CURRICULUM VITAE

Date prepared: 04/01/12

Name: Gordon James Fishell

Address: 48 Oak Avenue, Larchmont, NY 10538

Date and Place of birth: May 27th, 1960, Toronto, Ontario, Canada

Education

1984 Diploma (B.Sc.) in Physiology & Biophysics, University of

Toronto

1989 Ph.D. in Neurobiology, University of Toronto-Neurobiology

Research Group Derek van der Kooy.

Postdoctoral Training

1990-1992 Postdoctoral Research Fellow, Department of Pathology,

Laboratory of Mary E. Hatten at Columbia University

Academic Appointments

1989-1992 Research Developmental Neurobiologist, Columbia University

1992-1994 Assistant Professor, Rockefeller University

1994-1999 Assistant Professor, Developmental Genetics Program, Skirball

Institute and Dept. of Cell Biology, NYU School of Medicine

1999-2002 Associate Professor, Developmental Genetics Program, Skirball

Institute and Dept. of Cell Biology, NYU School of Medicine

2002-2005 Associate Professor with Tenure, Developmental Genetics

Program, Skirball Institute and Dept. of Cell Biology, NYU

2004-2006 Co-coordinator of the Skirball Developmental Genetics Program

2005-2006 Professor with Tenure, Developmental Genetics Program,

Skirball Institute and Dept. of Cell Biology, NYU

2006- Professor and Coordinator of the Smilow Neuroscience Program

2011- Associate Director of the NYU Neuroscience Institute

2012- Professor of Physiology and Neuroscience

Awards and Honors

1988 Richardson Award

1989-1993 MRC Fellowship

1990 McMurrich Award

1995 Irma T. Hirschl Career Scientist Award

2000-2002 Anthony Corso Memorial Child Brain Tumor Foundation Award

2002-2006 NY Spinal Cord Research Foundation Researcher

2007-2008 Simon's Investigator

Memberships

1984- Member of the Society for Neuroscience

Editorial Boards

2000-	Highlight Editor, Nature Reviews (Neuroscience)
2001-	Associate Editor Neurosignals
2001-	Faculty of 1000 Developmental Neurobiology section
2001	Associate Editor The Journal of Neuroscience
2002-	Associate Editor Developmental Neuroscience .
2003-	Associate Editor Genes and Development
2004-	Regular member of NIH NDPR study section.
2005-	GSF Center for excellence, Grant Panel Review
2006-	(Reviewer) California Institute for Regenerative Medicine

Major Research Interests:

The genetic basis of cortical interneuron diversity.

The Developmental Creation of cortical microcircuitry

Presentations at Meetings and Invited Seminars

1992

Albany Medical Center, Department of Pharmacology, Albany, New York (10/92) Invited Speaker, Society for Electron Microscopy, 15th Annual Meeting, Boston, Massachusetts (12/92)

1994

Heritary Disease Foundation, Workshop on Huntington's Disease, Santa Monica, CA (1/94) Departments of Anatomy and of Biochemistry, Biophysics and Psychiatry, University of

Southern California, San Francisco, California (1/94)

Genetech, Division of Neurobiology, San Francisco, California (1/94)

Department of Neurology, Harvard University, Boston, Massachusetts (1/94)

Department of Neurobiology, Tufts Medical Center, Boston Massachusetts (1/94)

Department of Biology, City College of New York (2/14)

Department of Biology, Columbia University, New York, New York (3/94)

Department of Neurobiology, Medical College of Pennsylvania, Philadelphia PA, (5/94)

Invited Speaker, Third Altschul Symposium, Saskatoon, Saskatchewan, Canada

Department of Psychobiology, University of California, Irvine, California (5/94)

Hereditary Disease Foundation, Workshop on Huntington's Disease, Santa Monica, CA (6/94)

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Invited Speaker, Developmental Neurobiology, Gordon Conference, Newport, RI (7/94)

