Curriculum Vitae
James Otho Phillips, Ph.D.

Personal Data

Place of Birth	Portland, Oregon
Citizenship	USA

Education:

Pomona College, Claremont, CA	B.A. English literature	1977
University of Washington Seattle, WA	Ph.D. Psychology and Physiology	1993

> *separate qualifying and general examinations in each discipline, doctoral committee from Arts and Sciences and from School of Medicine, and two-part dissertation containing behavioral and neurophysiological studies*
> *Psychology specialization in neuropsychology of memory and learning*
> *Physiology specialization in oculomotor and vestibular neurophysiology*

Postgraduate Training:

Post-doctoral and Senior Fellowships Department of Physiology and Biophysics University of Washington, Seattle, WA	1993-1997

Faculty Positions Held:

Research Asst. Professor Department of Otolaryngology - HNS University of Washington, Seattle, WA	1998-2002
Research Asst. Professor Division of Ophthalmology, Department of Surgery Children's Hospital and Regional Medical Center Seattle, WA	1998-2002
Research Assoc. Professor Department of Otolaryngology - HNS University of Washington, Seattle, WA	2003-2016
Research Assoc. Professor Division of Ophthalmology, Department of Surgery Children's Hospital and Regional Medical Center Seattle, WA	2003-2016
Adjunct Research Associate Professor Speech and Hearing Sciences University of Washington, Seattle, WA	2016

Hospital Positions Held:

Vestibular-Oculomotor Physiologist, Medical Staff, Consulting 2000-2016
Division of Ophthalmology, Department of Surgery,
Children's Hospital and Regional Medical Center, Seattle, WA
> *Responsible for vestibular and oculomotor assessment in pediatric patients.*

Vestibular Neurophysiologist, Medical Staff, Allied 2002-2016
Department of Otolaryngology University of Washington Medical Center, University of Washington, Seattle, WA
> *Responsible for vestibular and oculomotor assessment in adult and pediatric patients.*

Vestibular Neurophysiologist, Medical Staff, Allied 2002-2016
Department of Otolaryngology Harborview Medical Center, University of Washington, Seattle, WA
> *Responsible for vestibular and oculomotor assessment in adult patients.*

Honors

Fellow
James S. McDonnell Foundation 1988

Finalist
Lindsley prize in Behavioral Neuroscience 1994

Fellow
A.R.V.O./N.E.I. 1997

Professional Organizations

American Auditory Society

American Nystagmus Network

American Physiological Society

Association for Research in Vision and Ophthalmology

Association for Research in Otolaryngology

Barany Society

New York Academy of Sciences

Society for the Neural Control of Movement

Society for Neuroscience

Vestibular Disorders Association

Teaching Responsibilities (since 2001)

Instructor 100%
Psychology 101
Psychology as a Social Science
Alternate Quarters 1998–2005
> *Responsible for all course content for 350-600 students per quarter.*

Instructor 100%
Psychology 102
Psychology as a Natural Science
Alternate Quarters 1998-2001
> *Responsible for all course content for 400 students per quarter.*

Lecturer 5%
Otolaryngology-HNS Resident Education 1998-2015
Otology-Audiology Series
> *Responsible for vestibular physiology and assessment series.*

Lecturer 5%
Ophthalmology Resident Education 1999-2013
Neuro-ophthalmology
> *Responsible for strabismus and nystagmus lectures.*

Lecturer 10%
Physiology and Biophysics, 508
Physiology Laboratory 1999-2001
> *Responsible for single unit neurophysiology series lectures and labs.*

Lecturer 5%
Ophthalmology Resident Education 1999-2011
Pediatric Ophthalmology Series
> *Responsible for basic physiology of eye movement lectures*

Lecturer 5%
Speech and Hearing Science, 574 1999-2007
Assessment of Balance Function
> *Responsible for balance assessment lectures.*

Lecturer 5%
Neurobiology 403
Systems and Behavioral Neurobiology 1999-2001
> *Responsible for the neurobiology of brainstem function lectures.*

Lecturer 5%
Psychology 333
Sensory and Perceptual Processes 2001
> *Responsible for the vision and vestibular series.*

Lecturer 5%
Speech and Hearing Sciences 541 2001-2010
Vestibular Function
> *Responsible for rotary chair and posturography series*

Organizer and Instructor 100%
Otolaryngology Grand Rounds Subgroup 2004-2015
Clinical Vestibular Disorders
> *Responsible for a monthly vestibular grand rounds*

Instructor 100%
Speech and Hearing Sciences 574
Vestibular Assessment and Function
Summer Quarter 2011-2016
> *Responsible for all course content for 15 students per quarter.*

