

David Woolven Raible

Virginial Merrill Bloedel Professor, Department of Otolaryngology-HNS
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Personal Data

place of birth: Jamestown, NY USA
citizenship: USA

Education

Undergraduate: College of Arts and Sciences, Cornell University, Ithaca, NY.
BA/S in Biology (Neurobiology and Behavior) awarded June, 1983.

Graduate: Institute of Neuroscience, University of Pennsylvania, Philadelphia, PA.
Ph.D. awarded December 1989. Advisor, F. Arthur McMorris

Faculty Fellows Program, University of Washington, 1996.

Postgraduate Training

Postdoctoral Fellow: University of Pennsylvania, 1990. Advisor, Jonathan Raper
Postdoctoral Research Associate: University of Oregon, 1991-1995. Advisor, Judith Eisen

Positions Held

Department of Otolaryngology-Head and Neck Surgery
Virginia Merrill Bloedel Chair and Professor, 2021-
Department of Neurobiology and Biophysics
Joint Professor, 2024-
Department of Biological Structure, University of Washington
Assistant Professor, 1995-2001
Associate Professor, 2001-2006
Professor, 2006-present
Joint, 2021-2024
Department of Biology (Zoology), University of Washington
Adjunct Assistant Professor, 1999-2001
Adjunct Associate Professor, 2001-2006
Adjunct Professor, 2006-present
Department of Genome Sciences, University of Washington
Adjunct Associate Professor, 2002-2006
Professor, 2006-present
Laboratoire de Neurogénétique, Université Montpellier II, France, Visiting Professor, 2005

Founding Scientist, Oricula Therapeutics, LLC 2013-present

Honors

Dean's Fellow	University of Pennsylvania	1983 - 1984
University Fellow	University of Pennsylvania	1984 - 1985
NIH Predoctoral Trainee		1985 - 1989
Flexner Prize for Outstanding Dissertation Research in Neuroscience		1990
Neuromuscular Disease Research Fellow, Muscular Dystrophy Assn.		1991 - 1993
Science in Medicine New Investigator		1998

Visiting Professor, Institut Universaire de France	2005
Virginia Merrill Bloedel Endowed Chair	2021-

Diversity, Equity and Inclusion

Biological Structure Diversity Committee	2018-2023
Otolaryngology-HNS DEI Committee	2021-
Basic Sciences Equity, Diversity and Inclusion Task Force, founder/Co-chair	2020-2023
Mentoring URM Trainees (3 predoctoral, 4 postdoctoral)	

Professional Organizations

Society for Neuroscience	1984-
Society for Developmental Biology	1988-
Association for Research in Otolaryngology	2005-
International Zebrafish Society	2015-

Teaching

CONJ 542	Development; (Chair 1999-2010, 2015-)	1999-
Neuro 502	Systems Neuroscience	2017-
BSTR 584	Seminar in Neurogenesis	1995 –2017
HUBIO 532	Nervous System	1997 -2015
BIO542	Analysis of Development	2012-2016
MCB 514	MCB Literature Review	2007-2013
“Zebrafish Genetics and Development” Director	MBL, Woods Hole	2001- 2008-2012
“Biology of the Inner Ear”	MBL, Woods Hole	2007, 2009, 2011

Graduate Student Dissertation Committees

Past committees:	75
MCB	28
Neuroscience	16
Biology	9
Biochemistry	7
Pharmacology	3
Physiology and Biophysics	2
Biological Structure	2
Immunology	2
Psychology	2
Genome Sciences	2
Genetics	1
Zoology	1

Current committees:

Rachel Dam	2017-	MCB (Berg)
Jonathan Amezcuita	2021-	MCB (Grill)
Amanda Ciani	2021-	Speech and Hearing (Stone)
Syd Sattler	2023-	Genome Sciences (Abitua)
Maggie Fuqua	2024-	Biology (Akamatsu)
Sheridan Sargent	2024-	Neuro (Rasmussen)
Clifford Rostomily	2024-	Genome Sciences (Trapnell)
Jeffrey Munevar	2024-	Neuro (Dembrow)

External Examiner:

