CURRICULUM VITAE

Steven R. Zeiler, M.D., Ph.D.
The Johns Hopkins University School of Medicine
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DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

University

7/10-3/20	Assistant Professor, Department of Neurology, Johns Hopkins University SOM, Baltimore, MD
3/20-present	Associate Professor, Department of Neurology, Johns Hopkins University SOM, Baltimore, MD

Hospital

7/10-present	Active Staff, The Johns Hopkins Hospital, Baltimore, MD

Other

7/10-6/14	Head of Neurology Resident Education, Johns Hopkins Bayview Medical Center, Baltimore, MD
7/12-present	Head of Stroke Research, Johns Hopkins Bayview Medical Center, Baltimore, MD
7/14-present	Director Vascular Neurology Fellowship, Department of Neurology, Johns Hopkins, Baltimore, MD
7/18-present	President/Chairman of American Heart Association (AHA) Rehabilitation and Recovery Committee
1/19 -present	Vice Chair Department of Neurology in charge of Clinical Informatics and Technology

Education and Training

Undergraduate

8/92-5/96	B.A. Molecular, Cellular, Developmental Biology, University of Colorado, Boulder, CO

Doctoral/graduate

8/96-5/05	M.D. University of Colorado Health Sciences Center, Denver, CO
6/98-12/02	Ph.D. Molecular, Cellular, Developmental Biology, University of Colorado, Boulder, CO

Postdoctoral

7/05-6/06	Internship, University of Colorado Health Sciences Center, Denver, CO
7/06-6/08	Neurology resident, Johns Hopkins, Baltimore, MD
7/08-6/09	Chief Neurology Resident, Johns Hopkins, Baltimore, MD
7/09-6/10	Cerebrovascular Fellow, Johns Hopkins, Baltimore, MD

Professional Experience

7/10-1/19	Assistant Professor, Johns Hopkins, Baltimore, MD
7/10-6/14	Head of Resident Education, Johns Hopkins Bayview Medical Center, Baltimore, MD
7/12-1/19	Head of Stroke Research, Johns Hopkins Bayview Medical Center, Baltimore, MD
7/14-present	Director Vascular Neurology Fellowship, Johns Hopkins, Baltimore, MD
1/19-present	Vice Chair Department of Neurology in charge of Clinical Informatics and Technology
1/19-present	Associate Professor, Johns Hopkins, Baltimore, MD

PUBLICATIONS

Original Research [OR]

1. Bennett JL, **Zeiler** SR, Jones KR. Patterned expression of BDNF and NT-3 in the retina and anterior segment of the developing mammalian eye. *Invest Ophthalmol Vis Sci*, 1999 Nov;40(12):2996-3005.

2. Akbarian S, Rios M, Liu RJ, Gold S, Fongl H, **Zeiler** S, Coppola V, Tessarollo L, Jones K, Nestler EJ, Aghajanian GK, Jaenisch R. Brain-Derived Neurotrophic Factor is Essential for Opiate-Induced Plasticity of Noradrenergic Neurons. *J Neurosci*. 2002 May 15;22 (10):4153-62.
3. Gorski JA, **Zeiler** SR, Tamowski S, Jones KR. Brain-derived neurotrophic factor is required for the maintenance of cortical dendrites. *J Neurosci*. 2003 Jul 30;23(17):6856-65.
4. **Zeiler** SR, Gorski JA, Jones KR. BDNF Is Required for the Development and Experience-Dependent Modification of Visual Cortical Circuitry. *J Neurosci*. 2003 Jul 30;23(17):6856-65.
5. Qiao Y, Etesami M, Astor BC, **Zeiler** SR, Trout HH 3rd, Wasserman BA. Carotid Plaque Neovascularization and Hemorrhage Detected by MR Imaging are Associated with Recent Cerebrovascular Ischemic Events. *Am J Neuroradiol*. 2012 Apr;33(4):755-60. Epub 2011 Dec 22.
6. Marsh EB, **Zeiler** SR, Levy M, Llinas RH, Urrutia VC. Diagnosing CNS Vasculitis: the case against empiric treatment. *Neurologist*. 2012 Jul;18(4):233-8.
7. Chik Y, Gottesman RF, **Zeiler** SR, Rosenberg J, Llinas RH. Differentiation of Transverse Sinus Thrombosis From Congenitally Atretic Cerebral Transverse Sinus With CT. *Stroke*. 2012 Jul;43(7):1968-70. Epub 2012 May 15.
8. **Zeiler** SR, Gibson EM, Hoesch RE, Li MY, Worley PF, O'Brien RJ, Krakauer JW. Medial Premotor Cortex Shows A Reduction In Inhibitory Markers And Mediates Recovery In A Mouse Model Of Focal Stroke. *Stroke*. 2013 Feb;44(2):483-9.
9. Han Y, Li N, **Zeiler** SR, Pelled G. Peripheral nerve injury induces immediate increases in layer v neuronal activity. *Neurorehabil Neural Repair*. 2013 Sep;27(7):664-672.
10. Qiao Y, **Zeiler** SR, Mirbagheri S, Leigh R, Urrutia V, Wityk R, Wasserman BA. Intracranial Plaque Enhancement in Patients with Cerebrovascular Events: Initial Results using 3D High Resolution Vessel Wall MRI. *Radiology*. 2014 May;271(2):534-542.
11. Colby G, Lin LM, **Zeiler** SR, Coon A. Curative reconstruction of a cerebral aneurysm by flow diversion with the Pipeline embolization device in a patient with Loeys-Dietz syndrome *BMJ Case Rep*. 2014 Oct 16;2014.
12. Ng K, Gibson EM, Hubbard R, Juemin Y, Caffo B, O'Brien RJ, Krakauer JW, **Zeiler** SR, Fluoxetine Maintains a State of Heightened Responsiveness to Motor Training Early After Stroke in a Mouse Model. *Stroke*. 2015 Oct;46(10):2951-60.
13. Qiao Y, Anwar Z, Intrapiromkul J, Liu L, **Zeiler** SR, Leigh R, Zhang Y, Guallar E, Wasserman BA. Patterns and Implications of Intracranial Arterial Remodeling in Stroke Patients. *Stroke*. 2016 Feb;47(2):434-440.
14. **Zeiler** SR, Hubbard R, Gibson EM, Zheng T, Ng K, O'Brien R, Krakauer JW. Paradoxical motor recovery from a first stroke after induction of a second stroke: re-opening a post-ischemic sensitive period. *Neurorehabil Neural Repair*. 2016 Sep;30(3):794-800.
15. Urrutia VC, Faigle R, **Zeiler** SR, Marsh EB, Bahouth M, Cerdan M, Dearborn J, Leigh R, Rice S, Lane K, Saheed M, Hill P, Llinas RH. Safety of intravenous alteplase within 4.5 hours for patients awakening with stroke symptoms. *PLOS One*. 2018 May 22;13(5):30197714.
16. **Zeiler** SR, Qiao Y, Pardo CA, Lim M, Wasserman BA. Vessel Wall MRI for Targeting Biopsies of Intracranial Vasculitis. *AJNR Am J Neuroradiol*. 2018 Nov;39(11):2034-2036.
17. Hubbard R, Dunthorn J, O'Brien RJ, Tasch D, Tasch U, **Zeiler** SR. Evaluating Skilled Prehension in Mice Using an Auto-Trainer. *J Vix Exp*. 2019 Sep 12;(151).
18. Krakauer, JW, Kitago, T, Goldsmith, J, Ahmad, O, Roy, P, Stein J, Bishop, L, Casey, K, Valladares, B, Harran, MD, Cortes, JC, Forrence, A, Xu, J, DeLuzio, S, Held, JP, Schwarz, A, Steiner, L, Widmer, M, Jordan, K, Ludwig, D, Moore, M, Barbera, M, Vora, I, Stockley, R, Celnik, P, **Zeiler, SR**, Branscheidt, M, Kwakkel, G, Luft, AR. Comparing a Novel Neuroanimation Experience to Conventional Therapy for High-Dose Intensive Upper-Limb Training in Subacute Stroke: The SMARTS2 Randomized Trial. *Neurorehabil Neural Repair*, 2021 May;35(5):393-405.
19. DeBoer SR, Hubbard R, Mersha M, Pinilla Monsalve G, Winter S, **Zeiler** SR. Spontaneous motor recovery after stroke in mice treated with Cerebrolysin. *Neurorehabil Neural Repair* 2021 May 6.
20. Baxi EG, Thompson T, Li J, Kaye JA, Lim RG, Wu J, Ramamoorthy D, Lima L, Vaibhav V, Matlock A, Frank A, Coyne AN, Landin B, Ornelas L, Mosmiller E, Thrower S, Farr SM, Panther L, Gomez E, … et al. **Zeiler SR**, Krakauer J, Agurto C, Cecchi G, Bellard M, Raghav Y, Sachs K, Ehrenberger T, Bruce E, Cudkowicz ME, Maragakis N, Norel R, Van Eyk JE, Finkbeiner S, Berry J, Sareen D, Thompson LM, Fraenkel E, Svendsen CN,

