Fellow, Zukunftskolleg, University of Konstanz, Germany

FURTHER EDUCATION

- 2015 – 2016 **Certificate “Didactics in Higher Education”**
Center of Higher Didactics Baden-Württemberg, University of Konstanz, Germany
- 2015 – 2016 **Certificate “Leadership, Management and Transfer of Knowledge”**
Academic Staff Development, University of Konstanz, Germany

TEACHING

- 2013 – 2017 **Lecture “Evolution and Behavior”**
Lectures given on: “Evolution of the nervous system” and “Evolutionary Developmental Biology” (Total number of lectures given: 4)
Bachelor level, University of Konstanz, Germany
- 2014 – 2017 **Lecture “Advanced Course Molecular Evolutionary Biology”**
Lectures given on: “Evolution of sensory systems”, “Epigenetics and Evolution” and “How to create efficient figures” (Total number of lectures given: 10)
Master level, University of Konstanz, Germany
- 2014 – 2017 **Lecture “Evolutionary Organismal Biology”**
Lectures given on: “Transcriptional regulation, Epigenetics and Evolution” and “The genetic basis of coloration” (Total number of lectures given: 4)
Master level, University of Konstanz, Germany
Evaluation 2016: Teaching-Learning-Index: 1.72 (Range: 1.0 – 5.0; 1.0=best; Department average for lectures: 2.01; Average complete lecture series: 1.91); Satisfaction: 1.75 (Range: 1.0 – 5.0; 1.0=best)
- 2015 – 2017 **Lecture “Methods in Biology”**
Lectures given on: “Methods for linking Phenotypes to Genotypes” (Total number of lectures given: 3)
Master level, University of Konstanz, Germany
- 2016 **Lecture “Gene technology”**
Lectures given on: “Gene technology in Vertebrates” (Total number of lectures given: 1)
Refresher course for high school teachers, University of Konstanz, Germany
- 2014 – 2017 **Practical Course “Advanced Course Molecular Evolutionary Biology” (Assistant)**
Master level, University of Konstanz, Germany
Evaluation 2015: Teaching-Learning-Index: 1.31 (Range: 1.0 – 5.0; 1.0=best; Department average for courses: 2.03); Satisfaction: 1.38 (Range: 1.0 – 5.0; 1.0=best)
- 2017 **Practical Course “Principles of Zoology”**
Organizer of 2 x 1/2 day course on “Anatomy of the Rat”
Bachelor level, University of Konstanz, Germany

- 2013 – 2017 **Seminar “Advanced Seminar in Evolutionary and Developmental Biology”** (Organizer)
Master level, University of Konstanz, Germany
- 2014 – 2017 **Seminar “Evolution and Zoology”** (Organizer)
Master level, University of Konstanz, Germany
Evaluation 2016: Teaching-Learning-Index: 1.74 (Range: 1.0 – 5.0; 1.0=best; Department average for seminars: 2.12); Satisfaction: 1.75 (Range: 1.0 – 5.0; 1.0=best)
- 2015 **Seminar “Innovations in Vertebrate Evolution”** (Organizer)
2 SWS, Master level, University of Konstanz, Germany
- 2016 **Seminar “Evo-Devo”** (Organizer)
Master level, University of Konstanz, Germany
- 2016 **Seminar “Genome Evolution”** (Organizer)
Master level, University of Konstanz, Germany
Evaluation: Teaching-Learning-Index: 1.43 (Range: 1.0 – 5.0; 1.0=best; Department average for seminars: 2.12); Satisfaction: 1.50 (Range: 1.0 – 5.0; 1.0=best)
- 2017 **Seminar “Human Evolutionary Genetics”** (Organizer)
Master level, University of Konstanz, Germany

SUPERVISION

Doctoral students (co-supervised)

- Sabine Urban, Doctoral/PhD student (BW Elite Program, Co-Supervision with Prof. Dr. Axel Meyer, 2016 –)
- Maggie Sefton, Doctoral/PhD student (Hector Fellowship, Co-Supervision with Prof. Dr. Axel Meyer, 2014 –)
- Yipeng Liang, Doctoral/PhD student (CSC Fellowship, Co-Supervision with Prof. Dr. Axel Meyer, 2014 –)