Catrine Stevens	1998	Wageningen University
Jaime Wertman	2019	Dalhousie University
Craig Jacobs	2021	University of Calgary

Graduate Student Trainees

	dates	program	current position
Ph.D. Dissertation:			
Josette Ungos	1996-2002	MCB	
Jared Ragland	1999-2004	MCB	Director, Policy at BSA
Jessica Lewis	2001-2005	MCB	Assoc Counsel, Aldevron
Kelly Grant	2000-2005	MCB	CA Dept Tox Subs Contr
Hillary McGraw	2003-2009	MCB	Asst. Prof., UMKC
Eva Ma	2004-2009	MCB	Asst T Prof, UW Tacoma
Kevin Curran	2005-2010	Biology	Founder, BridgePoint Bio
Nicholas Coley	2006-2011	GS/MSTP	Pathologist, Sutter Health
Scott Mackenzie	2010-2012	NeuBeh	Mgr Analytics, Amazon
Sarah Malmquist	2008-2013	MCB	T Assoc. Prof., U Minn
Andrew Prendergast	2008-2013	NeuBeh	Scientific Prog. Mgr., Yale
Ivan Cruz	2009-2015	MCB	Research Scientist, UW
Philia Gau (Ajay Dhaka, primary)	2011-2016	Neuro	maternity leave
Sarah Pickett	2013-2018	Neuro	Int Asst Dean, U Albany
Emma Thomas	2012-2018	Neuro	Scientist, Allen Institute
Victor Lewis (co-mentor, Parichy)	2017-2019	Biology	Postdoc, U Oregon
Madeleine Hewitt	2017-2023	MCB	Scientist, Allen Institute
Marielle Beaulieu	2019-2024	MCB	
Master's Thesis			
Will Henry	2001-2002	Zoology	Asst. Attorney General, WA
AuD Capstone			
Samantha Davis	2018-2020	SHS	Grad Student, NYU
Kaitlyn Gervais	2019-2020	SHS	Audiologist, Puget Sound

Current Students

Undergraduate Student Trainees

	dates	program	
Paige Etter	1996-1997	honors thesis	Result Key LLC
David Jarboe	1996		
Kristin Latham-Scott	1997	HHMI Program	PhD; Interim Dean, WOU
Dan Heidel	1997-1998		
Priya Singh	1997-1998		
Melinda Modrell	1997-1998		PhD; Mgr Editor, Evolution
Andrea Snyder	1998		
Eldie Cruz	1998	STAR	MD
Tibebu Tsegga	1999	BRIDGES	DDS
Janie Cogan	1999		
Tiffany Kao Linbo	1999-2000		Res. Scientist, NOAA
Chester Costales	2001		PhD., Director, Eli Lilly
Damien Dombrowski	1999-2001		JD, patent law
Amy Wilson	2002		
Karin Pfeiffer-Hoyt	2002	HHMI Program	AmeriCore
Elizabeth Dobler	2004		MD

