

Christopher Peter Ford, Ph.D.

Assistant Professor

Department of Physiology and Biophysics & Department of Neurosciences

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EDUCATION AND TRAINING

| | | |
|-------------|---|-------------------------------------|
| 1994 - 1998 | University of Alberta Edmonton, Canada | B.Sc. Biological Sciences |
| 1998 - 2003 | University of Alberta Edmonton, Canada | Ph.D. Neuroscience |
| 2004 - 2010 | Vollum Institute, Oregon Health & Science University. Portland, OR | Post- Doctoral Fellow. Neuroscience |

APPOINTMENTS AND POSITIONS

| | | |
|----------------|--|--|
| 2011 - present | Case Western Reserve University School of Medicine Dept. of Physiology & Biophysics Cleveland, OH | Assistant Professor (Primary Appointment) |
| 2011 - present | Case Western Reserve University School of Medicine Dept. of Neurosciences Cleveland, OH | Assistant Professor (Secondary Appointment) |

HONORS

| | |
|---|-------------|
| Mary Louise Imrie Graduate Award. Studentship | 1999 |
| Province of Alberta. Studentship | 1999 |
| Alberta Heritage Foundation for Medical Research. Studentship | 2000 - 2003 |
| Neuroscience Canada. Studentship | 2001 - 2003 |
| Western Canadian Research Symposium. Student Award | 2003 |
| Alberta Heritage Foundation for Medical Research. Fellowship | 2004 |
| Alberta Heritage Foundation for Medical Research. Incentive award | 2004 - 2007 |
| Life Sciences Research Foundation. Post-Doctoral Grant | 2004 - 2007 |
| NIH/NIDA - K99/R00. Pathway to Independence Award | 2009 - 2013 |
| Frontiers in Addiction Research: 2010 NIDA Travel Award | 2010 |
| NARSAD Young Investigator | 2011 |
| Case Western Reserve University Mt. Sinai Foundation Scholar | 2011 |

MEMBERSHIP

Society for Neuroscience (SFN) 1999 – present

American Physiological Society 2011 – present

CWRU Addiction Research Interest Group 2011- present

PUBLICATIONS

Refereed Peer Reviewed Publications:

- 1) **FORD CP**, Ivanoff AY, Smith PA (2000). Interaction of vasomotor and exocrine neurons in bullfrog paravertebral sympathetic ganglia. *Canadian Journal of Physiology and Pharmacology*. 78(8):636-644.
 - 2) Stenkowski PL, Tse FW, Peuckmann V, **FORD CP**, Colmers WF, Smith PA (2002). ATP-inhibition of M current in frog sympathetic neurons involves phospholipase C but not Ins P(3), Ca(2+), PKC, or Ras. *Journal of Neurophysiology* 88(1):277-288.
 - 3) **FORD CP**, Stenkowski PL, Light PE, Smith PA (2003). Experiments to Test the Role of Phosphatidylinositol-4,5,-Bisphosphate in Neurotransmitter-Induced M-channel Closure in Bullfrog Sympathetic Neurons. *Journal of Neuroscience* 23 (12): 4931-4941
 - 4) **FORD CP**, Dryden WF, Smith PA (2003). Neurotrophic Regulation of Calcium Channels by the Peptide Neurotransmitter Luteinizing Hormone Releasing Hormone. *Journal of Neuroscience*. (23) 18: 7169—7175.
 - 5) **FORD CP**, Stenkowski PL, Smith PA (2004) Possible role of phosphatidylinositol 4,5 bisphosphate in luteinizing hormone releasing hormone-mediated M-current inhibition in bullfrog sympathetic neurons. *European Journal of Neuroscience*. 20 (11):2990-2998.
 - 6) **FORD CP**, Mark GP, Williams JT (2006). Properties and opioid inhibition of mesolimbic dopamine neurons vary according to target location. *Journal of Neuroscience*. 26 (10): 2788-2797.
 - 7) **FORD CP**, Beckstead MJ, Williams JT (2007). Kappa opioid inhibition of somatodendritic dopamine inhibitory post synaptic currents. *Journal of Neurophysiology*. 97 (1): 883-891.
 - 8) Beckstead MJ, **FORD CP**, Phillips PE, Williams JT (2007). Presynaptic regulation of dendrodendritic dopamine transmission. *European Journal of Neuroscience*. 26 (6): 1479-1488.
 - 9) **FORD CP**, Wong KV, Posse De Chaves E, Smith PA (2008). Differential neurotrophic regulation of sodium and calcium channels in an adult sympathetic neuron. *Journal of Neurophysiology*. 99 (3): 1319-1332.
 - 10) **FORD CP** & Williams JT (2008). Mesoprefrontal dopamine neurons distinguish themselves. *Neuron*. 57 (5): 631-632.
 - 11) Beckstead MJ, Gantz S, **FORD CP**, Stenzel-Poore MP, Phillips PE, Mark, GP, Williams JT (2009). CRF enhancement of GIRK channel-mediated transmission in dopamine neurons. *Neuropsychopharmacology*. 34 (8): 1926-1935.
 - 12) **FORD CP**, Phillips PE, Williams JT. The time course of dopamine transmission in the ventral tegmental area (2009). *Journal of Neuroscience*. 29 (42): 13344-1335.
 - 13) Bender KJ, **FORD CP**, Trussell LO (2010). Dopaminergic modulation of axon initial segment calcium channels regulates action potential initiation. *Neuron*. 68 (3), 500-511.
 - 14) **FORD CP**, Gantz SC, Phillips PE, Williams JT (2010). Control of extracellular dopamine at dendrite and axon terminals. *Journal of Neuroscience*. 30 (20): 6975-6983.
 - 15) Gantz SC, **FORD CP**, Neve KA, Williams JT (2011). Loss of Mecp2 in substantia nigra dopamine neurons compromises the nigrostriatal pathway. *Journal of Neuroscience*. 31 (35), 12629-12637
 - 16) Courtney NA, Mamaligas AA, **FORD CP** (2012) Species differences in somatodendritic dopamine transmission determine D2-autoreceptor mediated inhibition of ventral tegmental area neuron firing. *Journal of Neuroscience*. 32(39): 13520-13528
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RESEARCH GRANT FUNDING

1. Current Support

| Grant Number | Grant Title | Role (%effort) | Years | Source |
|----------------|---|----------------|-----------|------------|
| R00-DA026417 | Mechanisms of dopamine transmission in the VTA | PI -100% | 2011-2014 | NIH (NIDA) |
| Research Grant | Actions of antipsychotics at an identified dopamine synapse | PI -100% | 2011-2013 | NARSAD |

2. Pending Support

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|-------------|--|---------|-----------|------------|
| R01-DA35821 | Encoding dopamine signals in the mesolimbic system | PI-100% | 2013-2018 | NIH (NIDA) |
|-------------|--|---------|-----------|------------|

3. Previous Support

| | | | | |
|------------------|--|----------|-----------|-----------------------------------|
| K99-DA026417 | Mechanisms of dopamine transmission in the VTA | PI -100% | 2009-2010 | NIH (NIDA) |
| Fellowship Grant | Opioid modulation of dopamine neurons | PI 100% | 2004-2007 | Life Sciences Research Foundation |

SEMINARS AND INVITED LECTURES

| | |
|------|---|
| 2003 | International Society for Autonomic Neuroscience. Calgary, AB |
| 2006 | Life Sciences Research Foundation. Washington, DC |
| 2007 | Dopamine 50 years, Goteborg, Sweden |
| 2008 | Winter Conference on Brain Research. Snowbird, UT |
| 2009 | Case Western Reserve University, Department of Physiology and Biophysics. Cleveland, OH |
| 2010 | University of Texas, Department of Biology. San Antonio, TX |
| 2010 | University of Calgary, Hotchkiss Brain Institute. Calgary, AB |
| 2010 | Winter Conference on Brain Research, Breckenridge, CO |
| 2011 | International Narcotics Research Conference, Hollywood, FL |
| 2011 | Case Western Reserve University, Department of Neuroscience. Cleveland, OH |
| 2012 | University of Alberta, Department of Neurosciences, Edmonton, AB |
| 2012 | Case Western Reserve University, Department of Pharmacology. Cleveland, OH |
| 2013 | Winter Conference on Brain Research, Breckenridge, CO |
| 2013 | Northeast Ohio Medical University, Integrated Medical Sciences. Rootstown, OH |
| 2013 | Washington University, Dept. of Anesthesiology. St. Louis, MO |
| 2013 | Wayne State University, Dept. of Pharmacology. Detroit, MI |