Master students (co-supervised)

- Jan Gerwin, Master student (Co-Supervision with Prof. Dr. Axel Meyer, 2017)

Bachelor students (co-supervised)

- Laura Geißler, Bachelor student (Co-Supervision with Prof. Dr. Axel Meyer, 2014)
- Lukas Kaminski, Bachelor student (Co-Supervision with Prof. Dr. Axel Meyer, 2015)

Summer students

- Victoria-Marie Cusson, Summer student (Baden-Württemberg-Ontario Fellowship, 2014)

Student assistants and student projects:

- Niklas Warwas, 2014
- Jan Gerwin, 2015 – 2017
- Laura Geißler, 2014 – 2017
- Steffen Rausch, 2014
- Jan Häge, 2017
- Andreas Riesch, 2017

COMMITTEE WORK

- Zukunftskolleg’s Internal Liaison Board (2017 –), University of Konstanz, Germany
- PhD Committee (2014 –), Jennifer Knaus, Department of Chemistry & KoRS Chemical Biology graduate school, University of Konstanz, Germany

PROFESSIONAL SERVICES

Reviews for international scientific journals

AIMS Genetics, Advances in Bioinformatics, BMC Genetics, Development, eLife, European Journal of Neuroscience, Evo-Devo, Fish and Fisheries, Int. Journal of Molecular Sciences, Nature Communications, Journal of Comparative Neurology, PeerJ, Plos One, Scientific Reports, Zebrafish

Reviews for research agencies

- Icelandic Research Fund

COLLABORATORS

- Dr. Aristides Arrenberg, Centre for Integrative Neuroscience, University of Tübingen, Germany
- Prof. Dr. Helmut Cölfen, University of Konstanz, Germany
- Dr. Damien Farine, Max-Planck Institute for Ornithology, Konstanz, Germany
- Dr. Kiyoko Gotanda, University of Cambridge, UK
- Dr. Irene Kalchauer, University of Basel, Switzerland
- Dr. Pierre-Olivier Montiglio, McGill University, Montreal, Canada
- Dr. Carey Nadell, Max-Planck Institute for Terrestrial Microbiology, Marburg, Germany
- Dr. Elena Sturm (née Rosseeva), University of Konstanz, Germany

ORGANIZATION OF MEETINGS/SYMPOSIA

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| 2018 | Symposium “Evo-devo of colour pattern formation” (accepted)
European Society for Evolutionary Developmental Biology (EED); 26-29. July 2018, Galway, Ireland |
| 2016 | Symposium “Integrating the genotype-phenotype map with concepts of evolutionary-developmental biology” (with Joost Woltering)
European Society for Evolutionary Developmental Biology (EED); 26-29. July 2016, Uppsala, Sweden |

PRESENTATIONS

Talks and seminars

- **Centre for Integrative Neuroscience Tübingen**, Germany, September 2016: Kratochwil CF: Coevolution of coloration patterns in cichlid fishes through convergent gene regulatory evolution
- **Society for Molecular Biology and Evolution (SMBE) Meeting**, Vienna, Austria, July 12-16 2015: Kratochwil CF and Meyer A: Novel functional approaches to study regulatory evolution in cichlid fishes.
- **Scientific Meeting of the Zukunftskolleg**, Hegne, Germany, November 2014: Kratochwil CF: The Evolution of Color Diversity.
- **Jour fixe of the Zukunftskolleg**, Konstanz, Germany, February 2014: Kratochwil CF: Evolution of transcriptional regulation during diversification and speciation in cichlids.
- **University of Geneva**, Switzerland, October 2012: Kratochwil CF: Molecular mechanisms of topographic neuronal migration and connectivity.
- **University of Konstanz**, Germany, September 2012: Kratochwil CF: Molecular mechanisms of topographic neuronal migration and connectivity.
- **Joint PhD Meeting CRG Barcelona / FMI Basel**, Barcelona, Spain, May 20-23 2011: Kratochwil CF: Transcriptional regulation of hindbrain circuitry development.