Clinical Supervisor 10%
Speech and Hearing Sciences 591G
Advanced Outside Rotation
12 months 2013-2016
> *Responsible for 2-3 student trainees per quarter.*

Clinical Au.D. Externship Trainees (currently matriculating or graduated within the last 3 years)

Emily Bates, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Holly Bridges, B.S., 4th Year Extern, Department of Audiology, Washington University School of Medicine, St. Louis, MO

Carl Brodie, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Tina Chan, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Christa Dodson, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Kelsie Fisch, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Karen Harris, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Anne Harvey, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Joanne Huang, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Caitlin Hutton, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Taylor Olsen, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Mariana Perez Saabi, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Hillary Perry, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Andrea Robinson, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Amy Safron Henderson, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Cory Scott, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Erin Stewart, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Kaitlin Wintersteen, B.S., 3rd Year Extern, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Graduate Research Trainees:

Steven Bierer, Ph.D., post-doctoral fellow,
currently senior research scientist, Department of Speech and Hearing Sciences, University of Washington, Seattle, WA

Grace Chang, B.S., predoctoral trainee,
currently in the laboratory

Christina Defrancisci, B.S., predoctoral research assistant,
currently a 4th year Extern, University of Washington Medical Center, Seattle, WA

Alasia Fate, Au.D., predoctoral trainee,
currently audiologist at Sacramento ENT, Sacramento, CA

Sheridan Frank, B.S., predoctoral trainee,
currently in the laboratory

Justin Golub, M.D., resident trainee, currently Assistant Professor of Head and Neck Surgery, Columbia University, New York, NY

Judy J. Hopp, Ph.D. predoctoral fellow,
currently Professor of Physics, University of Wisconsin, Stout, Menomonie, WI

Shawn Kampel, Au.D., C.C.C.-A. , predoctoral trainee,
currently research audiologist, National Center for Rehabilitative Auditory Research, Portland, OR

Barry Lia, Ph.D., postdoctoral trainee,
currently electrodiagnostic technician, University of Washington Medical Center, Seattle, WA

Brittney Medina, B.S., predoctoral trainee,
currently in the laboratory

Nick Ottley, B.S., predoctoral trainee
currently in the laboratory

Trey Oxford, M.D., medical student trainee,
currently resident in Internal Medicine, Kaiser Permanente Medical Group, Santa Clara, CA

Warren Piehl, B.S., predoctoral trainee
currently in the laboratory

Sarah Shepherd, Au.D., predoctoral trainee,
currently audiologist at Vanderbilt Bill Wilkerson Center, Nashville, TN

Shanece Washington, B.S., predoctoral trainee,
currently 4th year audiology extern at Seattle VA, Seattle, WA

Undergraduate Research Trainees (since 2013)

Joel Fandel, Undergraduate Neurobiology Major, Graduate

Rummi Ganguly, Undergraduate Neurobiology Major, Graduate

Grace Green, Undergraduate Biology Major, Graduate

Aaron Holben, Undergraduate Psychology Biology Major, Graduate

Hunter Knapp, Undergraduate Neurobiology Major, Graduate

Sinwai Law, Undergraduate Neurobiology Major, Graduate

Rebecca Marquard, NASA undergraduate fellow, Undergraduate Biology Major,
currently enrolled

Andrew Morrow, Undergraduate Neurobiology Major, Graduate

Victoria Wahlstrom, NASA undergraduate fellow, Undergraduate Neurobiology Major, currently enrolled

Editorial Responsibilities:

Ad Hoc Reviewer

Aging Research Reviews
Archives of Pediatrics and Adolescent Medicine
Brain Research
Cerebral Cortex
Experimental Brain Research
Ear and Hearing
Hearing Research
IEEE Transactions Biomedical Engineering
Investigative Ophthalmology and Visual Science
Journal of Association for Research in Otolaryngology
Journal of Cognitive Neuroscience
Journal of Neurophysiology
Journal of Neuroscience
Journal of Vestibular Research
Neurobiology of Aging
Neuroscience Letters
Otology Neurotology
PLOS 1
Science Translational Medicine

Special National Responsibilities

Invited Participant, National Space Biomedical Research Institute, Neuro-vestibular Working Group, Houston, TX

Invited Participant, NASA Future Forum, Seattle, WA

Organizing Committee, Barany XXII Biennial Meeting, Seattle WA, 2002

Co-Organizer, Vestibular Influences on Movement, Orcas Island, WA, 2002

Co-Organizer, Northwest Auditory Vestibular Meeting, Portland, OR, 2007

Co-Organizer, How the brain controls the eye and head: neural mechanisms of oculomotor and vestibular function. Medford/Ashland OR, 2008

Faculty Affiliate 2007-2016
The Center for Navigation and Communication Sciences
Rochester University, Rochester, NY