Mary Nasry	2004		MD
Hans Wolf	2005		
Catherine Ray	2002-2005		Res. Sci., UW
Michael Louie	2006		PharmD
Katherine Reinhart	2006-2007	Roman Sch. Gates Fellowship	Software Developer, Starbucks
Parhum Namdaram	2006-2008	HHMI program Gates Fellowship	MD
Roxanne McCurry	2009		RN
Frederica Mackert	2009		DDS, Asst Prof, VCU
Tanya Swarts Brown	2009-2010	HHMI Program	PhD; Sci Dir, TESS Fdn.
Andrew Millspaugh	2011		
Elizabeth Emau	2011	HHMI Program	
James France	2011	Durham UEP	Res. Sci, U C Lancs
Lynn Herricks	2011-2012		Intuitive Digital
Ashley Siverly	2011-2012		Med Lab Sci, Houston
Nicholas Girkin	2012	Durham UEP	PhD; Asst Prof, Nottingham
Andrew Shelton	2012		
Julia Licholai	2012-14		Grad School, Brown/NIH
Ji Hoon Hwang	2014		
Charlotte Reynolds	2014	Durham UEP	MD
Liana Hernandez	2014-2015	PREP	MS; Scientist, NCH
Mason Iniguez	2014-2015		Teaching, Highline PS
Nihal Thapa	2014-2015		MD Resident, Loyola U
Maria Wong	2014-2016		Grad Student, U Iowa
Anumita Bajpai	2014-2016		MPH; NC State Lab PH
Tzu-Yin Lin	2016		Lab Asst Seattle Childrens
Jay Briggs	2016-2017		USAF Academy
Madison Thompson	2016-2017		Res Coord, Encephalone
Jonathan Ramos	2016-2018		MS, Res. Asst, LRI
Anna Roche	2016-2017		Grad Student, U Arizona
Jennifer Logue	2017-2018		Res Sci, Harborview
Marcell Szabo	2018		IRTA Postbac, NIH
Avani Modak	2020-2022		Grad Student, UPenn
Hayden Gizinski	2020-2021		Grad Student, UW
Brenna Linton	2021-2022		Medical Student, UW
Makayla Hsu	2022-2023		Student, UW
Euan McCubbin	2022-2023		Student, UW
Sophie Wheaton	2024-		
Ananya Cholkar	2024-		
Phoebe Macapinlac	2024-		

MD, 6; PhD, 5; Other Biomedical, 19

Postdoctoral Fellow Trainees

Past fellows:

	dates	current position
Catrin Pittack	1997	Teaching Professor, UW
Richard Dorsky (joint, Randy Moon)	1996-1999	Professor, U. Utah
Iain Shepherd	1998-2002	Assoc. Professor, Emory U.

James Lister	1997-2004	Asst. Professor, VCU
Alex Nechiporuk	2003-2008	Professor, OHSU
Cynthia Cooper	2003-2008	Assoc. Professor, WSU Vancouver
Alexandra Abramsson	2006-2008	Research Scientist, Gothenburg University
Kelly Owens (joint, Ed Rubel)	2003-2009	Director, Research & Education, FORCE
Alli Coffin (joint, Ed Rubel)	2007-2011	Assoc. Professor, Creighton
Corey Snelson	2009-2011	MPH, Director of Evaluation, ITHS UW
Arminda Suli	2008-2013	Assoc. Professor, Brigham Young University
Heather Brignull	2007-2015	Medical Writer, Gilead Sciences
Dale Hailey (joint, Ed Rubel)	2008-2015	Director, Garvey Imaging Center, UW ISCRM
Robert Esterberg (joint, Ed Rubel)	2011-2016	Investigator, Novartis Inst. Biomed. Research
Heather Stickney (joint, Steve Wilson)	2011-2016	Principal Scientist, Ambry Genetics
Tamara Stawicki (joint, Ed Rubel)	2011-2017	Asst. Professor, Lafayette College
Joy Sebe	2012-2018	Director, Education, United Way King County
Ivan Cruz	2015-2020	Research Scientist, UW
Esra Camci (joint, Ed Rubel)	2016-2020	Scientist, Prime Medicine
Jo Bellairs	2019-2021	Otolaryngologist, Surgical Associates NW
Andrea McQuate	2017-2023	Asst Professor, U New Mexico
Kevin Yu	2022-2024	Otolaryngology Resident, UW

Current Fellows

Francisco Barros-Becker	2019-
Selina Baeza-Loya	2022-

Editorial Responsibilities

Editorial Board	Developmental Dynamics	2003-
	Development	2008-
	Developmental Biology	2008-2021
	PLoSOne	2007-2010

National Service

Society Roles	ARO, Travel Award Committee	2023-2026
	ARO, External Relations Committee	2019-2022
	Society for Dev Biology, Board of Directors	2007-2013
	Intl Zebrafish Society, Board of Directors	2015-2020

External Program Review	University of Utah Dept. of Neurobiology	2013
	University of Arizona MCB Program	2018
	University of Iowa Genetics	2019

Grant Review:	March of Dimes
	Spinal Cord Research Foundation
	USDA
	Wellcome Trust
	BBSRC
	INSERM