Poster presentations

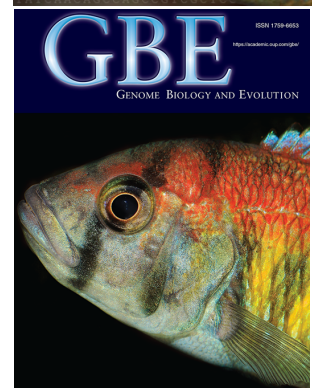
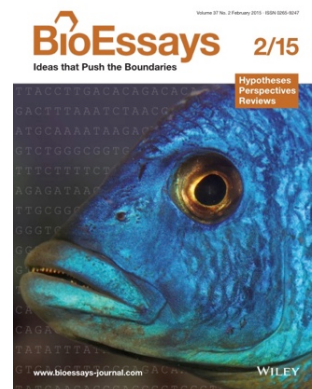
- **Euro Evo Devo Meeting**, Uppsala, Sweden, July 26-29 2016: Sefton MS, Liang Y, Kratochwil CF, Meyer A: Tol2 Mediated Transgenesis in the Midas Cichlid Species Complex (*Amphilophus spp.*).
- **Society for Molecular Biology and Evolution (SMBE) Meeting**, Vienna, Austria, July 12-16 2015: Sefton MS, Liang Y, Kratochwil CF, Meyer A: Early development and transgenesis in the Midas cichlid (*Amphilophus spp.*) - a new model system for evo-devo research.

- **Society for Neuroscience (SFN)**, San Diego, USA, November 15–19 2010: Di Meglio T, Kratochwil CF, Vilain N, Ducret S and Rijli FM: Hox paralogue group 2 genes control distinct steps of pontine neuron tangential migration in the mouse brainstem.
- **Society for Neuroscience (SFN)**, Chicago, USA, October 17-21 2009: Kratochwil CF and Rijli FM: Generation of genetic tools to study development of myelencephalic nuclei circuitry in the mouse.
- **Joint PhD Meeting LMCB London / FMI Basel**, Emmetten, Switzerland, June 12-15 2009: Kratochwil CF and Rijli FM: Transcriptional regulation of topographic circuitry in the precerebellar system.
- **Society for Neuroscience (SFN)**, Washington D.C., USA, November 15-19 2008: Kastenhuber E, Schweitzer J, Kratochwil CF, Kern U, Ryu S. and Driever W: Establishment of catecholaminergic circuitry in the zebrafish.
- **Zebrafish Development & Genetics**, Madison, USA, June 25-29 2008: Koch P, Kratochwil CF and Driever W: Optimization of *in vivo* electroporation in the zebrafish brain.
- **Society for Neuroscience (SFN)**, San Diego, USA, November 3-7 2007: Tervonen TA, Sun X, Hokkanen M-E, Kratochwil CF, Zebryk P, Castrén E and Castrén ML: Developmental abnormalities in neocortex formation of Fmr1 knockout mouse.
- **European Zebrafish Genetics and Development**, Amsterdam, Netherlands, 12-15 Juli 2007: Koch P[©], Kratochwil CF[©], Ledderose J, Filippi A and Driever W: Optimization of *in vivo* electroporation in the zebrafish brain.