Faculty Affiliate 2010-2016
Center for Integrative Brain Research
Seattle Children's Research Institute, Seattle, WA

National Aeronautics and Space Administration Space Biology Advisory and Review Panel 2012-2016

NIH Review Panel, ZDC1-SRB-K-17 2013

Vestibular Disorders Association, Medical and Scientific Advisory Board, 2014-2016

NIH Review Panel, ZDC1 2015-2016

Department of Defense Congressionally Directed Medical Research Programs Clinical and Rehabilitative Medicine Research Panel 2015

NASA/NSBRI 2015-2016 Crew Health Step 2 Review 2016

Special Local Responsibilities

Director 1999-2016
Vestibular Diagnostic Laboratory
University of Washington Medical Center

> *The VDL is a testing laboratory housed in the Otolaryngology-HNS Clinic at University Hospital. It offers over 25 tests of vestibular function and performs over 4000 procedures a year. This laboratory serves the UW Dizziness and Balance Center, the UW Otology Service, and takes community referrals for specialized vestibular assessment only.*

Director 1999-2016
Roger Johnson Clinical Oculomotor Laboratory
Seattle Children's Hospital

> *The RJCOL is a testing laboratory housed in the Ophthalmology Clinic at Seattle Children's Hospital. It offers assessment of pediatric oculomotor and vestibular function, and extraocular muscle path reconstruction from MRI and Spiral CT. It is utilized by several services including Ophthalmology, Medical Genetics, Otolaryngology, Neurology, Neurosurgery, and Craniofacial.*

Director 2005-2016
Dizziness and Balance Center
University of Washington Medical Center

> *The DBC is an interdisciplinary center for the diagnosis and treatment of balance disorders and related conditions*

Member 2005-2015
Affiliate Liaison Committee
Virginia Merrill Bloedel Hearing Research Center
University of Washington

> *This committee oversees the academic activities of the VMBHRC.*

Director
Auditory and Vestibular Patient Subject Pool 2000-2004
University of Washington

> *Administration of research subject pool of over 1000 patents was assumed by the UW NIDCD P30 in 2004.*

Co-Director
Child Development Research Participants Subject Pool 2000-2002
University of Washington

> *Administration of research subject pool of over 2000 pediatric volunteers was assumed by the UW NIDCD P30 in 2002.*

Faculty Research Affiliate
Human Interface Technology Laboratory
University of Washington 2000-2013

> *The research effort here was directed toward developing interfaces that incorporate realistic vestibular and visual interactions.*

Faculty Research Affiliate 2006-2016
Washington National Primate Research Center,
University of Washington

> *This site contains the primary research laboratory and effort. The projects here study a prosthesis for restoration of vestibular function, and the coordination of eye and head movement during head unrestrained gaze shifts.*

Faculty Research Affiliate 2008-2016
Infant Primate Research Laboratory
University of Washington

> *This site contains a primate oculomotor laboratory. Ongoing studies include the assessment of oculomotor and vestibular function in developing monkeys, and assessment of monkeys with perinatal asphyxia treated with erythropoietin.*

Faculty Research Affiliate 2006-2016
Autism Center
University of Washington

> *The research effort here is directed evaluating vestibular and oculomotor function in pediatric patients diagnosed with autism.*

Faculty Research Affiliate 2010-2016
Center on Human Development and Disability
University of Washington

> *The research effort here is directed toward developing technologies to evaluate pediatric vestibular function.*

Faculty Research Affiliate 1998-2016
Virginia Merrill Bloedel Hearing Research Center
University of Washington

> *This center is the site for development of human prostheses for recovery from vestibular loss and two ongoing studies of treatment of these disorders. In addition, Dr. Phillips runs the small animal behavioral assessment laboratory housed within the VMBHRC.*

University of Washington Human Subjects Review Committee
IRB Biomedical Research A, University of Washington, Seattle, WA 1987-1991

Ad Hoc Reviewer
Royalty Research Fund 2005-2011

Ad Hoc Reviewer 2008-2016
Translational Research Fund

Organizer, UW Vestibular In-service 2009, Seattle Washington, 2009

Research Funding

Grants Funded

027500 Phillips, J.O. P.I. 1/1/1998 – 9/30/2001
Direct Cost $10,900
Prediction of eye movements following craniofacial surgery.
Marsha Sloan Glazier Fund

EY00745-26 (Fuchs, A.F., . P.I., Phillips, J.O. Co-investigator), 9/1/1998-8/31/2005
Yearly Direct Cost $225,931
Neurophysiology of the oculomotor system.
NIH-National Eye Institute

