

CURRICULUM VITAE
PAUL R. BORGHESANI, M.D., PH.D.

1. PERSONAL DATA

Business Address: Department of Psychiatry and Behavioral Sciences
University of Washington
1959 N.E. Pacific St.
Box 356560
Seattle, WA 98195-6560

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2. EDUCATION

9/1987-6/1989 University of Rochester, Rochester, New York

9/1989-5/1992 Massachusetts Institute of Technology, Cambridge, MA
S.B. Biology, June, 1992/S.B. Brain and Cognitive Science, June
1992

3. POSTGRADUATE TRAINING

9/1992-6/2001 Doctor of Medicine, Harvard/ Massachusetts Institute of
Technology, Division of Health Sciences and Technology,
Cambridge, MA

9/1992-6/2001 Doctor of Philosophy (concentration in neurobiology), Harvard
University, Program in Neuroscience, Boston, MA

4. FACULTY POSITIONS HELD

7/2005-6/2007 Research Fellow, VA Hospital, Mental Illness Research,
Education and Clinical Center (MIRECC), Seattle, WA

7/2005-6/2007 Acting Instructor, University of Washington Medical Center,
Department of Psychiatry and Behavioral, Seattle, WA

5. HOSPITAL POSITIONS HELD

6/2001-6/2005 Resident, University of Washington Medical Center, Department
of Psychiatry & Behavioral Sciences, Seattle, WA

2004-2005 Chief Resident, University of Washington Medical Center,
Inpatient Psychiatry, Seattle, WA

6. HONORS

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|-----------|---|
| 2005 | Fellow at the NIMH Summer Research Institute, Stanford University |
| 2005 | Fellow at the Summer Institute in Cognitive Neuroscience, Dartmouth College |
| 2005 | Award for Academic Excellence, University of Washington Medical Center, Department of Psychiatry & Behavioral Sciences, Seattle, WA |
| 2005 | American Association of Geriatric Psychiatry, Stepping Stones Program |
| 2003 | NIMH Outstanding Psychiatry Resident Award |
| 1998-1999 | Freudenberger Predoctorial Fellow, Harvard Medical School |
| 1993-2001 | Medical Scientist Training Program Fellowship |
| 1993-1994 | Harvard/M.I.T., Health Sciences and Technology Research Fellowship |

7. BOARD CERTIFICATION

- | | |
|---------|--------------------------------|
| 9/1994 | USMLE Step I |
| 1/2001 | USMLE Step II |
| 2/2004 | USMLE Step III |
| 10/2005 | ABPN, Psychiatry Boards part 1 |
| 1/2007 | ABPN, Psychiatry Boards part 2 |

8. CURRENT LICENSE(S)

- | | |
|---------------|---|
| 6/2004-5/2012 | Physician and Surgeon
Washington State Department of Health
MD 00043879 |
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9. PROFESSIONAL ORGANIZATIONS

None

10. TEACHING RESPONSIBILITIES

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|-----------|--|
| 2005-2008 | Co-organized and taught PGY3 neuroscience didactics for psychiatry residents. Topics ranged from developmental neurobiology, cortical networks to the neurobiology of personality. |
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2004-2005	Led residents and medical students in journal article reviews and didactics as chief resident in psychiatry (3hrs/week).
2003-2005	Organized and lectured in a monthly resident/faculty neurobiology seminar series.
2005 & 2006	Taught psychology interns during their didactics (2hrs/year) "Technology used in the Assessment and Treatment of Psychopathology".
2004-2005	Taught within a graduate ethics seminar (2hrs/year)"Decisional capacity in the medically ill".