NSF Review Panel		2006
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NIH Study Section:	NIH MCDN-6/NCF, Member	2001-2005
	Chair	2003-2005
	NINDS, Board of Scientific Counselors	2002
	Ad Hoc Member	

NIDCD, Board of Scientific Counselors Ad Hoc Member	2010, 2020
NICHHD, Board of Scientific Counselors Ad Hoc Member	2021
NIH Ad Hoc, AUD	2007, 2008, 2010, 2012, 2014, 2020
NIDCD Training Review	2011, 2017
NIH Special Emphasis Panel, Zebrafish	2011, 2013, 2014
NIDCD Board of Scientific Counselors	2017-2018
NIH Neuroscience Blueprint Advisory Committee	2006
Scientific Advisory Board	Creighton University Hearing Research Ctr. Biology of Inner Ear Course, Woods Hole
	2019- 2020-

Local Service

Departmental

Biological Structure

Faculty Development Committee	2007-09, 2015-18
Search Committee	2004, 2010, 2017
Space Committee	2001-05, 2009-16
Bio Structure Chair Search Committee	2015
Search Committee Chair	2008
Renovation Committee, Chair	2005-2008
Graduate Affairs Committee	1996-2000

Otolaryngology-HNS

Diversity Committee	2021-
Research Committee	2021-
Search Committee Chair	2021-2024
VMBHRC Executive Committee	2021-

Medical School

Biomedical Research EDI Task Force	co-chair	2019-2023
Committee Member	Appointments and Promotions	2018-2021
Director	Center for Developmental Biology	2006-2010
Seminar Series Organizer	Neurobiology and Behavior	1998-2000
Admissions Committee	MCB	1999, 2005
Admissions Committee	Neurobiology and Behavior	2001
Reviewer	ISMS Thesis Papers	1998
Reviewer	Nathan Shock Institute Grant	1998

University

Interdisciplinary Representative	Graduate School Council	2018-
Policy Committee	Graduate School Council	2019-
Steering Committee	Molecular Cell Biology Graduate Program	2014-
Steering Committee	Auditory Neuroscience Training Grant	2017-
Steering Committee	Cell and Molecular Biology Training Grant	2022-
Executive Committee	Neuroscience Graduate Program	2022-
Program Director	Cell and Molecular Biology Training Grant	2017- 2022
	Developmental Biology Training Grant	2011-2016
Director	Molecular Cell Biology Graduate Program	2007-2014

Review panel Ad Hoc	Royalty Research Fund	2005-2006 1998- present
Faculty Senate		2003-2004
Steering Committee	Developmental Biology Training Grant	2005-2010
SHACS Seminar Committee		2020-21, 2022-23, 2023-24
Review Committee, Chair	Dept. of Immunology	2016
Review Committee, Chair	Dept. of Biochemistry	2022
Graduate Dean Review	UW Provost Office	2024

Current Research Funding

1 R01 DC005987 (Raible) NIDCD Genetics of Zebrafish Hair Cell Toxicity Current year direct costs \$373,524 The goals of this grant are to develop the zebrafish system as a model for ototoxicity and identify genes that confer differential susceptibility.		4/1/19-3/31/25
Kellogg Family Trust (Raible/Stone) Regulation of Hair Cell Regeneration Current year direct costs: \$225,000 This program examines shared mechanisms of hair cell regeneration between zebrafish and chick.		7/1/2019-12/31/2024
Hearing Health Foundation (Raible/Stone) Interspecies Analysis of Gene Expression Current year direct costs: \$90,000 This program examines shared gene expression patterns of hair cells between zebrafish and mouse.		10/1/2021-9/30/2024

Past Research Funding

1 R21 DC019948 (Raible) NIDCD Zebrafish Inner Ear Regeneration Total Cost: \$407,543		1/1/2022-12/31/2023
1 R01 DC015783 (Raible) NIDCD Mitochondrial Function and Dysfunction in Hair Cells Total Cost: \$1,626,732		12/1/16-11/30/22
2T32 GM136534 (Raible, PD) Training in Molecular and Cellular Biology		7/01/21-6/30/26
2T32 GM00007270 (Raible, PD) Training in Molecular and Cellular Biology		7/01/75-6/30/21
R01 DC005987 (Raible, Rubel multi-PI) NIDCD Genetics of Zebrafish Hair Cell Toxicity Total Cost: \$7,167,548		2003-2017
R21 DC015110 (Raible)		2016-2017