002004 (Phillips, J.O. P.I.) 3/1/1999 - 2/29/2001
Direct Cost $36,550
Evaluation of vestibular function in hearing impaired infants and children.
Royalty Research Fund

110838 (Gates, G.A. P.I., Phillips, J.O. Co-Investigator), 7/1/1999-6/30/2001
Direct Cost $36,350
Pharmacotherapy of Meniere's Disease
American Otological Society Research Fund

NIH DC05175-01 (Fuchs, A.F., P.I., Phillips, J.O. Co-investigator), 9/14/2001-8/31/2006
Yearly Direct Cost $29,511
Vestibular Influences on Movement
NIH-NIDCD

NSF 0214744 (Albert Fuchs, James Phillips, Co-PIs), 8/1/2002-present
Yearly Direct Cost $20,000
Conference: Vestibular Influences on Movement, San Juan Islands, September 22-26, 2002
National Science Foundation

NIH-DC005368-01A1 (Gates, G.A., P.I., Phillips, J.O. Co-investigator)
Yearly Direct Cost $29,876
Barany Society XXII
NIH-NIDCD

NIH MH066399 (Dawson, G., P.I., Phillips, J.O., Consultant), 5/1/2004 – 4/30/2005
Yearly Direct Cost
UW Autism research center of Excellence: Project II Precursors to Language
NIH-NIMH

NIH HD35465 (Dawson, G., P.I., Phillips, J.O., Consultant), 6/1/2003-5/31/2007
Yearly Direct Cost
Neurobiology and Genetics of Autism: Project II Precursors to language
NIH-NICHD

P30 DC04661 (Rubel, E., P.I., Phillips, J.O., Investigator) 9/25/2007-8/31/2010
Yearly Direct Cost $450,000
University of Washington Research Core Center

NASA NNA04CC60G (Phillips, J.O., PI) 2/1/2004-1/31/2008
Yearly Direct Cost $187,426
Gravitational Influence on Cerebellar Control of Gaze Movement and Adaptation
NASA/FSB

NAAR (Webb S. P.I. UW, Phillips, J.O. Co P.I., CHRMC) 9/1/2005-8/31/2008
Yearly Direct Cost $55,000
Linking Cerebellar Pathology to Functioning in Individuals with Autism: Implications for Translational Research
NAAR

NIH R21 (Kaneko, C.R.S. P.I., Phillips J.O. Co. I.) 1/1/2007-12/31/2010
Yearly Direct Cost $140,000
Vestibular and optokinetic testing for research and clinic.
NIDCD

Schmitt Research Award (Ison, J., P.I., Phillips, J.O. Co. I.)
Yearly Direct Cost $100,000
Deficits in auditory and vestibular function in episodic ataxia type-1: a comparison of auditory and vestibular unction in human patients and mouse models.
Schmitt Program on Integrative Brain Research

NIH 1R44DC009386-01 (Wells, J. P.I., Phillips, J.O. Co. I.) 3/1/08-2/28/09
Yearly Direct Cost $230,000
Optical nerve stimulation for a vestibular prosthesis
NIDCD

RVMCG (Phillips, J.O. P.I.) 7/1/2008-6/30/2009
Yearly Direct Cost - $10,000
Neural Mechanisms of Oculomotor and Vestibular Function
Asante-RVMC

MG003 (Phillips, J.O. P.I.) 4/1/2009-12/31/2009
Oculomotor and vestibular function following perinatal asphyxia.
VMBHRC
Yearly Direct Cost $5,000

HSH 200707 NCE (Phillips, J.O., P.I.) 8/1/2007-7/31/2010
Yearly Direct Cost $39,000
Vestibular function in Usher's Type 1.
HSH

Translational Research Partnership Grant 2009-1 (Phillips, J.O. & Rubinstein, J.T. PIs)
4/1/2009-3/31/2010
Clinical Feasibility of a Vestibular Prosthesis for Meniere's Disease
Wallace H Coulter Foundation
Yearly direct cost $105,936

Translational Research Partnership Grant 2010-2 (Phillips, J.O. & Rubinstein, J.T. PIs)
4/1/2010-3/31/2011
Clinical Feasibility of a Vestibular Prosthesis for Meniere's Disease
Wallace H Coulter Foundation
Yearly direct cost $100,000

NCT00768378 (Phillips, J.O. Lead P.I.) 4/1/2008-3/31/2010
A Controlled Clinical Study to Evaluate the Safety and Efficacy of the BrainPort® Balance Device When Used to Improve Balance in Subjects With Peripheral Vestibular Dysfunction.
WiCab
Yearly direct cost (UW site) $99,000

HHS-N-260-2006-00005-C (Phillips, J.O. P.I.) 8/1/2006-8/15/2012
Neurophysiological Studies of Electrical Stimulation for the Vestibular Nerve
Yearly Direct Cost $353,475
NIDCD