LIST OF PUBLICATIONS

Publications in peer-reviewed scientific journals

1. Tervonen TA[©], Louhivuori V[©], Sun X, Hokkanen M-E, [Kratochwil CF](#), Zebryk P, Castrén E and Castrén ML (2009): Aberrant differentiation of glutamatergic cells in neocortex of mouse model for fragile X syndrome. *Neurobiology of Disease* 33 (2), 250–259.
2. Kastenhuber E[©], [Kratochwil CF](#)[©], Ryu S[©], Schweitzer J and Driever W (2010): Genetic dissection of dopaminergic and noradrenergic contributions to catecholaminergic tracts in early larval zebrafish. *The Journal of Comparative Neurology* 518 (4), 439–458.
3. Minoux M, [Kratochwil CF](#), Ducret S, Amin S, Kitazawa T, Kurihara H, Bobola N, Vilain N and Rijli FM (2013): Mouse Hoxa2 genetic analysis provides a model for microtia and auricle duplication. *Development* 140 (21), 4386-4397.
4. Di Meglio T[©], [Kratochwil CF](#)[©], Vilain N, Loche A, Vitobello A, Yonehara K, Roska B, Peters A, Eichmann A, Wellik D, Ducret S and Rijli FM (2013): Ezh2 orchestrates topographic tangential migration and connectivity of precerebellar neurons. *Science* 339 (6116), 204-207.
5. [Kratochwil CF](#) and Meyer A (2015): Closing the genotype-phenotype gap: Emerging technologies for evolutionary genetics in ecological model vertebrate systems. *BioEssays* 37 (2), 213-226.
6. [Kratochwil CF](#) and Meyer A (2015): Mapping active promoters by ChIP-seq profiling of H3K4me3 in cichlid fish—a first step to uncover cis-regulatory elements in ecological model teleosts. *Molecular Ecology Resources* 15 (4), 761–771.
7. [Kratochwil CF](#)[©], Sefton MS[©] and Meyer A (2015): Embryonic and larval development in the Midas cichlid fish species flock (*Amphilophus spp.*): a new evo-devo model for the investigation of adaptive novelties and species differences. *BMC Developmental Biology* 15: 12.
8. Bechara A, Laumonnerie C, Vilain N, [Kratochwil CF](#), Cankovic V, Maiorano N, Kirschmann M, Ducret S and Rijli FM (2015): *Hoxa2* selects barrelette neuron identity and connectivity in the mouse somatosensory brainstem. *Cell Reports* 13 (4), 783-797.



9. [Kratochwil CF](#)[☉], Geissler L[☉], Irisarri I[☉] and Meyer A (2015): Molecular evolution of the neural crest regulatory network in ray-finned fish. *Genome Biology and Evolution* 7 (11), 3033-3046.
10. Renier N, Dominici C, Erzurumlu R, [Kratochwil CF](#), Rijli FM, Gaspar P and Chédotal A (2017): A mutant with bilateral whisker to barrel inputs unveils somatosensory mapping rules in the cerebral cortex. *eLife* 6, e23494
11. [Kratochwil CF](#), Maheshwari U. and Rijli FM (2017): The Long Journey Of Pontine Nuclei Neurons: From Rhombic Lip To Cortico-Ponto-Cerebellar Circuitry. *Frontiers in Neural Circuits* 11, 33
12. [Kratochwil CF](#)[☉], Sefton MS[☉], Liang Y and Meyer A (2017): *Tol2* transposon-mediated transgenesis in the Midas cichlid (*Amphilophus citrinellus*) — towards understanding gene function and regulatory evolution in an ecological model system for rapid phenotypic diversification. *BMC Developmental Biology* 17: 15.

☉ equal contribution

Short communications

1. [Kratochwil CF](#) and Meyer A (2015): Evolution: Tinkering within gene regulatory landscapes. *Current Biology* 25 (7), R285-R288.

Book chapters and comments

1. [Kratochwil CF](#) and Rijli FM (2014): The Cre/lox system to assess the development of the mouse brain, *Brain development: Methods and Protocols, Methods in Molecular Biology* (Simon G. Sprecher ed.), Springer, New York. 1082, 295–313.
2. [Kratochwil CF](#) (2015): Comment on: Forgetting – A cognitive neuroscience perspective. In: Galizia G and Schulman D (eds.), *What is Forgetting?*, Jerusalem: Magnes Press of the Hebrew University.

Other publications

1. [Kratochwil CF](#) (2008): Characterization of the Catecholaminergic Circuitry in Zebrafish, *Diploma Thesis*, University of Freiburg, Germany
2. [Kratochwil CF](#) (2013): Transcriptional and epigenetic regulation of neuronal migration and circuitry development in the murine hindbrain, *PhD Thesis*, University of Basel, Switzerland

Media appearance

1. Knauer R: Evolution im Zeitraffer. (German for “Evolution in fast motion”) *Spektrum der Wissenschaft* (2014) Nr. 4, p. 24-31

Bibliometrics

Google Scholar: h-index = 8, total citations = 262 (30-Nov-17)
 Web of science: h-index = 6, total citations = 198 (30-Nov-17)