Rothstein JD. Answer ALS, A Large-Scale Resource for Sporadic and Familial ALS Combining Clinical and Multi-Omics Data from Induced Pluripotent Cell Lines. *Nature Neurosci*. 2022, Feb, 25(2):226-237.

21. Kang, J, Liu, X, Cao, S, **Zeiler, SR**, Graham, E, Boctor, E, Koehler, R. Transcranial photoacoustic characterization of neurovascular physiology during early-stage photothrombotic stroke in neonatal piglets in vivo. *Journal of Neural Engineering*. In Press.
22. Dibble, JP, Deboer, SR, Mersha, M, Robinson, TJ, Felling, RJ, **Zeiler, SR**, Tovar, JD. In Vivo Formation and Tracking of Peptide Nanostructures. *ACS Applied Materials & Interfaces*. 2022, Jul 15. (10.1021/acsami.2c04598)
23. **Zeiler, SR**, Abshire, MS, Chao, A, Bahouth, M. Telemedicine Services for the Delivery of Specialty Home-Based Neurological Care. *Telemedicine and e-Health*. 2022 Nov 24.
24. Drazich, BF, Abshire, MS, **Zeiler, SR**, Bahouth, M. Providers' Perceptions of Neurology Care Delivered Through Telemedicine Technology. *Telemedicine and e-Health*. 2023 May;29(5):761-768.
25. **Zeiler, SR**, Nudo, RJ, Technologies for Recovery after Neurological Injuries. *Neurorehabil Neural Repair*. Special Issue Editors. 2023 June; 6.
26. Mersha, MD, Hubbard, R, **Zeiler, SR**. Alternate Day Fasting Leads to Improved Post-Stroke Motor Recovery in Mice. *Neurorehabil Neural Repair* 2024, Vol. 38(3) 187-196.
27. Bastani, PB, Saber Tehrani, AS, Badihian, S, Rastall, D, Farrell, N, Parker TM, Otero-Millan, J, Rieiro, H, Hassoon, A, Newman-Toker, DE, Clawson, LL, Uchil, A, Riely, K, **Zeiler, SR**. Self-Recording of Eye Movements in Amyotrophic Lateral Sclerosis (ALS) Patients Using a Smartphone Eye-Tracking App (EyePhone). Digital Biomarkers. In Press.
28. Wasserman, BA, Qiao, Y, Yan, W, Guallar, E, Romero, ME, Virmani, R, **Zeiler, SR**. Vessel Wall Imaging Features of Spontaneous Intracranial Carotid Artery Dissection. *Neurology*. 2024;102:e209250. doi:10.1212.

Review articles [RA] / Comments

1. Dearborn JL, Urrutia VC, **Zeiler** SR. Stroke and Cancer- A Complicated Relationship. *J Neurol Transl Neurosci.* 2014;2(1):1039.
2. **Zeiler** SR, Krakauer JW. The interaction between training and plasticity in the poststroke brain. *Curr Opin Neurol*. 2013 Dec;26(6):609-616.
3. **Zeiler** SR. Should We Care About Early Post-Stroke Rehabilitation? Not Yet, but Soon. *Curr Neurol Neurosci Rep.* 2019 Feb 20;19(3):13.
4. Stinear CM, Lang CE, **Zeiler** SR, Byblow WD. Advances and challenges in stroke rehabilitation. *Lancet Neurol. 2020* Jan 28 S1474-4422(19)30415-6.\
5. **Zeiler** SR. Fatal and Nonfatal Events Within 14 Days After Early, Intensive Mobilization Poststroke. PracticeUpdate website. March 2021 Available at: https://www.practiceupdate.com/content/fatal-and-nonfatal-events-within-14-days-after-early-intensive-mobilization-post-stroke/114321/65/7/1.
6. Bahouth, MN, Zink EK, Ahmad, O, Roy, P, **Zeiler, SR**, Urrutia, VC, Krakauer, JW, Bringing High-Dose Neurorestorative Behavioral Training Into the Acute Stroke Unit. Am J Phys Med Rehabil. 2023 Feb 1;102(2S Suppl 1):S33-S37.

Case Reports [CR]

1. **Zeiler** SR, Kaplan PW. Propofol withdrawal seizures (or not). *Seizure*. 2008 Oct;17(7):665-667.
2. **Zeiler** SR, Kaplan PW. Our digital world: camera phones and the diagnosis of a seizure. *Lancet*. 2009 Jun 20;373(9681):2136.
3. **Zeiler** SR, Jordan JD, Greenberg BM, Kaplan PK. ANNA-3 Associated Stiff-Person-Syndrome. *J Cancer and Science Therapy*. 2009 Vol. 2 Issue 1; 1 – 2.
4. **Zeiler** SR, Turtzo CL, Kaplan PW. SPECT Negative SIRPIDs Mimicking a Stroke After Cardiac Arrest. *J Clin Neurophysiol*. 2011 Oct;28(5):493-496.

Book Chapters, Monograph [BC]

1. **Zeiler** SR, Sclafani RA. The Molecular Basis of Cancer. In: Davis LB (ed). Healing, A Guide to Pediatric Oncology. Rocky Mountain Children's Resources, Denver CO 2000;12-27.
2. **Zeiler** SR. Speech, Language, and Cognition. in Neurologic and Psychiatric Patient Encounters. Levy M (ed). Lippincott Williams Wilkins, 2012;168-173.