11. EDITORIAL RESPONSIBILITIES

None

12. SPECIAL NATIONAL RESPONSIBILITIES

None

13. SPECIAL LOCAL RESPONSIBILITIES

None

14. RESEARCH FUNDING:

1 UL1 RR 025014-01 Disis (PI) 9/17/07-5/31/12

NIH/NCRR

Institute for Translational Health Sciences (ITHS)

This grant is linked to two training grants; together, the three grants fund the Institute of Translational Health Sciences, a partnership between the University of Washington, the Fred Hutchinson Cancer Research Center, Children's Hospital and Regional Medical Center, and local and regional research and community partners. As a "collaboratory," the Institute fosters collaboration, career development, education, innovative technologies and resources, and the translational health research process itself.

Role: KL2 Scholar 8/1/2007-7/1/2012. 0.75 FTE salary and \$25K annual research budget

Completed Research Support

T32 AG000258-09 Craft (PI) 7/1/2005-7/30/2007

NIH/NIA

Neurobehavior, Neuroendocrinology, and Genetics of AD

This research training program provides post-doctoral training for seven MD or PhD fellows in clinical research regarding the neurobehavior, neuroendocrinology, and neurogenetics of Alzheimer's Disease (AD) and related dementias.

Role: Post-doctorial Fellow. 1.0 FTE Salary only.

P50 AG05136 Raskind (PI) 5/1/2005-4/30/2006

NIA/NIH

Alzheimer's Disease Research Center Pilot Award

Cortical Activation and Cognition in Healthy Older APOE ε4 carriers. The goal of this study was to evaluate cortical systems that may be dysfunctional prior to the onset of dementia in individuals who are at greater risk of developing Alzheimer's disease

Role: PI ADRC Pilot Award 5/1/2005-4/30/2006. Total amount \$35K

15. BIBLIOGRAPHY

a) Papers published in peer-reviewed journals (*equal contribution):

1. **Borghesani PR**, DeMers SM, Manchanda V, Pruthi S, Lewis DH, and Borson S. What information can be gained from neuroimaging during the evaluation of cognitive decline? In revision. *Journal of the American Geriatric Society, in press 2010*
2. Cherrier MM, **Borghesani PR**, Shelton A and Higano CS. Changes in neuronal activation patterns in response to androgen deprivation therapy. *BMC Cancer* 10(1):1-8. 2010
3. Archbold KH* and **Borghesani PR***, Mahurin RK, Kapur VK and Landis CA. Neural activation patterns during working memory tasks and OSA disease severity. *Journal of Clinical Sleep Medicine* 5(1):21-27. 2009
4. **Borghesani PR**, Johnson LC, Shelton AL, Peskind ER, Aylward EH, Schellenberg GD, and Cherrier MM. Altered medial temporal lobe responses during visuospatial encoding in healthy APOE*4 carriers. *Neurobiology of Aging* 29(7):981-991. 2008
5. Choi Y, **Borghesani PR**, Chan JA, Segal RA. Migration from a mitogenic niche promotes cell-cycle exit. *Journal of Neuroscience* 25(45):10437-10445. 2005
6. **Borghesani PR***, Peyrin JM*, Klein R*, Rubin J, Carter AR, Schwartz PM, Luster A, Corfas G, Segal RA. BDNF stimulates migration of cerebellar granule cells. *Development* 129(6):1435-1442. 2002
7. **Borghesani PR***, Alt FW, Bottaro A, Davidson L, Aksoy S, Rathbun GA, Roberts TM, Swat W, Segal RA, Gu Y*. Abnormal development of Purkinje cells and lymphocytes in *Atm* mutant mice. *PNAS* 97(7):3336-3341. 2000