NIDCD CRISPR Screen for Hair Cell Development and Regeneration Regulators Total Cost: \$425,500	
Hearing Restoration Project (Raible) Hearing Health Foundation Profiling support cell types during zebrafish hair cell regeneration Total Cost: \$462,588	2012-2019
R01 DC013688 (Rubel, Raible, Simon multi-PI) NIDCD Drug Discovery for the Prevention of Hearing Loss Total Cost: \$295,850	2013-2015
R13HD078006 (Raible) NICHD 2013 Neural Crest & Cranial Placodes Gordon Research Conference Total Cost: \$14,000	2013
T32 HD 007183 (Raible, PD) NICHD Interdisciplinary Training in Developmental Biology	2011-2015
R01 DC0112169 (Raible) NIDCD Screens for modulators of hair cell regeneration Total Cost: \$1,568,882	2010-2014
U01 NS074506 (Rubel, Raible, Simon multi-PI) NINDS Drug Discovery for the Prevention of Hearing Loss Total Cost: \$516,453	2011-2012
R01 NS057220 (Raible) NINDS Genetic Regulation of Neural Crest Neurogenesis Total Cost: \$1,330,906	2007-2011
S10 RR026826 (Raible) NCRR Intelligent Imaging Spinning Disk Confocal Microscope Total Cost: \$499,532	2010
R21 DC008973 (Raible) NIDCD Genetic analysis of hair cell regeneration in zebrafish Total Cost: \$426,465	2007-2008
P01 GM065469 (Kimelman; Raible, PI Subproject 2) NIGMS Combinatorial Signaling in Zebrafish Development Total Cost Subproject 2: \$589,241	2002-2004

R01NS045246 (Raible) NINDS Cell Fate Regulation by Transcriptional Repression Total Cost: \$938,385	2003-2006
Royalty Research Fund (Rubel/Raible) UW Total Cost: \$28,000	2002
R01NS035833 (Raible) NINDS Regulation of Neural Crest Development Total Cost: \$1,582,785	1997-2003
Research Grant (Raible) March of Dimes Total Cost: \$150,000	1997-1999
Research Grant (Raible) Whitehall Foundation Total Cost: \$100,000	1996-1997
Royalty Research Fund (Raible) UW Total Cost: \$32,000	1996

Trainee Research Funding

Hearing Health Foundation (Barros-Becker) Aminoglycoside compartmentalization and its role in hair cell death Total Cost: \$100,000	2022-2024
F31DC020898 (Beaulieu) Characterizing hair cell regeneration in the larval zebrafish inner ear Total Cost:\$92,944	2022-2024
F31 DC019208 (Hewitt) Cellular Dynamics During Zebrafish Hair Cell Death, Differentiation and Regeneration Total Cost: \$115,380	2020-2023
Cystic Fibrosis Foundation (Bellairs) Cellular Mechanisms of ORC-13661 Protection Total Cost: \$50,383	2020-2022
American Society of Pediatric Otolaryngology (Bellairs) Mechanism of ORC-13661 Otoprotection Total Cost: \$20,000	2020
F32 DC017343 (McQuate) Regulation of Mitochondrial Networks in Hair Cells of the Zebrafish Lateral Line Total Cost: \$187,710	2018-2021
R03 DC015080 (Stawicki)	2015-2016