3. Raja P, **Zeiler** SR. Core Clerkship in Neurology. in First Aid for the Wards, 4th Ed. Le T, Bhushan V, Skapik J (eds). McGraw-Hill/Appleton Lange. 2014

Books, Textbooks [BK] - None

Media Releases

2/5/13 Desmon S. Stroke damage in mice overcome by training that 'rewires' brain centers. EurekAlert. https://www.eurekalert.org/pub_releases/2013-02/jhm-sdi020513.php

2/8/13 Desmon S. After stroke, training 'rewires' brain. Johns Hopkins University Featured.. http://www.futurity.org/after-stroke-training-rewires-brain/

8/31/15 Research in mice shows potential value of antidepressant in some stroke victims. Science Daily. https://www.sciencedaily.com/releases/2015/08/150831144106.htm

9/1/15 Common Antidepressant Valuable for Recent Stroke Victims. ALNmagazine. https://www.alnmag.com/news/2015/09/common-antidepressant-valuable-recent-stroke-victims

9/2/15 Worsley O. Mouse study suggests Prozac may help stroke patients recover. Fierce Biotech. http://www.fiercebiotech.com/research/mouse-study-suggests-prozac-may-help-stroke-patients-recover

9/2/15 Feller S. Antidepressant may help stroke patients with rehabilitation. UPI. http://www.upi.com/Health_News/2015/09/02/Antidepressant-may-help-stroke-patients-with-rehabilitation/3001441196180/

1/7/16 McMains V. 'Window of Recovery' Can Reopen after Stroke. Johns Hopkins News and Publications. http://www.hopkinsmedicine.org/news/media/releases/window_of_recovery_can_reopen_after_stroke

1/7/16 Feller S. Researchers think 'window of recovery' after stroke can reopen. UPI. http://www.upi.com/Health_News/2016/01/07/Researchers-think-window-of-recovery-after-stroke-can-reopen/6801452199905/

1/7/16 Restoring lost movement from stroke may be possible, study suggests. Fox News Health. http://www.foxnews.com/health/2016/01/07/restoring-lost-movement-from-stroke-may-be-possible-study-suggests.htmlhttp://www.foxnews.com/health/2016/01/07/restoring-lost-movement-from-stroke-may-be-possible-study-suggests.html

1/8/16 Window of Recovery Can Reopen Following a Stroke. Neuroscience News. http://neurosciencenews.com/stroke-brain-plasticity-3378/

1/8/16 McMains V. Can 2nd stroke reopen the recovery window? Futurity. http://www.futurity.org/stroke-recovery-window-1087432-2/

Other Media

11/17/15 **Zeiler** SR. Stroke Webinar #26--Stroke Recovery: Timing, Training, And Biological Determinants. Invited *STROKE* Webinar Series. https://professional.heart.org/professional/ScienceNews/UCM_480886_Stroke-Webinar-26--Stroke-Recovery-Timing-Training.jsp

FUNDING
Extramural Funding

Current:

12/1/18-11/30/23 Development of real-time, non-invasive photoacoustic imaging to rapidly detect and track perinatal focal stroke at birth.
R01 R01HL139543
NIH/NINDS
PI: Koehler R
$15,000,
Role: Collaborator 8%; Aims: Using a newborn piglet, Dr. Zeiler will work with P.I. Koehler to validate the oxygenation measurements against directly measured sagittal sinus O2 saturation during hypoxia-ischemia of regional tissue hypoxia during focal stroke. Based on these data, we will then develop algorithms for detecting progressive ischemia so that we

may test dynamic changes in tissue hemoglobin content and O2 saturation. We will use noninvasive imaging to track tissue uptake of photoacoustically sensitive dyes conjugated to different size molecules and relate regional differences in size-dependent blood brain-barrier permeability to markers of energy metabolism. This will test the utility of innovative new technology to be used for stroke-screening in newborns.

9/1/2019-8/31/2022 Preclinical stroke trial with the PARP inhibitor veliparib
U01 NS113444
NIH/NINDS
PI: Koehler R
$7,000
Role: Collaborator 4% + coverage of technician; Aims: Using a prospective, multi-center mouse trial-based approach, Dr. Zeiler is using his expertise with P.I. Koehler to assess the PARP inhibitor veliparib requirements for stroke neuroprotection at various times after stroke induction.

Pending: None

Previous:
9/1/13 – 9/1/18 The contributions of motor learning and inhibitory balance to stroke recovery
1 K08 NS085033-01
NIH/NINDS
$994,216
Role: PI, 75%; Aims: Dr. Zeiler's proposal describes a mentored research and career development plan designed to facilitate his transition to an independent clinician-researcher. During the proposed 5 year plan, he will 1) characterize and begin to mechanistically define a post-stroke period of time during which motor recovery is decreasingly sensitive to motor training and 2) develop my career, skills, and knowledge base as he address this interesting and clinically relevant problem. Using a mouse model of post-stroke motor recovery, he is using this grant to further define the post-stroke sensitive period by describing how the timing and dose of motor retraining interact to affect motor recovery, how fluoxetine (a commonly used anti-depressant medicine) can modify the sensitive period, and how specific neuronal activity influences this sensitive period. Specific training goals include 1) further development of mouse models in which to study post-stroke recovery, 2) developing a foundation in behavioral statistics, 3) learning advanced fluorescence microscopy, 4) translational research strategies, 5) developing an independent program of post-stroke recovery research, and 6) how to obtain independent funding. The training program and mentoring team that he has assembled will help to elucidate important recovery interventions, position Dr. Zeiler to exploit genetic models that impact neural plasticity, and use cutting edge technology to advance this work as he transition to my independent laboratory.
Website:https://projectreporter.nih.gov/project_info_description.cfm?aid=9334322&icde=40419799&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Intramural Funding
Current:
7/1/10-present PT Lemmon Endowment for cerebrovascular research.
$250,000
Role: PI:

Pending: None

Previous:
7/1/13-6/30/14 The contributions of motor learning and inhibitory balance to stroke recovery
Johns Hopkins Richard S. Ross Clinician Scientist award

$80,000
Role: PI, 75%

9/1/17-8/31/18 Engineering plasticity after stroke to promote recovery using peptide π-electron hydrogels.
Johns Hopkins Discovery Award
$100,000
Role: PI, 5%; Aims: Dr. Zeiler's team proposes that placement of π-electron hydrogels, a novel scaffolding system that polymerizes and conducts electricity while in the CNS, into the infarct will enhance stroke-induced neuroplasticity by facilitating neurogenesis and peri-infarct synaptic remodeling, resulting in improved functional outcome.

Philanthropic Funding

Previous:

10/1/16 Donation on behalf of Leonard Lapidus for the study of stroke recovery. Food deprivation and stroke recovery; Made by wife Jackie Lapidus
$20,000
Role: PI; Aims: Dr. Zeiler's team is modeling a lack of recovery in animals who undergo delayed training after stroke (which has previously been shown to lead to poor motor recovery) and is investigating caloric restriction, which has been shown to enhance brain plasticity and can restore improvement in recovery.

10/1/18 Donation made by Sandra Berman for the study of stroke recovery.
$165,000
Role: PI; Aims: Dr. Zeiler's team is modeling a lack of recovery in animals who undergo delayed training after stroke (which has previously been shown to lead to poor motor recovery) and is investigating hydrogel implantation and stem cell implantation, while investigating the molecular requirements associated with recovery post-stroke.

Private Company Funding

Current:

10/1/16 - 10/1/22 SRA: The contribution of early motor learning and Cerebrolysin to severe stroke recovery.
EVER Neuro Pharma GmbH, Oberburgau 3, A-4866 Unterach, AUSTRIA
$47,214 and ongoing
Role: PI; 5%; Aims: Dr. Zeiler's team is modeling a lack of recovery in animals who undergo delayed training after stroke and is testing the effects of Cerebrolysin®, a polypeptide mixture, on restoring the recovery phase.

5/1/19 - present SRA: Neurological Recovery using Multi-Modal Enrichment.
M^2, Baltimore MD
$ 300,601.00 and ongoing
Role: PI; 15% Aims: Dr. Zeiler's team is using a combination of video-game-based, immersive, robotic assisted, interactive environments to test the hypothesis that enrichment is useful for recovery from neurological injury. Dr. Zeiler's individual salary as well as his team's studies are funded in part by an SRA from M^2.