8. Ma Q, Jones D*, **Borghesani PR***, Segal RA, Nagasawa T, Kishimoto T, Bronson RT, Springer TA. Impaired B-lymphopoiesis, myelopoiesis, and derailed cerebellar neuron migration in CXCR4- and SDF-1-deficient mice. *PNAS* 95(16):9448-9453. 1998
9. Schwartz PM, Levy RL, **Borghesani PR**, Segal RA. Cerebellar pathology in BDNF -/- mice: the classic view of neurotrophins is changing. *Molecular Psychiatry* 3(2):116-120. 1998
10. Schwartz PM, **Borghesani PR**, Levy RL, Pomeroy SL, Segal RA. Abnormal cerebellar development and foliation in BDNF -/- mice reveals a role for neurotrophins in CNS patterning. *Neuron* 19(2):269-281. 1997
11. Johnston KM, Jacoby D, Pechan PA, Fraefel C, **Borghesani P**, Schuback D, Dunn RJ, Smith FI, Breakefield XO. HSV/AAV hybrid amplicon vectors extend transgene expression in human glioma cells. *Human Gene Therapy* 8(3):359-370. 1997
12. Haque NS, **Borghesani PR**, Isacson O. Therapeutic strategies for Huntington's disease based on a molecular understanding of the disorder. *Molecular Medicine Today* 3(4):175-183. 1997
13. Nitsch RM, Slack BE, Farber SA, Schultz JG, Deng M, Kim C, **Borghesani PR**, Korver W, Wurtman RJ, Growdon JH. Regulation of proteolytic processing of the amyloid B-protein precursor of Alzheimer's disease in transfected cell lines and in brain slices. *Journal of Neurotransmission* 44:S21-27. 1994
14. Nitsch RM, Slack BE, Farber SA, **Borghesani PR**, Schulz JG, Kim C, Felder CC, Growdon JH, Wurtman RJ. Receptor-Coupled APP Processing. *Annals of the New York Academy of Sciences* 695:122-127. 1993
15. Loeb E, Giszter S, **Borghesani P**, Bizzi E. Effects of dorsal root cut on the forces evoked by spinal microstimulation in the spinalized frog. *Somatosensory and Motor Research* 10 (1): 81-95. 1993

b) Book Chapters:

None

c) Published books, videos, software, etc.:

None

d) Other Publications (non-refereed journals and letters to the editor):

None

e) Manuscripts submitted/In preparation:

1. Madhyastha T, Willis SL, **Borghesani PR**, Richards A, Aylward EH, and KW Schaie. Dual change modeling of Cognition and Health in Adulthood: Findings from the Seattle Longitudinal Study.

2. Willis SL, Madhyastha T, **Borghesani PR**, Richards A, Aylward EH, and KW Schaie. Midlife Predictors of Cognitive Change in Episodic Memory and Executive Functioning: Findings from the Seattle Longitudinal Study. In preparation.
3. **Borghesani PR**, Weaver KE, Aylward EH, Kahn AR, Liang O, Ellenbogen RL, Beg MF, Schaie KW and Willis SL. Midlife memory improvement predicts preservation of hippocampal volume in old age. Submitted to Neurobiology of Aging in 3/10.

f) Abstracts:

None

16. OTHER

Recent Invited Talks and Posters:

- 3/2009 "Use of MRI and SPECT during dementia evaluations in a specialty clinic increases diagnostic confidence". Poster presentation, American Association of Geriatric Psychiatry, Honolulu, HI.
- 3/2008 "Neuroimaging: is it all in your head?" Research presentation, Seattle Pacific University, Seattle, WA.
- 12/2007 "Changes in neuronal activation in response to androgen deprivation". Poster presentation, American College of Neuropsychopharmacology, Boca Raton, FL.
- 4/2006 "Altered cortical activation during visuospatial encoding in APOE*4 carriers". Poster presentation, Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- 3/2006 "Altered cortical activation during memory encoding in healthy APOE*4 carriers". Research presentation, West Coast College of Biological Psychiatry Annual Meeting, Costa Mesa, CA.
- 12/2005 "Dedifferentiation of visual-spatial encoding in older, non-demented APOE*4 carriers". Research presentation, Weill Medical College of Cornell University, New York City, NY.
- 3/2005 "Visual-spatial learning in older, non-demented APOE ϵ 4 carriers". Research presentation, Quarterly Neuroscience Seminar, University of Washington Medical Center, Department of Psychiatry and Behavior Sciences, Seattle, WA.