R01-HD052820 - Sup (Juul, S. P.I., Phillips, J.O. Co.I.) 7/1/2009-6/30/2013
Optimizing neuroprotection following perinatal asphyxia.
NIH
Yearly Direct Cost $108,506

1R21DC010862-01 (Bermingham-McDonough, O., P.I., Phillips J.O., Collaborator)
4/1/2010-3/31/2013
Regeneration in the mammalian vestibular system.
NIDCD
Yearly Direct Cost $137,000

RR-00166-51 (Phillips, J.O. PI) 5/1/2011-4/30/2012
NCRR-ITHS Ignition Award: Vestibular prosthesis for bilateral and uncompensated unilateral loss.
NCRR ORIP
Yearly Direct Cost $75,000

MG003 (Stone, J. P.I., Phillips, J.O. P.I.) 1/1/2012-12/31/2013
Development of vestibular testing parameters for adult mice
VMBHRC
Yearly Direct Cost $5,000

MG003 (Phillips, J.O., P.I.) 1/1/2013-12/31/2014
Actively-Controlled Transtympanic (ACT) Drug Delivery System
VMBHRC
Yearly Direct Cost $4,958

Cochlear Corporation Research Grant (Rubinstein, J., Phillips, J.O., project Co-PIs)
1/12/13-12/31-2014
Development of a vestibular prosthesis.
Cochlear Corporation
Yearly Direct Cost $100,000

RR-00166-61 (Robinson, F.R., P.I., Phillips, J.O. Co. PI) 5/1/2012-4/30/2013
ITHS Ignition Award: Dissolution of perineuronal nets to aid adaptation to a vestibular prosthesis.
NCRR-ORIP
Yearly Direct Cost $75,000

IIP-1315779 (Reza Shekarriz, P.I., Phillips J.O., UW P.I.) 7/1/2013-12/31/2013
SBIR Phase I: Actively-Controlled Transtympanic (ACT) Drug Delivery System.
NSF
Yearly Direct Cost $160,000

P30 DC07651 (Paige, G., P.I., Phillips, J.O., Investigator – Moderate Use)
Center for Navigation and Communication Sciences
NIDCD
Yearly Direct Cost $350,000

P30 DC04661 (Rubel, E., P.I., Phillips, J.O., Core Co-Director) 9/1/2010-8/31/2015
University of Washington Research Core Center – Mouse Genetics Core
NIDCD
Yearly Direct Cost $399,664

> *This proposal provides research resources for investigators in hearing science at the University of Washington.*

Grants / Contracts Currently Funded.

R01 DC014002-01 (Rubinstein, J., P.I., Philips J.O., Co.I.) 8/1/2014-8/31/2019
Optimization of a human vestibular prosthesis
NIDCD
Yearly Direct Cost $382,976
> *The major goals of this project are to continue development of a first in man vestibular prosthesis for the treatment of vestibular loss, using FDA approved clinical studies of technologies initially tested in a non-human primate model*

Kranwinkle Gift (Rubinstein, J., Phillips, J.O., project Co-PIs) 6/1/2011 – open
Clinical Study of the UW/Nucleus Vestibular Neurostimulator
Private Foundation
Initial Direct Cost $1,000,000
> *The goal of this project is to develop a chronic vestibular stimulator in humans.*

Phillips 000-0 (Phillips, JO, PI) 3/25/2016-3/24/2017
Scleral Coil Lenses
Oculus VR, LLC
Yearly Direct Cost open/invoiced (initial invoice, 3/25/2016, $4,944)
> *The goal of this project is to develop eye tracking technologies for virtual reality studies of human oculomotor function.*

Oculus Gift (Phillips, JO, PI) 12/1/2016-open
VR Development
Oculus VR, LLC
Initial Direct Cost $2,000
> *The goal of this unrestricted gift is to continue the study of VR in the treatment of vestibular disorders.*

MG2016003 (Rubel, EW, PI; Phillips, J.O., Co.I.) 1/1/2016-12/31/2017
Small Animal Digital aVOR Recording and Analysis Equipment
VMBHRC
Yearly Direct Cost $4,958
> *The goal of this grant is to provide funds to allow us to upgrade the small animal vestibular rotator in the Bloedel center with the objective of studying molecules to protect against hair cell loss.*

MG2016004 (Stone, J., PI; Phillips, J.O., Co.I.) 1/1/2016-12/31/2017
Small Animal Digital aVOR Recording and Analysis Equipment II
VMBHRC
Yearly Direct Cost $4,958
> *The goal of this grant is to provide funds to allow us to upgrade the small animal vestibular rotator in the Bloedel center with the objective of studying recovery of function and adaptation in DT mice.*

Grants / Contracts Pending.