CLINICAL ACTIVITIES

Clinical focus

Dr. Zeiler focuses on the diagnosis and management of cerebrovascular disease, including acute stroke therapy, secondary prevention of stroke, and recovery from stroke. Dr. Zeiler attends on the inpatient wards at both Johns Hopkins Hospital as well as the Johns Hopkins Bayview Medical Center. Dr. Zeiler sees outpatients at the Johns Hopkins Outpatient Center and Greenspring campuses as well as with Vascular Neurology fellows.

Certification

Medical, other state/governmental licensure

5/10-present Maryland Department of Health and Mental Hygiene License (D0070791)

Boards, other specialty certification
9/09-present American Board of Psychiatry and Neurology (Certificate # 55949)
2019 Recertified
8/11-present American Board of Psychiatry and Neurology – Cerebrovascular Neurology

Clinical (Service) Responsibilities
2010-present Inpatient Vascular Neurology service. Attending Physician 4 weeks per year Johns Hopkins Hospital, Baltimore, MD
2010-present Inpatient General Neurology service. Attending Physician 4 weeks per year, Johns Hopkins Bayview Medical Center, Baltimore, MD.
2010-present Outpatient vascular neurology clinic once per week. Johns Hopkins Outpatient Center, Baltimore, MD
2018-present Outpatient vascular neurology fellows' clinic once per week. Johns Hopkins Outpatient Center, Baltimore, MD

Relative Value Unit information.
FY2011 1,737 units (220% of target)
FY2013 1,860 units (123% of target)
FY2014 1,718 units (210% of target)
FY2015 1,517 units (168% of target)
FY2016 1,383 units (156% of target)
FY2017 1380 units (137% of target)
FY2018 1134 units (110% of target)

Clinical Productivity

Year	# New Patients	# visits/ patients seen	Actual wRVUs	Target wRVUs	% Target	Clinical effort
2011	425	941	1737	789	220%	26%
2012	361	837	1712	761	224%	21%
2013	387	858	1860	885	210%	21%
2014	330	798	1718	817	210%	20%
2015	272	695	1517	908	168%	20%
2016	286	738	1381	884	156%	20%
2017	267	798	1380	869	158%	20%
2018	204	669	1134	862	131%	39%

Clinical Draw from outside local/regional area

		Fiscal Year								
		2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Total**
International		2	1	4	5	9	23	-	6	50
	Bermuda	-	-	-	-	-	1	-	4	5
	Canada	-	-	-	-	-	-	-	1	1
	KUWAIT	2	-	-	-	-	-	-	-	2
	Qatar	-	-	-	-	-	-	-	-	-
	Saudi Arabia	-	-	2	-	7	10	-	-	19
	UK	-	1	-	-	-	-	-	-	1
	Unknown	-	-	2	5	2	12	-	1	22

		Fiscal Year								
		2011	2012	2013	2014	2015	2016	2017	2018	Total
United States		905	814	832	767	661	617	673	529	5,798

	Maryland	777	689	701	669	582	555	612	473	5,058
	Virginia	30	33	28	29	18	14	6	6	164
	Pennsylvania	29	22	53	17	14	18	7	12	172
	Delaware	15	11	16	4	6	9	6	13	80
	Florida	7	17	7	16	5	3	2	16	73
	New York	13	9	4	2	2	1	2	1	34
	D.C.	4	7	3	7	5	4	3	-	33
	New Jersey	2	7	2	4	3	2	8	1	29
	Texas	13	1	1	-	2	1	11	-	29
	West Virginia	1	5	3	6	4	4	1	1	25
	North Carolina	4	2	-	3	6	1	2	2	20
	South Carolina	2	-	3	1	1	-	6	-	13
	Connecticut	2	1	1	1	-	4	-	-	9
	Louisiana	-	-	-	-	9	-	-	-	9
	Georgia	-	-	1	1	1	1	1	1	6
	Kentucky	-	-	1	1	2	-	-	-	4
	Illinois	-	1	2	-	-	-	1	-	4
	Massachusetts	-	-	1	-	-	-	4	-	5
	Michigan	-	-	-	2	-	-	-	-	2
	Ohio	-	1	1	-	-	-	-	2	4
	Colorado	1	3	-	-	-	-	-	-	4
	California	-	-	-	2	-	-	-	1	3
	Alabama	1	1	-	-	1	-	-	-	3
	Arkansas	3	-	-	-	-	-	-	-	3
	New Mexico	-	-	1	2	-	-	-	-	3
	Tennessee	-	-	1	-	-	-	1	-	2
	Washington	1	1	-	-	-	-	-	-	2

Membership in or examiner for specialty board
Not Applicable.

Clinical Program Building / Leadership
Not Applicable.

Clinical Demonstration Activities to external audience, on or off campus
Not Applicable.

Development of nationally/internationally recognized clinical standard of care
Not Applicable.

EDUCATIONAL ACTIVITIES

Educational Focus
Dr. Zeiler teaches residents and fellows in the examination, diagnosis, and treatment of patients with cerebrovascular disease. Dr. Zeiler teaches in the clinic, on rounds, in his lab and during lectures.

Teaching
Classroom instruction
JHMI/Regional
7/10-6/13 BoneHead Lecture series. Creator, content organizer and instructor. Johns Hopkins Bayview Medical Center, Baltimore, MD. In my role as creator, organizer, and instructor, I taught junior residents basic / introductory material useful for their future as neurology residents. The main goal was to allow them to ask “bonehead” questions that they were otherwise too embarrassed to ask in other venues.

7/10 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/10 Brain Attack and Emergency Stroke Care. Content organizer and lecturer. Johns Hopkins, Baltimore

7/11 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/11 Brain Attack and Emergency Stroke Care. Lecture to the Emergency Department Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/12 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/12 Brain Attack and Emergency Stroke Care. Lecture to the Emergency Department Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/12 CNS Vasculitis; how to help, how to harm. Lecture to the NeuroRadiology Fellows. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/13 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

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714 CNS Vasculitis; how to help, how to harm. Lecture to the NeuroRadiology Fellows. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/15 Brain Attack and Emergency Stroke Care. Lecture to the Emergency Department Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/15 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/16 Brain Attack and Emergency Stroke Care. Lecture to the Emergency Department Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/16 CNS Vasculitis; how to help, how to harm. Lecture to the NeuroRadiology Fellows. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

3/17 CNS Vasculitis; how to help, how to harm. Lecture to the NeuroRadiology Fellows. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/17 Brain Attack and Emergency Stroke Care. Lecture to the Emergency Department Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

3/18 CNS Vasculitis; how to help, how to harm. Lecture to the NeuroRadiology Fellows. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

7/18 Brain Attack and Emergency Stroke Care. Lecture to the Emergency Department Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

8/19 CNS Vasculitis; how to help, how to harm. Lecture to the NeuroRadiology Fellows. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

8/19 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

8/20 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

8/21 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

9/22 CNS Vasculitis; how to help, how to harm. Lecture to the Neurology Residents. Content organizer and lecturer. Johns Hopkins, Baltimore, MD

National
Not applicable.

International
Not applicable.

Clinical instruction

JHMI/Regional

2010-present	Inpatient Vascular Neurology service. Attending Physician 4 weeks per year Johns Hopkins Hospital, Baltimore, MD
2010-present	Inpatient General Neurology service. Attending Physician 4 weeks per year, Johns Hopkins Bayview Medical Center, Baltimore, MD.

National
Not applicable.

International
Not applicable.

