

Nicole Vittoz

Email: nvittoz@gmail.com

Education:

Postdoctoral Fellowship, Psychiatry, University of British Columbia, 2006-2009

Ph.D., Psychology, University of Wisconsin, 2006

Dissertation: "Hypocretin-dopamine interactions: implications for waking, cognition and behavior"

Fulbright Scholar, Universities of Göttingen and Würzburg, Max-Planck Institutes, Germany, 2001

Bachelor of Science, Biopsychology and Cognitive Science, Highest Distinction, High Honors, University of Michigan, 2000

Work Experience:

Instructor

January 2010-April 2010, University of British Columbia Psychology Department

- Drugs, Society and Behaviour, 2nd year course

May 2009-August 2010, Kwantlen Polytechnic University Psychology Department
(Student and peer evaluations available upon request.)

- Drugs and Behaviour, 3rd year course
 - Fall 2009
- Brain and Behaviour, 2nd year course
 - Spring 2010
- Experimental Psychology: Research Methodology, 2nd year course
 - Fall 2009
 - Spring 2010
 - Summer 2010
- Psychology of Aging, 3rd year course
 - Summer 2009
 - Summer 2010

Program Coordinator

July 2009-present, BC Centre of Excellence for Women's Health. Coordinator of the IMPART research training program for gender, addictions, mental health, violence and trauma.

<http://addictionsresearchtraining.ca>

▪ Training:

- The Odd Couple: Biomedicine meets Intersectionality, An innovative 2 days of discussion and dialogue. November 1, 2010, The SFU Institute for Critical Studies in Gender and Health.
- Theory and key concepts in gender, sex, and health research: a research training session. Tuesday, July 6, Institute for Gender and Health (CIHR)

Work Experience (continued...):

Program Coordinator (continued...)

- Responsibilities:

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| Build curriculum | Mentor trainees |
| Compose progress reports to CIHR | Recruit mentors and applicants |
| Maintain website | Plan conferences and other events |
| Design advertising materials | Present workshops and posters at conferences |
| Administer trainee fellowships and travel awards | Redesign online course |
| Manage budget (over \$300K per yr) | Supervise Program Assistant |

Postdoctoral Fellow

2006-present, University of British Columbia, Psychiatry, Postdoctoral Research Fellow

- Established *in vivo* electrophysiology research program
- Co-founded the successful Prefrontal Cortex Journal Club at the Brain Research Centre
- Invited by Dr. C. Winstanley to give guest lectures, UBC Psychology - January 2009
- Recruited, supervised and mentored undergraduate and graduate students in the Seamans laboratory
- Designed and created lab web site
- Training:
 - 2009, Networking Workshop, Soc. for Canadian Women in Sci. and Tech.
 - 2008, Project Management Workshop, BC Cancer Agency
 - 2008, Workshops: teaching for researchers, altern. careers for bioscientists, UBC Postdoc Assoc.
 - 2006, Short Course on recording neural signals, Society for Neuroscience

Teaching Assistant

2005-6, University of Wisconsin, Psychology

- Behavioral Neuroscience, 3rd year course
 - Lab section instructor, guest lecturer, significant contributor to course design and implementation, marker of exams and papers. Broad introductory neuroscience course for students with at least one prior biology course.
- Introduction to Statistics, 2nd year course
 - Lab section instructor. Rigorous course in which a mark of B or better was required for all students applying to the psychology major.
- Training:
 - 2005, Attended two full-day teaching and diversity training sessions offered to TAs by University of Wisconsin.
 - 2005, Attended workshop in Madison, Wisconsin for teachers on how the mind/brain learns.

Graduate Student

2001-6, University of Wisconsin, Psychology

- Trained and mentored undergraduate students in the Berridge laboratory (research for credit, summer programs, paid staff)
- Created and maintained lab web site

Work Experience (continued...):

Volunteer work

Science/mental health outreach in schools, mentoring programs, organizing for student groups

- 2010, The Kaleidoscope mental health support group at UBC – Founding member and co-facilitator, co-author of grants for funding support
- 2009, MC and Panelist for 1st Annual Brain Bee for High School students in Lower Mainland
- 2009, Soc. Canadian Women in Science & Tech. – organized events calendar, researched collaborations
- 2008, Facilitator for two-day Faculty of Medicine Research Ethics Workshop for graduate students
- 2008, Let's Talk Science/Genome BC: prepared and led genetics-related activities in several schools on Vancouver Island during week-long rural visit
- 2007-8, Let's Talk Science (UBC): designed and implemented neuroscience-related activities in east-side Vancouver classroom; brought a team of three researchers to help.
- 2007-9, Life Sciences Tri-Mentoring Program (UBC): provided career related advice and opportunities to advanced undergraduate students in the sciences
- 2006-present, Prefrontal Cortex Journal Club, co-founder of student/trainee-oriented research discussion group (sponsored by Brain Research Centre)
- 1999-2000, Neuroscience Undergrads (Univ. Michigan): neuroscience-related activities outreach in area schools; Brain Awareness Week Parkinson's Penny Drive.
- 1998-2000, Undergraduate Psychological Society (Univ. Michigan), Academic Committee chair: assembled panels of faculty and industry professionals to talk about careers, applying for grad schools, and research.