1 R01 DC015470-R1 (Phillips, J.O., P.I.) 6/01/2017-5/31/2022
Perturbation of gaze shifts with a vestibular prosthesis.
NIDCD Yearly Direct Cost $350,000
> *The major goal of this grant application is to study head unrestrained gaze shifts and vestibular function with neural recording during stimulation with a vestibular prosthesis. The proposal was scored but not funded in the last round.*

Royalty Research Fund (Phillips, J.O., P.I.) 1/15/2017-1/14/2018
Vestibular and auditory function in patients with cystic fibrosis.
NIDCD Yearly Direct Cost $50,000
> *The goal of this pilot grant application is to prospectively study vestibular and auditory function in a small cohort of patients with cystic fibrosis.*

Cystic Fibrosis Foundation (Phillips, J.O., P.I.) 4/01/2017-3/31/2019
Vestibular and auditory function in patients with cystic fibrosis.
NIDCD Yearly Direct Cost $40,000
> *The major goal of this grant application is to study vestibular and auditory function in a group of subjects with cystic fibrosis who are already enrolled in a larger CFF study to see if single dose I.V. aminoglycoside affects hair cell function in these patients.*

Intellectual Property / Patents

UW43415
Printed Circuit Search Coil for Eye and Head Movement Recording in Humans and Animals
10/19/2004

UW44432
Intralabyrinthine electrode array for a vestibular prosthesis
1/4/2008

UW44789
Vestibular implant stimuli for the treatment of Meniere's disease
1/11/2009

UW44803
Electrically-evoked vestibular compound action potentials to guide placement and programming of a vestibular neural stimulator
1/24/2009

UW45116
Vestibular gain enhancement by unmodulated peripheral pacing
12/13/2009

UW45138
Printed circuit search coil for eye and head movement
1/12/2010

UW45552
Method to decrease spontaneous firing rate of electrically stimulated nerve
Other 3/13/2011

UW45568
A bone anchored sensory array/processor for a vestibular prosthesis
3/27/2011

UW45570
Real time communication link for a vestibular prosthesis
3/28/2011

UW46358
restraint system for chronic infusion pump
1/13/2013

14744951
EFS ID 22683450
Vestibular stimulation device
6/19/2015

UW47812
Canal specific eVEMP, eVSEP, and eABR stimulation for a vestibular prosthesis.
09/06/2016

Bibliography

Papers

1. Rushmer, D.S., Russell, C.J., MacPherson, J.M., Phillips, J.O., Dunbar, D.C. Automatic postural responses in the cat: responses to headward and tailward translation. *Exp. Brain Res.* 50:45-61, 1983.

2. Phillips, J.O., Robinson, F.R., Fuchs, A.F. Two-dimensional eye movement and vestibular responses in primate brainstem. *Ann. N.Y Acad. Sci.* , 656: 950-953, 1992

3. Coble, E.T., Ling, L., Phillips, J.O., Fuchs, A.F. The role of omni-pause neurons during gaze shifts. In: *Visual and oculomotor functions, advances in eye movement research.* Edited by J. Van Rensbergen and G. d'Ydewalle. Amsterdam: Elsevier / North Holland, 1994, p. 285-293.,

4. Phillips, J.O., Ling, L., Siebold, C., Fuchs, A.F. Gaze movements during sinusoidal tracking and body rotation. I. A comparison between head free and head fixed responses in normal monkeys. In: *Contemporary ocular motor and vestibular research.* Edited by A.F. Fuchs et al. Stuttgart: Georg Thieme Verlag, 1994, p. 265-268.

5. Ling, L., Phillips, J.O., Siebold, C., Fuchs, A.F. Gaze movements during sinusoidal tracking and body rotation. III. A computational exploration of pursuit and VOR interactions. In: *Contemporary ocular motor and vestibular research.* Edited by A.F. Fuchs et al. Stuttgart: Georg Thieme Verlag, 1994, p. 182-184.

6. Siebold, C., Ling, L., Phillips, J.O., Fuchs, A.F., Duckert, L.G. Gaze movements during sinusoidal tracking and body rotation. II. A comparison between normal and canal plugged monkeys. In: *Contemporary ocular motor and vestibular research.* Edited by A.F. Fuchs et al. Stuttgart: Georg Thieme Verlag, 1994, p. 268-270.

7. Robinson, F.R., Phillips, J.O., Fuchs, A.F. Coordination of gaze shifts in primates: brainstem inputs to neck and extraocular motoneuron pools. *J. Comp. Neurol.* , 364: 43-62, 1994.