CME instruction

JHMI/Regional

1/10	Practical Update in Outpatient Neurology: Update in Stroke. Johns Hopkins Bayview Medical Center, Baltimore, MD
9/10	NCCU CME conference: Assessment of Post-Stroke Cortical Plasticity; A story of photocoagulation and immediate-early genes. Johns Hopkins, Baltimore, MD
5/13	Stroke and Vasculitis; How to Help, How to Harm. Neuroscience Grand Rounds. Invited talk at Greater Baltimore Medical Center, Baltimore, MD
6/13	Stroke and Vasculitis; How to Help, How to Harm. Neuroscience Grand Rounds. Invited talk at Good Samaritan Hospital, Baltimore, MD
3/14	Practical Update in Outpatient Neurology: Timing, Training, and Biological Determinants of Post-Stroke Recovery. Johns Hopkins, Baltimore, MD
2/17	Speaker, Stroke and Vasculitis; How to Help, How to Harm. Department of Medicines Grand Rounds, Med Star Union Memorial Hospital, Baltimore, MD
7/18	Speaker, Stroke and Vasculitis; How to Help, How to Harm. Department of Medicines Grand Rounds, Med Star Union Memorial Hospital, Baltimore, MD

National

5/13	Stroke and Vasculitis; How to Help, How to Harm. Neurovascular Case Review (division of Neuro-Interventional Surgery). Invited talk at Christiana Care Hospital, Newark, DE
10/14	Intermountain Utah Stroke Conference invited CME talk: Timing, Training, and Biological Determinants of Post-Stroke Recovery. Invited talk. Salt Lake City, UT

International
Not applicable

Workshops /seminars

JHMI/Regional
Not Applicable

National

11/18	NIH / NINDS Stroke Recovery Workshop: Bridging the Translational Gap in Stroke Recovery & Rehabilitation Research. How do we address spontaneous recovery (i.e., especially restitution vs. compensation of function) in modeling data from pre-clinical studies to clinical trials? Dr. Zeiler was asked to sit on a committee to explore how the NIH can better stimulate studies leading to improved post-stroke recovery Rockville MD

Mentoring

Pre-doctoral advisee

1/11-7/14 Ellen Michelle Gibson, BA; currently neurology resident; matriculated into medical school under my tutelage; Shared pubs: OR 8, 12, 14

1/14-7/19 Robert Hubbard, BS; currently graduate student; matriculated into graduate school under my tutelage; shared pubs: OR 12, 14

Post-doctoral advisee

7/13-7/14 Kwan Ng M.D., Ph.D., Neurology resident and Stroke Research Fellow; currently Director of Clinical Stroke University of California, Davis; matriculated into Vascular Neurology Fellowship under my tutelage; shared pubs: OR 12, 14

1/18 – present Mahlet Mersha Ph.D., Post-doctoral fellow and former graduate student with Dr. Harbinder Singh Dhillon at the Delaware State University. Dr. Mersha continues her work on stroke recovery under my tutelage; shared pubs: OR 18.

Thesis committees

Not applicable

Educational Program Building / Leadership

7/10-6/14 Head of Neurology Resident Education, Johns Hopkins Bayview Medical Center, Baltimore, MD

7/14-present Director Vascular Neurology Fellowship, Department of Neurology, Johns Hopkins, Baltimore, MD

Educational Demonstration Activities to external audience on or off campus - not applicable

RESEARCH ACTIVITIES

Research Focus

Dr. Zeiler is interested in recovery from central neurological system injury. He is most interested in, and uses as a model, the recovery from stroke. Most recovery from motor impairment after stroke occurs in the first month and is largely complete by 3 months. Improvement occurs independently of rehabilitative interventions (for example, physical and occupational therapy), which predominantly target function through compensatory strategies and not true recovery. Thus there is a powerful recovery mechanism that is currently not the focus of rehabilitation. Animal models, which also show the existence of a period of heightened recovery early after stroke, provide the opportunity to better define as well as test approaches to augment and prolong this period of heightened recovery. There is an urgent need to develop innovative new approaches to rehabilitation because, despite improvements in acute stroke care, up to 60% of stroke survivors suffer disability in arm or leg use, and 30% need placement in a longer-term care facility.

To address this urgent clinical issue, Dr. Zeiler has created an independent research laboratory and is currently using multi-modal techniques (e.g. mouse genetics, mouse behavior, advanced microscopy, DREADD biology) aimed at testing stroke outcomes during the time-period of heightened recovery. These research endeavors were developed based upon mechanisms known to measure and influence brain plasticity and, hopefully, stroke outcome. Dr. Zeiler's lab currently employs several students as well as a fully funded research technician.

Dr. Zeiler oversees a translational research program with the intent of using technology in novel ways to affect recovery from neurological injury. To address his goal of neurological recovery, he works closely with KATA (see below), to develop innovative new technologies. Current studies include the use of the MindPod, a video-game-based, immersive, robotic assisted, interactive environments that provides a rich source of encouragement, enjoyment, and the possibility of improved movement after neurological injury.

Research Collaborators

Dr. Zeiler collaborates widely with experts both internal and external to Johns Hopkins.

1. **John W. Krakauer, M.D.** is a professor of neurology at Johns Hopkins, an expert in motor control both before and after stroke, and is designing new forms of motor rehabilitation. Website: http://blam-lab.org/
2. **Ray Koehler, Ph.D.** is a professor of Anesthesia at Johns Hopkins, an expert in stroke neuroprotection and is designing multi-center studies for the investigation of novel neuroprotection interventions.
3. **Noam Shemesh, Ph.D.** is an investigator at the Champalimaud Center for the Unknown in Lisbon, Portugal. He has harnessed advanced MRI methodologies to investigate highly complex systems including the brain's gray matter. Website: http://neuro.fchampalimaud.org/en/
4. **Ryan Felling, M.D., Ph.D.** is the director of the Johns Hopkins Pediatric Stroke Program and specializes in the evaluation and treatment of children with a wide range of cerebrovascular disorders. His clinical and research efforts are aimed at improving neurological function in children following stroke.
   Website: http://www.hopkinsmedicine.org/profiles/results/directory/profile/9990003/ryan-felling
5. **Galit Pelled, Ph.D.** is an investigator at the Kennedy Krieger Institutue. She studies neuroplasticity mechanisms that are involved in reshaping brain function after injury. She has developed a novel way to modulate neuronal function using non-invasive magnetic fields.
   Website: https://www.kennedykrieger.org/patient-care/faculty-staff/galit-pelled
6. **J. D. Tovar, Ph.D.** is an investigator in the Johns Hopkins department of Chemistry. He invented / patented extended pi-electron hydrogels. He is using his expertise to predict, control, and seek a better understanding of energy transport processes through these hydrogels.
   Website: https://chemistry.jhu.edu/directory/j-d-tovar/
7. **Ever Pharma** is a globally successful pharmaceutical specialist with a focus on neurological recovery.
   Website: http://www.everpharma.com/
8. **KATA** is an engineering and software design company created at Johns Hopkins to bridge the gap between professional experiential production and neuroscience, clinical neurology, and medical hardware.
   Website: https://www.hopkinsmedicine.org/neurology_neurosurgery/research/labs/kata_studio/.

Research Program Building / Leadership

2012-present Director of Johns Hopkins Bayview Medical Center Stroke Research. Dr. Zeiler oversees the coordination and completion of stroke research including basic science and translational efforts.

Research Demonstration Activities to external audience, on or off campus

Not Applicable.