SERVICE

Journal Reviewer:

Journal of Neuroscience, Journal of Neurochemistry, Journal of Neurophysiology, Journal of Physiology

Grant Reviewer:

French National Research Agency: Program Blanc

Committee Member:

Board of Directors (Cell/Molecular*) Winter Conference on Brain Research (2013-2016)

TRAINING RECORD

| Trainee | Period | Degree | Department |
|---------|--------|--------|------------|
|---------|--------|--------|------------|

Current Graduate Students

| | | | |
|---------------------|-----------------------|----------------|-------------------------|
| Nick Courtney | Fall 2011- present | PhD Student | Physiology & Biophysics |
| Aphroditi Mamaligas | Fall 2012- present | PhD Student | Neurosciences |
| Pamela Marcott | Spring 2013 - present | MD/PhD Student | Physiology & Biophysics |

Graduate Rotation Students

| | | | |
|---------------------|-------------|----------------|-------------------------|
| Kate Fu | Spring 2011 | PhD Student | Dept of Physiology CWRU |
| Nick Courtney | Summer 2011 | PhD Student | Dept of Physiology CWRU |
| Jeff Blair | Summer 2011 | PhD Student | BSTP CWRU |
| Oheneba Amponsah | Summer 2011 | PhD Student | Dept of Physiology CWRU |
| Aphroditi Mamaligas | Spring 2012 | PhD Student | BSTP CWRU |
| Pamela Marcott | Summer 2012 | MD/PhD Student | MSTP CWRU |
| Samantha Barclay | Summer 2012 | MD Student | CCLCM Cleveland Clinic |

Summer Undergraduate Students

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|------------------|------|--|------------------------|
| Samantha Barclay | 2011 | | BS Student, Cedarville |
|------------------|------|--|------------------------|

Thesis Committees (in addition to primary advisees)

| | | | | |
|------------------|-------------|-----------------|-------------------------|--------|
| Ahlam Salameh | PhD student | Walter Boron | Physiology & Biophysics | Member |
| Sheela Toprani | PhD student | Dominic Durand | Physiology & Biophysics | Member |
| Isaac Youngstrom | PhD student | Ben Strowbridge | Neurosciences | Member |
| Neil Goldsmith | PhD student | Corey Smith | Physiology & Biophysics | Chair |

Qualifying Examination Committees

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|-------------------|-------------|-----------------|---------------|--------|
| Isaac Youngstrom | PhD student | Ben Strowbridge | Neurosciences | Member |
| Nicolaus Schmandt | PhD Student | Roberto Galan | Neurosciences | Member |

Previous Thesis Committees

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|-------------|-------------|--------------|-------------------------|--------|
| Ken Gresham | PhD student | Chris Wilson | Physiology & Biophysics | Member |
|-------------|-------------|--------------|-------------------------|--------|

TEACHING***CWRU Medical Courses***

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|-------------|---|
| Spring 2011 | Block 4, medical curriculum. Action Potential Lab |
| Summer 2011 | Block 2, medical curriculum, Cell Physiology |
| Spring 2012 | Block 4 Homeostasis – Cell Physiology and Cardiovascular Physiology |
| Fall 2012 | Block 2, medical curriculum, Cell Physiology |

CWRU Graduate Courses

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|-------------|--------------------------------|
| Spring 2011 | Physiology 476 Cell Biophysics |
| Fall 2012 | C3MB |