8. Phillips, J.O., Ling, L., Fuchs, A.F., Siebold, C., Plorde, J.J. Rapid horizontal gaze movement in the monkey. *J. Neurophysiol.* 73 (4): 1632-1652, 1995.

9. Phillips, J.O., Ling, L., Siebold, C., Fuchs, A.F., and Newlands, S. Responses of vestibular neurons during passive and active head and eye movement in the primate. *Ann. N.Y Acad. Sci.* , 781: 276-291, 1996

10. Phillips, J.O., Finocchio, D.V., Ong, L., and Fuchs, A.F. Smooth Pursuit in 1- to 4-Month Old Human Infants. *Vision Research,* 37(21): 3009-3020, 1997

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Kelly, J.P., Weiss, A.H., Ishak, G., Phillips, J.O., Visual Sensory And Motor Function In Children With Polymicrogyria; Relationship To Neuroimaging, *Association for Research in Vision and Ophthalmology Annual Meeting*, 4265 - C0274, 2015

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Phillips, J.O., Ling, L., Phillips, C., Nie, K., Rubinstein, J.T. Dynamics of the eVOR elicited by a vestibular prosthesis. *American Audiological Society Annual Meeting*, 2016

Phillips, J.O., Ling, L., Phillips, C., Nie, K., Rubinstein, J.T. Ocular Torsion and Skew Deviation Findings During Electrical Stimulation in Human Subjects with a Chronically Implanted Vestibular Prosthesis. *ARO Midwinter Meeting*, 2016

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Weiss, AH, Kelly, JP, Phillips, JO Congenital and Acquired Exotropia: Underlying Mechanisms. *Association for Research in Vision and Ophthalmology Annual Meeting*, 983, 2016

Phillips, C., Ling, L., Nie K., Nowack, A, Rubinstein, JT, Phillips, JO. Dynamics of eye movements and secondary vestibular neurons during prosthetic vestibular stimulation. Society for Neuroscience, 802.02., 2016

Nowack, A, Ling, L., Nie K., Phillips, C., Phillips, JO., Rubinstein, JT, Relationship between vestibular evoked compound action potential responses and electrically elicited VOR. Society for Neuroscience, 802.03., 2016

Invited Lectures (2001-present)

Phillips, J.O. Pediatric Vestibular Testing presented in *Advanced Temporal Bone Lab 2001,* Seattle, WA, 2001

Phillips, J.O. Vestibular Assessment in Children presented in *Advanced Temporal Bone Lab 2002,* Manchester, England, 2002

Phillips, J.O. Judicious Use of Vestibular Laboratory Testing *Advanced Temporal Bone Lab 2003,* Seattle, WA, 2003

Phillips, J.O. Introduction to Vestibular Evaluation: Disorders, Physiology, and Instruments, *Harborview Rehabilitation Medicine Rounds*, Seattle, WA, 2003

Phillips, J.O. Development of Vestibular Function in Human Infants and Children, Virginia Merrill Bloedel Day, Seattle, WA, 2003

Phillips, J.O , Balance Disorders In The Elderly, *Ears Hearing and Beyond,* Seattle, WA, 2004

Phillips, J.O Effects of bilateral canal plugging on the discharge of brainstem neurons during eye and head gaze shifts. *Barany XXII*, Paris, France , 2004

Phillips, J.O. Laboratory Testing in the Treatment of Vestibular Disorders *Advanced Temporal Bone Lab 2004,* Seattle, WA, 2004

Phillips, J.O. Laboratory Vestibular Testing *Advanced Temporal Bone Lab 2005,* Seattle, WA, 2005

Phillips, J.O. Disequilibrium and the Ear; I'm not dizzy, I just fall down. *Ears Hearing and Beyond,* Seattle, WA, 2006

Phillips, J.O. Judicious Use of Vestibular Testing, *Japan Lab 2007,* Virginia Mason Medical Center, Seattle, WA, 2007

Phillips, J.O. Surgical Partitioning of the Labyrinth: The effects of canal plugging on VOR and brainstem neural activity during passive and natural (active) head rotation, *COSM, ANS*, San Diego, CA, 2007

Phillips, J.O. Judicious Use of Vestibular Testing, *Japan Lab 2008,* Virginia Mason Medical Center, Seattle, WA, 2008

Phillips, J.O. VEMP and ECOG in the diagnosis of vestibular dysfunction. *Japan Lab 2009,* Virginia Mason Medical Center, Seattle, WA, 2009

Phillips, J.O. A minimally invasive vestibular prosthesis based upon cochlear implant technology, *Conference on Implantable Auditory Prostheses 2009*, Lake Tahoe, CA 2009

Phillips, J.O. Tale of a vestibular prosthesis: four years from bench to bedside. *NW Auditory and Vestibular Meeting*, Seattle, WA, 2010