Retrograde Intraflagellar Transport Genes in Aminoglycoside-Induced Hair Cell Death Total Cost: \$309,000	
R03 DC014006 (Sebe) Mitochondrial Activity in Hair Cell Afferent Neurons Total Cost: \$458,050	2014-2016
R03 DC014772 (Esterberg) ER-Mitochondrial Calcium Flow in Aminoglycoside-Induced Hair Cell Death Total Cost: \$74,306	2015
R03 DC012881 (Hailey) Intercellular Trafficking of Labeled Aminoglycosides in Living Hair Cells Total Cost: \$455,755	2012-2014
F32 DC012244 (Esterberg) The Role of Intracellular Calcium in Ototoxin-Mediated Hair Cell Death Total Cost: \$108,712	2011-2012
Hearing Health Foundation DRF (Suli) Assessing functional recovery after mechanosensory hair cell regeneration Total Cost: \$50,000	2010-2011
F32 DC010940 (Hailey) Determining How Aminoglycoside-Induced Hair Cell Death is Blocked Total Cost: \$50,474	2010
F32 DC09547 (Brignull) Genetic and Molecular Analysis of Hair Cell Regeneration in Zebrafish Total Cost: \$51,710	2009
F32 DC09931 (Coffin) Differences in Neomycin and Gentamicin Toxicity in the Zebrafish Lateral Line Total Cost: \$104,632	2008-2009
F30 DC09392 (Coley) Zebrafish Lateral Line Enhancer Elucidation Total Costs: \$95,770	2007-2009
K99 HD055303 (Nechiporuk) Development of Epibranchial Placodes in Zebrafish Total Cost: \$90,001	2007-2008
F31 DC008743 (Ma) Hair Cell Regeneration in the Zebrafish Lateral Line Total Cost: \$97,612	2006-2008
F32 HD047108 (Cooper) Regulation of Neural Crest Cell Fate by FoxD3 Total Cost: \$150,772	2005-2007
F32 DC06998 (Owens) Modulation of Hair Cell Toxicity in Zebrafish	2005-2006

Total Cost: \$114,174

F32 HD047130 (Nechiporuk)
FGF Signaling During Cranial Placode Development
Total Cost: \$141,700

2004-2006

F32 NS010764 (Lister)
Molecular Genetics of Pigment Cell Development
Total Cost: \$97,612

1999-2001

Patents

US Patent 8,232,314 Ou, et al. issued 7/31/2012
COMPOUNDS THAT PROTECT AGAINST SENSORY HAIR CELL DEATH

US Patent 9,416,141 Simon, et al. issued 8/16/2016
COMPOUNDS AND METHODS FOR PREVENTING, TREATING AND/OR PROTECTING AGAINST
SENSORY HAIR CELL DEATH

US Patent 9,439,482 Simon et al., issued 11/15/2016
COMPOUNDS AND METHODS FOR PREVENTING OR TREATING SENSORY HAIR CELL DEATH

US Patent 9,902,738 Simon et al., issued 2/27/2018
COMPOUNDS AND METHODS FOR PREVENTING, TREATING AND/OR PROTECTING AGAINST
SENSORY HAIR CELL DEATH

US Patent 10,399,994 Simon et al., issued 9/3/2019
COMPOUNDS AND METHODS FOR PREVENTING OR TREATING SENSORY HAIR CELL DEATH

Bibliography

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Manuscripts in Refereed Journals

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2. **Raible, D.W.** and McMorris, F.A. (1989). Cyclic AMP Regulates the Rate of Differentiation of Oligodendrocytes Without Changing the Lineage Commitment of their Progenitors. *Dev. Biol.* 133: 437-446.
3. **Raible, D.W.** and McMorris, F.A. (1990). Induction of Oligodendrocyte Differentiation by Activators of Adenylate Cyclase. *J. Neurosci. Res.* 27: 43-46.
4. McMorris, F.A., Furlanetto, R.W., Mozell, R.L., Carson, M.J., and **Raible, D.W.** (1990). Regulation of oligodendrocyte development by insulin-like growth factors and cyclic nucleotides. *Ann. N.Y. Acad. Sci.* 605: 101-109.
5. **Raible, D.W.**, Wood, A., Hodsdon, W., Henion, P., Weston, J.A. and Eisen, J.S. (1992). Segregation and early dispersal of neural crest cells in the embryonic zebrafish. *Dev. Dyn.* 195: 29-42.
6. **Raible, D.W.** and McMorris, F.A. (1993). Oligodendrocyte differentiation and progenitor cell proliferation are independently regulated by cyclic AMP. *J. Neurosci. Res.*, 34: 287-294.
7. Luo, Y.L., **Raible, D.** and Raper, J.A. (1993). Collapsin: a protein in brain that induces the collapse and paralysis of neuronal growth cones. *Cell* 75: 217-227.