Inventions, Patents, Copyrights

Invention

6/2014 Robot Mouse Trainer. Made in collaboration with Uri Tasch of UMBC (University of Maryland, Baltimore County). Dr. Zeiler and his team saw the need to automate the difficult and time-consuming task of mouse training and behavioral assessment. Dr. Zeiler worked with Uri Tasch and his team of engineers to develop a novel robotic system that automates both the process of providing food pellets for the mouse to grasp as well as the recording of successful and failed reaching and grasping attempts. This allows for the collection of reaching data for multiple mice with minimal effort, to be used in experimental analysis as appropriate.

Patents

Not Applicable.

Copyrights

Not Applicable.

Technology Transfer Activities

Not Applicable.

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

System Innovation Focus

Dr. Zeiler's research into stroke recovery has led to a translational research program with the intent of using technology in novel ways to affect recovery from neurological injury. As such, Dr. Zeiler works with the Enrichment Group, who is working to build and change the way post-neurological rehabilitation is offered. Current innovations include use of the MindPod, a video-game-based, immersive, robotic assisted, interactive environment that provides a rich source of encouragement, enjoyment, and the possibility of improved movement after neurological injury. Additionally, Dr. Zeiler oversees the education of vascular neurology fellows as the vascular neurology fellowshipt director.

System Innovation and Quality Improvement efforts within JHMI including program building / leadership

7/10-6/14 Head of Resident Education, Johns Hopkins Bayview Medical Center, Baltimore, MD; 5% effort.
Dr. Zeiler oversaw the educational schedule and content of the residents rotating through the Johns Hopkins Bayview Medical Center. Specifically, he scheduled master teaching classes, lectures, and organized video conferencing with the Johns Hopkins Hospital campus. Additionally, Dr. Zeiler organized the BoneHead Lecture series (described above) in which residents were encouraged to ask "bonehead" questions they might not otherwise be inclined to ask. Finally, Dr. Zeiler held an annual transition course which taught first year residents how to be good second year residents.

7/14-present Director Vascular Neurology Fellowship, Johns Hopkins, Baltimore, MD; 10% effort.
Dr. Zeiler oversees the Vascular Neurology Fellowship which affords extensive experience in clinical vascular neurology as well as clinical research training. The program encompasses the spectrum of cerebrovascular disease, from critically-ill patients with acute stroke, to the rehabilitation and secondary prevention of stroke victims. Dr. Zeiler has made many improvements to the program including:

- Rotations with neurosurgery where the fellows follow vascular neurosurgical patients from the clinic to the operating room and into recovery
- A formalized connection with the NIH which allows 1-3 additional research years after their clinical training has ended. These additional years are funded via an NIH mechanism and include a formal mentoring program for the fellows.

7/18-present Faculty Senate Representative for the Department of Neurology. In order to provide a mechanism for the Faculty, Fellows, and Residents of the Johns Hopkins Department of Neurology to participate more effectively in the deliberations and governance of the Institution, Dr. Zeiler serves as their representative to the Faculty Senate. The Faculty Senate creates, debates, and is informed (from the Dean's office, advisory board, and other offices) regarding proposals that affect the School of Medicine.

1/19-present Vice Chair Department of Neurology in charge of Clinical Informatics and Technology; 20% effort;
Dr. Zeiler oversees the departmental use and integration of technology including, but not limited to the use of electronic medical record. Dr. Zeiler serves as an advocate and intermediary in the JHM-level decisions regarding information technology of Epic, imaging software, SAFE Desktop, messaging software, and other clinical packages. Dr. Zeiler supports the performance improvement initiatives put forth by the Chair, Division Directors, and the committee of clinical operations and works closely with his coordinators to implement the departmental leaders' goals.

System Innovation and Quality Improvement efforts outside of JHMI – not applicable

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

7/10-6/14 Head of Resident Education, Johns Hopkins Bayview Medical Center, Baltimore, MD
7/12-2019 Head of Stroke Research, Johns Hopkins Bayview Medical Center
7/14-present Director Vascular Neurology Fellowship, Johns Hopkins, Baltimore, MD
1/19-present Vice Chair Department of Neurology in charge of Clinical Informatics and Technology, Johns Hopkins, Baltimore, MD

Editorial Activities

Editorial Board Appointments

2018-present Neurorehabilitation and Neural Repair, associate editor.

Journal Peer review activties

2010-present The Neurologist
2011-present Behavioral Neurology
2012-present Neurology
2012-present Journal of Neuro-Ophthalmology
2013-present Neurorehabilitation and Neural Repair
2014-present Journal of Chemical Neuroanatomy
2014-present Physiology
2015-present Behavioral Neuroscience
2015-present Neurotherpeutics

Other Peer Review Activities

2015-present Motor Learning & Motor Control program committee (formerly known as the Translational & Computational Motor Control) abstract review for selecting content or the annual national meeting.
2016-present American Heart Association (AHA) International Stroke Conference abstract review for selecting content of the annual international meeting.
2016-present American Society of Neurorehabilitation (ASNR) abstract review for selecting content of the annual national meeting.

Advisory Committees, Review Groups / Study Sections

11/18 NIH / NINDS Stroke Recovery Workshop: Bridging the Translational Gap in Stroke Recovery & Rehabilitation Research. How do we address spontaneous recovery (i.e., especially restitution vs. compensation of function) in modeling data from pre-clinical studies to clinical trials? Dr. Zeiler was asked to sit on a committee to explore how the NIH can better stimulate studies leading to improved post-stroke recovery. Rockville MD

Professional Societies

2005-10 American Academy of Neurology, Member
2012-present Society for Neuroscience, Member
2013-present American Heart Association
2015-present Member, American Heart Association (AHA) Rehabilitation and Recovery Committee. A group of thought leaders and program builders in the field of stroke recovery.
2016-18 Vice President, American Heart Association (AHA) Rehabilitation and Recovery Committee.
2018-20 President/Chair, American Heart Association (AHA) Rehabilitation and Recovery Committee.
2015-present Motor Learning & Motor Control program committee, Member (formerly known as the Translational & Computational Motor Control), A group of thought leaders and program builders in the field of movement and motor learning.
2016-2022 American Society of Neurorehabilitation (ASNR) program council, Member
A group of thought leaders and program builders in the field of recovery after a neurological injury.
2019-present American Society of Neurorehabilitation (ASNR), Board Member
2022-23 American Society of Neurorehabilitation (ASNR), Membership Committee Member
2023-present American Society of Neurorehabilitation (ASNR), Membership Committee President

Conference Organizer

2014-present Translational and Computational Motor Control annual meeting.
2016-present American Society of Neurorehabilitation (ASNR) program council annual meeting.
2018-present American Heart Association's International Stroke Conference Program Committee.
2019-present American Academy of Neurology Abstract Reviewer.

Session Chair

2/15 Moderator of oral abstracts presentation, "Clinical Rehabilitation and Recovery Oral Abstracts." International Stroke Conference, Nashville Tennessee.
9/15 International Salzburg Conference on Neurorecovery Session Chair – dementia. Salzburg, Austria.
9/17 24th International Mondsee Medical Meeting Session Chair – neurorecovery. Salzburg, Austria.
10/18 World Stroke Conference. Session chair - Experimental and Translational Neuroscience. Montreal, Canada.
11/18 American Society of NeuroRehabilitation. Session moderator and thought leader - Biomarkers in Neurorehabilitation and Neural Repair. San Diego, CA.
11/19 American Society of NeuroRehabilitation. Why Do Animals Recover Post- Stroke but Our Patients Do Not? – Session Chair and Organizer. Chicago, IL

Consultantships

2011-present Medical legal advisor to various firms
2014-2016 Medical and scientific advisor to Techfields Pharma
2015-present Medical and scientific advisor to EVER Neuro Pharma

RECOGNITION

Awards, Honors

2005 American Academy of Neurology Extended Neuroscience Award
2008 Osler Housestaff Teaching Award; presented by the Johns Hopkins Internal Medicine residents to the one faculty member (but they made an exception and presented it to a resident) in the University who has best embodied teaching excellence and service, Johns Hopkins.
2009 Jay Slotkin Research Award; presented to one resident for outstanding research in the field of neurology, Johns Hopkins Neurology.
2009 Guy McKhann teaching Award; presented to one resident for outstanding teaching in the field of clinical neurology, Johns Hopkins Neurology.
2011 Teaching Excellence Award; presented by the Johns Hopkins University Medical Students to one faculty member for excellence in teaching.
2011 Ford Teaching Excellence Award; presented by the Johns Hopkins neurology residents to the one faculty member who has best embodied teaching excellence and service, Johns Hopkins.
2012 Osler Housestaff Teaching Award; presented by the Johns Hopkins Internal Medicine residents to the one faculty member in the University who has best embodied teaching excellence and service, Johns Hopkins.