Phillips, J.O. Exploring the mechanism of a vestibular prosthesis. *CNCS Retreat*, Rochester, NY, 2010

Rubinstein J.T., Phillips, J.O. A Vestibular Implant for the Treatment of Meniere's Disease, *6th International Symposium on Meniere's Disease and Inner Ear Disorders*, Kyoto, Japan, 2010

Phillips, J.O. Vestibular implant for the treatment of Meniere's disease: Preclinical development, *University of Washington School of Medicine Mini Medical School*, Seattle, WA, 2011

Phillips, J.O. A Vestibular Prosthesis: Development, Application and Challenges, *SHACS lecture series*, University of Washington, Seattle, WA, 2011

Phillips, J.O. Pediatric vestibular testing and treatment. *Neurobehavioral Grand Rounds*, Seattle Children's Hospital, Seattle, WA, 2011

Phillips, J.O. Judicious Use of Vestibular Testing, *Japan Lab 2011,* Virginia Mason Medical Center, Seattle, WA, 2011

Phillips, J.O. Human Vestibular Prosthesis Research, *Japan Lab 2011,* Virginia Mason Medical Center, Seattle, WA, 2011

Phillips, J. O. An implantable prosthesis for vestibular loss. *NCRAR Monthly Televised Seminar Series*, 2012

Phillips, J.O. An implantable prosthesis for vestibular loss in humans. *AAS Annual Meeting*, 2012

Phillips, J.O. Evaluation and Treatment of Vestibular (Balance) Disorders, *Childhood Communication Center*, Seattle Children's Hospital, 2012

Phillips, J.O. A vestibular prosthesis to compensate for loss of function in human patients. *French American Biotechnology Symposium*, Nice, FR, 2012

Phillips, J.O. An implantable neural prosthesis to treat vestibular loss in children and adults: how basic science and animal research paved the way to a novel treatment strategy, *Seattle Children's Research Institute*, Seattle, WA, 2012

Phillips, J.O. Evaluation of balance disorders, *Japan Lab 2013,* Virginia Mason Medical Center, Seattle, WA, 2013

Phillips, J.O. Clinical challenges in vestibular implantation. *Ultimate Midwinter Otolaryngology Meeting*, Vail, CO 2013

Phillips, J.O. Diagnosis of pediatric vestibular loss: clinical screening versus laboratory chair testing. *American Neurotology Society*, Vancouver, BC, 2013

Phillips, JO UW Cochlear Human vestibular prosthesis trial, *CIAP*, Lake Tahoe, CA, 2013

Phillips, J.O. Vestibular function and Usher Syndrome, *Usher Syndrome Family Conference*, Portland, OR, 2013

Phillips, J.O. Vestibular prosthesis: 5 years from design, to monkey, to man. *Aspen Brain Sciences Meeting*, Aspen, CO, 2013

Phillips, J.O., Human trial of an implantable vestibular prosthesis. *Association for Research in Otolaryngology Midwinter Meeting*, Presidential Symposium, 2014

Phillips, J.O. Vestibular Prosthesis: An update and new understanding of the underlying mechanisms from neural recording. *Ultimate Midwinter Otolaryngology Meeting*, Vail, CO, 2014

Phillips, J.O., Augmentation of reduced vestibular function with a vestibular prosthesis: a safety and efficacy trial in human subjects, Vestibular Processing in Motor Control; *Neural Control of Movement Satellite Meeting*, Amsterdam, NL, 2014

Phillips, J.O., An implantable vestibular prosthesis. *Computational Neuroscience Connections*, Seattle, WA 2014

Phillips, J.O., Prudent Use of Vestibular Testing, *Seattle Otology and Rhinology Meeting*, Seattle, WA, 2015

Phillips, J.O. Pediatric Vestibular Testing. *Seattle Children's Hospital Physical Therapy In Service Meeting*, Seattle, WA, 2015

Phillips, J.O. Can an implantable prosthesis reduce or eliminate acquired nystagmus in children following posterior fossa tumor resection? *American Neuroscience Network*, New Orleans, LA, 2015

Phillips, J.O. Vestibular and Oculomotor Sequellae of Posterior Fossa Tumor Resection in Children are Significant, Disabling, and Long Lasting, *Ultimate Colorado Midwinter Meeting*, Vail, CO, 2016

Phillips, J.O., Can a vestibular prosthesis usefully mimic natural vestibular information in humans and in monkeys?" *Seminars in Hearing and Communication Sciences*, Seattle, WA, 2016

Phillips, J.O., The discharge of vestibular nucleus neurons during functional stimulation with a vestibular prosthesis. *29th Barany Society Meeting*, Seoul, South Korea, 2016