8. Chang, S. and **Raible, D.W.** (1994). RIN, a novel cell surface protein that labels reticular neurons early in chick neurogenesis. *J. Neurobiol.* 25: 395-405.
9. **Raible, D.W.** and Eisen, J.S. (1994). Restriction of neural crest cell fate in the trunk of the embryonic zebrafish. *Development* 120: 495-503.
10. **Raible, D.W.** and Eisen, J.S. (1995). Lateral specification of cell fate during vertebrate development. *Curr. Opin. Genet. Dev.* 5:444-449.
11. **Raible, D.W.** and Eisen, J.S. (1996). Regulative interactions in zebrafish neural crest. *Development* 122: 501-507.
12. Henion, P.D., **Raible, D.W.**, Beattie, C.E., Stoesser, K.L., Weston, J.A. and Eisen, J.S. (1996). A screen for mutations affecting development of zebrafish neural crest. *Dev. Genet.* 18: 11-17.
13. Bisgrove, B.W., **Raible, D.W.**, Walter, V., Eisen, J.S. and Grunwald, D.J. (1997). Expression of *c-ret* in the zebrafish embryo: Potential roles in motoneuronal development. *J. Neurobiol.* 33: 749-768.
14. Dorsky, R.I., Moon, R.T. and **Raible, D.W.** (1998). Control of neural crest fate by the Wnt signalling pathway. *Nature* 396: 370-373
15. Beattie, C.E., **Raible, D.W.**, Henion, P.D. and Eisen, J.S. (1999). Early pressure screens. *Methods Cell Biol.* 60:71-86.
16. Dorsky, R.I., Snyder, A., Cretekos, C., Grunwald, D.J., Giesler, R., Haffter, P., Moon, R.T. and **Raible, D.W.** (1999). Maternal and embryonic expression of zebrafish *lef1*. *Mech. Devel.* 86:147-150.
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18. Dorsky, R.I., **Raible, D.W.** and Moon, R.T. (2000). Direct regulation of *nacre*, a zebrafish MITF homologue required for pigment cell formation, by the Wnt pathway. *Genes Dev.* 14:158-162. PMID: PMC316348
19. **Raible, D.W.** and Kruse, G.J. (2000). Organization and development of the lateral line system in embryonic zebrafish. *J. Comp. Neurol.* 421: 189-198.
20. Dorsky, R.I., Moon, R.T. and **Raible, D.W.** (2000). Environmental signals and cell fate specification in premigratory neural crest. *Bioessays*, 22: 708-716.
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22. Lister, J.A., Close, J. and **Raible, D.W.** (2001). Duplicate *mitf* genes in zebrafish: complementary expression and conservation of melanogenic potential. *Dev. Biol.* 237: 333-344.
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24. Harris, J.A., Cheng, A.G., Cunningham, L.L., MacDonald, G., **Raible, D.W.** and Rubel, E.W. (2003). Neomycin-induced hair cell death in the lateral line of zebrafish (*Danio rerio*): a model system to study hair cell survival. *JARO* 4: 219-234. PMID: PMC3202713
25. Elworthy, S., Lister, J.A., Carney, T.J., **Raible, D.W.** and Kelsh, R.N. (2003). Transcriptional regulation of *mitfa* accounts for the *sox10* requirement in zebrafish melanophore development. *Development* 130: 2809-2818.
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28. Shepherd, I.T. Pietsch, J., Elworthy, S., Kelsh, R.N. and **Raible, D.W.** (2004). Roles for GFR α 1 receptors in zebrafish enteric nervous system development. *Development* 131: 241-249.
29. Lewis, J.L., Bonner, J., Modrell, M., Ragland, J.W., Moon, R.T., Dorsky, R.I., and **Raible, D.W.** (2004). Reiterated Wnt signaling during zebrafish neural crest development. *Development* 131:1299-308.
30. Kennedy, B.N., Sterns, G.W., Smyth, V.A., Ramamurthy, V., van Eeden, F., Ankoudinova, I., **Raible, D.**, Hurley, J.B. and Brockerhoff, S.E. (2004). Zebrafish rx3 and mab2112 are required