Invited Talks, Panels

JHMI/Regional

12/13 Speaker, Training, and Biological Determinants of Post-Stroke Recovery. Department of Neurology Grand Rounds, Johns Hopkins Hospital, Baltimore, MD
6/14 Speaker, Timing, Training, and Biological Determinants of Post-Stroke Recovery. Department of Medicine Grand Rounds, Good Samaritan Hospital, Baltimore, MD
2/15 Speaker, Translational-Stroke Recovery, Inaugural Indo-US Translational Neuroscience Symposium and Biomarker Discovery, Johns Hopkins, Baltimore, MD
2/17 Speaker, Stroke and Vasculitis; How to Help, How to Harm. Department of Medicines Grand Rounds, Med Star Union Memorial Hospital, Baltimore, MD
5/17 Speaker, Timing, Training, and Biological Determinants of Post-Stroke Recovery. Department of Medicine Grand Rounds, Med Star Union Memorial Hospital, Baltimore, MD
7/18 Speaker, Stroke and Vasculitis; How to Help, How to Harm. Department of Medicines Grand Rounds, Med Star Union Memorial Hospital, Baltimore, MD
1/19 Speaker, Timing, Traing, and Tinctures; Can We Rehabilitate Stroke Rehabilitation. Department of Neurology Grand Rounds, Johns Hopkins Hospital, Baltimore, MD

National

7/00	**Zeiler** SR, Vigers A, Amin D, Jones KR. BDNF expression in the visual cortex is differentially regulated during the critical period. Invited Lecture at 15th Annual National MD/Ph.D. Student Conference; Aspen, CO.
10/12	Speaker, The Importance of Mouse Medial Premotor Cortex, Early Re-Training, and Fluoxetine in the Recovery from a Focal Stroke Induced Motor Deficit, Translational and Motor Control Satellite meeting platform presentation. New Orleans, LA
3/14	Speaker, Timing, Training, and Biological Determinants of Post-Stroke Recovery. Department of Neurology Grand Rounds, West Virginia University, Morgantown, WV
7/14	Speaker, Timing, Training, and Biological Determinants of Post-Stroke Recovery. Department of Neurology Grand Rounds, University of Kentucky, Lexington, KY
7/14	Speaker, Timing, Training, and Biological Determinants of Post-Stroke Recovery. AHA Stroke Conference Regional Meeting, Reading, PA
11/15	Presented internationally and recorded via AHA. https://engage.vevent.com/rt/aha-7192751~111715, American Heart Association Stroke Webinar Series
2/16	Speaker and Symposium leader, Providing Very Early Rehabilitation after Acute Stroke: From Neurophysiology to Bedside Care, International Stroke Conference, Los Angeles, CA
9/16	Speaker, Stroke Recovery: timing, training, & biological determinants. Kansas University Grand Rounds, Kansas City, KS
11/16	Organizer and Plenary Speaker, Providing Very Early Rehabilitation after Acute Stroke: From Neurophysiology to Bedside Care, American Society of Neurorehabilitation, San Diego, CA
2/17	Speaker, Timing, Training, & Biological Requirements – Stroke Recovery. NIH National Rehabilitation Hospital Grand Rounds, NIH National Rehabilitation Hospital, Washington, DC
3/18	Speaker, Timing, Training, & Tinctures – Reorganization & Recovery After Stroke. Burke Rehabilitation Grand Rounds, Cornell, White Plains, NY
11/18	Debate and Controversy Speaker, Biomarkers in Neurorehabilitation and Neural Repair. American Society of Neurorehabilitation, San Diego, CA
11/18	Speaker, Spontaneous Motor Recovery after Cerebrolysin Treatment in a Mouse Model of Stroke. American Society of NeuroRehabilitation, San Diego, CA
11/18	Speaker, NIH / NINDS Stroke Recovery Workshop: Bridging the Translational Gap in Stroke Recovery & Rehabilitation Research. How do we address spontaneous recovery (i.e., especially restitution vs. compensation of function) in modeling data from pre-clinical studies to clinical trials. Rockville MD
12/21	Invited Speaker – Can we Enrich Stroke Rehabilitation? Lessons From Translational & Restorative Biology. 2021 Johns Hopkins Grand Rounds, Neurology. Balitmore, MD.
9/22	Invited Speaker – How to Pitch Yourself. American Neurological Association Symposium, Virtual. September, 2022.
2/23	Invited Plenary Speaker – Role of a built Environment in Stroke Rehabilitation. 2023. International Stroke Conference, Dallas, TX
3/23	Invited Speaker - Designing the Optimal Control Group Across Preclinical & Clinical Research: Recommendations from the Stroke Recovery & Rehabilitation. American Society of NeuroRehabilitation, Charleston, SC.
5/24	Commencement Address – University of Colorado, Molecular, Cellular, Developmental Biology; Boulder, CO.
5/24	Invited Symposium Speaker – Enriched Environments: Can They Rehabilitate Stroke Rehabilitation? Molecular, Cellular, Developmental Biology; Boulder, CO.

International

2/14	Winter Conference on Neuroplasticity invited talk: Interaction between post-stroke plasticity, rehabilitation, and functional recovery; from rodents to humans. Invited speaker. Vieques Island, Puerto Rico
9/15	International Salzburg Conference on Neurorecovery. Timing, Training, and Biological Determinants of Post-Stroke Recovery. Invited speaker. Salzburg, Austria