Research Assistant

1998-2000, Institute for Social Research, University of Michigan

- Created searchable internet meta-database for economic Index of Consumer Sentiment

Residential Care Worker

1998, Synod Residential Services, Ann Arbor, Michigan

- Worked in a group care home for high-functioning schizophrenic patients

Current Research Interests:

Some of the most important brain functions include planning, decision-making and learning. I am interested in the ways in which the brain encodes and performs these functions. Specifically, I examine the contributions of single cell and network level activity in the prefrontal cortex to the performance of various cognitive tasks, as well as the modulation of this activity by the dopamine neuromodulator system. Additional research interests include the use of neuroanatomy techniques to establish the location and function of unique and under-studied sub-groups of dopamine neurons in the midbrain, which may play important roles in higher order cognition as well as motivational processes. The goals of this research include the identification of neural mechanisms underlying prefrontal dysfunction, the problem that lies at the heart of schizophrenia, depression, attention deficit and drug addiction.

Publications:

Peer-reviewed Journal Articles:

Durstewitz D.*, **Vittoz N.***, Floresco S.B., Seamans J.K. (2010) Abrupt transitions between prefrontal neural ensemble states accompany behavioral transitions during rule learning. **Neuron**, 66, 438–448.
*These authors contributed equally to the work.

Borgland S.L., Chang S-J., Bowers M.S., Thompson J., **Vittoz N.**, Floresco S., Chou J., Chen B.T., Bonci A. (2009) Orexin A/Hypocretin-1 selectively promotes motivation for positive reinforcers. **Journal of Neuroscience**, 29(36), 11215-25.

Vittoz N.M., Schmeichel B., Berridge C.W. (2008) Hypocretin/Orexin Preferentially Activates Dopamine Neurons in the Caudomedial Ventral Tegmental Area that Project to the Prefrontal Cortex and Nucleus Accumbens Shell. **European Journal of Neuroscience**, 28(8), 1629-1640.

Vittoz N.M., Berridge C.W. (2006) Hypocretin/Orexin Selectively Increases Dopamine Efflux within the Prefrontal Cortex: Involvement of the Ventral Tegmental Area. **Neuropsychopharmacology**, 31(2), 384-395.

Day H.E.W., **Vittoz N.M.**, Oates M.M., Badiani A., Watson, S.J., Jr., Robinson T.E., Akil H. (2002) A 6-Hydroxydopamine lesion of the mesostriatal dopamine system decreases the expression of corticotropin releasing hormone and neurotensin mRNAs in the amygdala and bed nucleus of the stria terminalis. **Brain Research**, 945(2), 151-159.

Day, H.E.W., Badiani, A., Uslaner, J.M., Oates, M.M., **Vittoz, N.M.**, Robinson, T.E., Watson, S.J., Jr., Akil, H. (2001) Environmental novelty differentially affects amphetamine-induced c-fos mRNA expression in the bed nucleus of the stria terminalis and amygdala. **Journal of Neuroscience**, 21(2), 732-740.

Reviews:

Berridge C.W., España R.A., **Vittoz N.M.** (2010) Hypocretin/Orexin in Arousal and Stress. **Brain Research**. 1314, 91-102.

Selected Posters/Abstracts/Conference Presentations:

Vittoz, N.M. (chair), Benoit, C., Krank, M., Young, R. (2010) Intersectionalities in women's mental health and addictions: Applying innovative and mixed methodologies in research. *Women's Mental Health Conference: Building Research Networks and Capacity*. Toronto, ON. Oct 1.

Vittoz, N.M., Sullivan, K., Torchalla, I., Rostam, H., Brache, K., Greaves, L. (2009) IMPART: Mental Health Perspectives in Addictions Research Training (Poster no. 71). *Into the Light Conference: Transforming Mental Health in Canada*, Vancouver, BC. Nov 29 - Dec 1.

Vittoz N.M., Seamans, J., Floresco, S.B. (2008) Neural correlates of effort-based decision making in medial prefrontal cortex and nucleus accumbens. *Society for Neuroscience Annual Meeting*, Washington, DC.

Vittoz N.M., Floresco, S.B., Seamans, J. (2007) Cellular correlates of set-shifting in rat medial prefrontal cortex. *Society for Neuroscience Annual Meeting*, San Diego, CA.

Grants and Fellowships:

NARSAD Young Investigator Award, 2007-9, National Alliance for Research on Schizophrenia and Depression (\$60,000)

NSF Graduate Fellowship, National Science Foundation 2002-5 (\$58,000 + tuition)

Graduate Fellowship, University of Wisconsin Graduate School, 2001-2 (\$15,000 + tuition)

Fulbright Scholar, Germany, 2000-1 (\$18,000)

Travel Award, Health & Emotions Symposium, University of Wisconsin, 2007 (\$1000)

Travel Award, Gordon Research Conference (Catecholamines), 2005 (\$600).

Travel Awards, Department of Psychology, University of Wisconsin, annually 2002-5 (\$500 each)

Skills and Qualifications:

- Proven competence in the areas of teaching, communication, public speaking, management, leadership and research
- Strong computer skills: Presentation, web site design and development (Wordpress), programming (Matlab, Java)