- during eye morphogenesis. *Dev. Biol.* 270:336-349.
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Commentary/ Meeting Reports

1. Chapman, S., **Raible, D.W.**, Henken, D. and Tosney, K. (2004). The neural crest as a way of knowing: new perspectives on lineage and morphogenesis. *Dev. Dyn.*, 229:140-142
2. Ghysen A, Dambly-Chaudière C, **Raible D.** (2007). Making sense of zebrafish neural development in the Minervois. *Neural Develop.* 2:15. PMID: PMC1988804
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4. Streit A, **Raible DW** (2011). A Feast for the Senses in Barcelona: development and function of sensory systems. *EMBO Reports*, 12:874-6. PMID: PMC3166473
5. Beaulieu MO, **Raible DW** (2021). Losing the license to regenerate hair cells. *Dev Cell*, 56:2402.

Submitted

Recent Invited Presentations (past 10 years)

Stanford University	Palo Alto, CA	2014
University of Virginia	Charlottesville, VA	2014
Stowers Institute	Kansas City, MO	2014
University of Western Ontario	London, Ontario, Canada	2014
Peking University	Beijing, China	2014
University of Washington SHACS seminar	Seattle, WA	2015
USC	Los Angeles, CA	2015
University of Utah	Salt Lake City, UT	2015
Strategic Conference of Zebrafish Investigators	Asilomar, CA	2015
Neural Crest and Placodes GRC	Boston, MA	2015
Keynote speaker, SE Region SDB Meeting	Clemson, SC	2015
Johns Hopkins University	Baltimore, MD	2016
Washington University	St. Louis, MO	2016
Skirball Institute, NYU	New York, NY	2016
SUNY Stonybrook	Stonybrook, NY	2016
Molecular Biology of Hearing and Deafness	Hinxton, UK	2016
University of Washington Neuro Seminar	Seattle, WA	2017
NIDCD	Bethesda, MD	2017
Harvard MEEI	Boston, MA	2017
University of Buffalo	Buffalo, NY	2017
Caltech	Pasadena, CA	2017
UCLA	Los Angeles, CA	2017
Strategic Conference of Zebrafish Investigators	Asilomar, CA	2017
University of Washington Pharmacology	Seattle, WA	2018
USC	Los Angeles	2018
U Michigan	Ann Arbor MI	2018
Stanford	Palo Alto, CA	2018
Northwest Auditory and Vestibular Meeting	Seattle, WA	2018
WSU Vancouver	Vancouver, WA	2019
SUSTech	Shenzhen, China	2019
Dalhousie University	Halifax, Nova Scotia	2019
Strategic Conference of Zebrafish Investigators	Asilomar, CA	2019

Chinese Hearing Conference	Beijing, China	2019
Conference on Inner Ear Therapeutics	Hanover, Germany	2019
University of Washington, VMBHRC	Online	2020
Emerging Hearing Medicines Landscape	Online	2020
Oregon State University	Online	2021
PIHL Preclinical Ototox Group	Online	2021
Bloedel Trustees	Online	2021
Belluci Symposium	Online	2021
3 rd Inner Ear Disorders Therapeutics Summit	Boston, MA	2023
RNID Hearing Therapeutics Summit	London, UK	2023
58 th Inner Ear Biology	London, UK	2023

Meeting organization

Local Organizer, Society for Developmental Biology	Seattle, WA	2014
Community Session Leader, International Zebrafish Meeting	Madison, WI	2014
Community Session Leader, Strategic Conference of Zebrafish Investigators		2015
Organizer, NW Developmental Biology meeting	Friday Harbor	2016
Community Session Leader, Strategic Conference of Zebrafish Investigators		2017
Organizer, NW Developmental Biology meeting	Friday Harbor	2017
Discussion Leader, Auditory Neuroscience GRC		2018
Community Session Leader, Strategic Conference of Zebrafish Investigators		2019