9/15	International Salzburg Conference on Neurorecovery. Discussant leader: can we prevent Post-Stroke Dementia. Salzburg, Austria
5/16	European Stroke Organization Congress. Post-Stroke Recovery and medications. Invited speaker. Barcelona, Spain
6/17	European Academy of Neurology Congress Invited Talk: Timing, Training, & Tinctures – Reorganization & Recovery After Stroke. Amsterdam, Netherlands
9/17	24th International Mondsee Medical Meeting Invited Talk Plenary: Timing, Training, & Tinctures – Reorganization & Recovery After Stroke. Salzburg, Austria
6/18	Champalimaud Centre for the Unknown lecture: Stroke Recovery; Mice and MRI. Lisbon, Portugual.
6/18	European Academy of Neurology Congress Invited Talk: Timing, Training, & Tinctures – Reorganization & Recovery After Stroke. Lisbon, Portugal
10/18	World Stroke Conference. Spontaneous Motor Recovery after Cerebrolysin Treatment in a Mouse Model of Stroke. Montreal, Canada
3/19	Plenary Speaker – Can We Rehabilitate Stroke Rehabilitation?13th Annual Conference of Korean Society for NeuroRehabilitation. Seoul, Korea
3/19	Plenary Speaker – Challenges and Opportunities in Motor Recovery after Stroke and Brain Injury. Manila Rehabilitation Conference, Kakati Philippines.
10/20	Symposium speaker - 11th World Congress of NeuroRehabilitation & World Federation of NeuroRehabilitation. Enriched Environments: Can They Rehabilitate Stroke Rehabilitation? Online Conference (COVID).
11/20	Invited Speaker – Stroke Rehabilitation Guidelines Webinar. Everpharma. Mondsee Austria (Virtual).
12/20	Symposium speaker – DGNR 2020. German Society for Neurorehabilitation. Enriched Environments: Can They Rehabilitate Stroke Rehabilitation? Online Conference (COVID).
3/21	Plenary Speaker – *Can we enrich stroke rehabilitation?* International Mondsee Medical Meeting (Virtual): New international Guidelines in stroke and subacute rehabilitation, Mondsee Austria (Virtual)
5/21	Invited Speaker – Enriched Environments: Can They Rehabilitate Stroke Rehabilitation? Oxford Physiological Neuroimaging Group Seminar Series – London, England (Virtual).
11/21	Invited Speaker – Enriched Environments: Can They Rehabilitate Stroke Rehabilitation? ELANS 2021 Post-Stroke Neurorehabilitation International Conference, Mexio City, Mexico (Virtual).
12/21	Invited Speaker - Can we Enrich Stroke Rehabilitation? Medical and Technological Enrichment. 2021 European Congress of NeuroRehabilitation, Berlin, Germany (Virtual).
1/22	Invited speaker - Future of Connected Health. Speaker and roundtable discussant. 2022 Samsung Roundtable (Virtual).
5/22	Invited speaker – Guidelines for Post-Stroke Motor recovery. Salzburg Everpharma Webinar. (Virtual).
8/22	Invited speaker - Can we Enrich Stroke Rehabilitation? Lessons From Translational & Restorative Biology. ELANS-Symposium Mexico City, Mexico.
8/22	Invited speaker – Post-Stroke Rehabilitation, Standards of Care. Stroke Care Symposium Mexico City, Mexico
1/23	Invited speaker - Navigating Control Interventions in Preclinical Post-Stroke Recovery Studies; relevance to clinical trials. Advances in Stroke Recovery — Scientific Conference care of Canadian Partnership for Stroke Recovery, Toronto, Canada (Virtual).
3/23	Invited speaker - Can we Enrich Stroke Rehabilitation? Lessons From Translational & Restorative Biology. Features of diagnosis, treatment and rehabilitation of neurological patients in war time – A Conference organized by the Association of Neurologists, Psychiatrists and Neurologists of Ukraine.
5/23	Invited Speaker – Post-Stroke Enrichment: Recipes for Recovery. European Stroke Organization Congress. Munich Germany.
6/23	Invited Plenary Speaker – Post-Stroke Enrichment: Recipes for Recovery. The National Neurological Congress., Sinaia, Romania.
8/23	Invited Symposium Speaker – Is Motivation Important? Post-Stroke Enrichment: Recipes for Recovery. 7th European Congress of NeuroRehabilitation, Centre de Congrès, Lyon.
4/24	Invited Symposium Speaker – Enriched Environments: Can They Rehabilitate Stroke Rehabilitation? 40th annual MENASO Education Academy; Dubai, UAE.

5/24 Invited Symposium Speaker – Is Motivation Important? See Also… Can Enriched Environments Rehabilitate Stroke Rehabilitation? WFNR 13th Annual World Congress for Neurorehabilitation; Vancouver Canada.

OTHER PROFESSIONAL ACCOMPLISHMENTS

Posters

11/00 Jones KR, Vigers AJ, Amin D, **Zeiler** SR. BDNF expression in murine visual cortex is altered by monocular deprivation. Society for Neuroscience 30th Annual Meeting; New Orleans, LA

11/01 **Zeiler** SR, Jones KR. BDNF expression in the murine visual cortex is regulated in a manner suggesting a role in linking neural signaling with anatomical plasticity. Society for Neuroscience 31st Annual Meeting; San Diego, CA

3/09 **Zeiler** SR, Turtzo CL, Kaplan PW. SPECT Negative SIRPIDs Mimicking a Stroke After Cardiac Arrest. American Clinical Neurophysiology Society. Milwaukee, WI

2/10 **Zeiler** SR, O'Brien R, Worley P. Post-Infarct Visual Cortical Plasticity Assessment Using the Immediate-Early Gene Arc. International Stroke Conference; San Antonio, TX

2012 Colby GC, Lin LM, Huang J, Tamargo RJ, **Zeiler SR**, Coon AL. Curative endovascular treatment of a cerebral aneurysm by flow diversion in a patient with Loeys-Dietz syndrome: technical considerations for Pipeline embolization in the setting of a pronounced connective tissue disorder. 3rd SNIS (Society for Neurointerventional Surgery) International Endovascular Stroke Conference (IESC)/Joint Cerebrovascular Section Annual Meeting. Honolulu, HI

2/12 Sahin B, Bonaguidi MA, **Zeiler** SR, Song H. "Remote Ischemic Stroke Decreases Quiescence and Increases Neurogenic Activation of Radial Glia-like Precursors in the Subgranular Zone of the Dentate Gyrus in Adult Mice." International Stroke Conference. New Orleans, LA.

10/12 **Zeiler** SR, Gibson EM, Hoesch RE, Li MY, Worley PF, O'Brien RJ, Krakauer JW. Medial Premotor Cortex Shows A Reduction In Inhibitory Markers And Mediates Recovery In A Mouse Model Of Focal Stroke. Society for Neuroscience Annual Meeting; New Orleans, LA

10/13 Gibson EM, Ng KL, O'Brien RJ, Krakauer JW, **Zeiler** SR. The Time Window of Heightened Plasticity After Ischemic Stroke Is Extended by Fluoxetine in a Mouse Model. Society for Neuroscience Annual Meeting; San Diego, CA

2/14 Ng KL, Gibson EM, O'Brien RJ, Krakauer JW, **Zeiler** SR. A time window of heightened plasticity to training after ischemic stroke in the mouse is extended by fluoxetine if provided within the first week after stroke. International Stroke Conference; San Diego, CA

11/14 **Zeiler** SR, Hubbard RB, Gibson EM, Ng K, Zheng T, O'Brien RJ, Krakauer JW. Paradoxical motor recovery from a first stroke by re-opening a sensitive period with a second stroke. Society for Neuroscience Annual Meeting; Washington DC

2/15 **Zeiler** SR, Hubbard RB, Gibson EM, Ng K, Zheng T, O'Brien RJ, Krakauer JW. Paradoxical motor recovery from a first stroke by re-opening a sensitive period with a second stroke. International Stroke Conference; Nashville, TN

10/16 **Zeiler** SR, Ng K, Hubbard RB, Gibson EM, Ng K, Zheng T, O'Brien RJ, Krakauer JW. A time window of heightened plasticity to training after ischemic stroke. American Neurological Association meeting; Baltimore, MD

2/18 **Zeiler** SR, Ng K, Hubbard RB, Pinilla-Monsalve G, Winter S, DeBoer S. Spontaneous Motor Recovery After Cerebrolysin Treatment in a Mouse Model of Stroke. International Stroke Conference; Los Angeles, CA

6/18 **Zeiler** SR, Ng K, Hubbard RB, Pinilla-Monsalve G, Winter S, DeBoer S. Cerebrolysin after stroke leads to spontaneous motor recovery in the absence of reduced stroke volume in a mouse model of stroke. European Academy of Neurology. Electronic poster presentation. Lisbon, Portugal, 2018.