1995

Departments of Physiology and Neurobiology, University of Connecticut, Storrs, CT (4/95)
Department of Neurobiology, Guys Hospital, London, (5/95)

Invited Speaker, Genetic Control in Vertebrate Development, Kolymbari, Crete (6/95)

Invited Speaker, Pediatric Neurological Society, Baltimore, Maryland (10/95)

1996

Invited Speaker, Molecular Basis of Vertebrate Nervous System Development, CNRS, Jacques Monod Conference, La Londe-les-Maures, France (6/96)

Department of Molecular Cell Biology, Gottingen, Germany (6/96)

Ontogeny, Boston, Massachusetts (11/96)

1997

Department of Medical Cell Research, Lund, Sweden (9/97)

External Examiner of Martin Olson, student in Anders Borklund's lab., Lund, Sweden, (9/97) Chaired Session on Pattern formation, Compartments and Boundaries, 27th Annual Meeting of the Society for Neuroscience, New Orleans, Louisiana (10/97)

1998

Departments of Molecular Pharmacology and Pediatrics, Northwestern University, Chicago, Illinois (1/98)

Departments of Pharmacology and Physiology, University of Chicago, Illinois (1/98)

Department of Molecular Biology and Genetics, Southwestern University, TX (10/98)

Department of Genetics, Harvard University, External examiner for Marcus Ware Ph.D candidate (11/98)

1999

Department of Neurobiology, SUNY Stoneybrook, New York (3/99)

Biogen, Cambridge, MA (5/99)

Department of Biological Structure, University of Washington, Seattle (10/99)

2000

Organized and participated in workshop on lateral signaling in mammals. Keystone Meeting: Genetic basis of brain development and dysfunction. Taos, New Mexico (3/00)

Invited Speaker, Molecular and Cellular Neurobiology, Gordon Conference, Hong Kong, China (6/00)

Chaired Session on Neuronal/Glial determination. Gordon Conference, Newport, Rhode Island (7/00)

Invited Speaker, ISDN meeting, Heidelberg, Germany (7/00)

Department of Neurobiology, MPI, Munich, Germany (8/00)

Institute of Cell Biology, Swiss Federal Institute of Technology, ETH-Honggerberg, Zurich, Switzerland (8/00)

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Institute of Neurological Sciences, University of Pennsylvania, Philadelphia (9/00)

Carnegie Institution of Washington, Department of Embryology, Baltimore (10/00)

St. Judes, Memphis TN, Department of Neurobiology (12/00)

2001

Yale University, Department of Molecular and Cell Biology (2/01)

Johns Hopkins, Department of Neurobiology (2/01)

McGill University, Department of Neuroscience, Montreal (3/01)

NINDS, NIH, Bethesda, MD (3/01)

Invited Speaker, Northeast Regional Developmental Biology Meeting, Woodshole, MA (4/01) Invited Speaker, Inaugural Conference, MRC Developmental Neurobiology, Kings College, London (09/04/01)

Case Western University, Department of Neurobiology, (10/03/01)

Symposium Speaker, Annual Society for Neuroscience meeting, San Diego, (11/12/01)

NRI, Ottawa, Department of Neuroscience, University of Ottawa, Ottawa Canada (11/26/01)

Robert Wood Johnson Medical Center, Department of Neuroscience, Rutgers University New Jersey (11/28/01)

University of Connecticut Medical Center, Department of Neuroscience, Connecticut (12/04/01) Rockefeller University, Division of Developmental Neurobiology, New York (12/18/01)

2002

Columbia University, Brain and Behavior Institute, New York (01/17/02)

ANPP Meeting (neuro-psycho-pharmacologie), Paris, France (02,23/27/02)

"Building a Behaving Brain" Symposium, Speaker and Organizer. Toronto, Canada (03/08/02)

Department of Molecular Biology, Umea University, Umea, Sweden (04/26/02).

Cortical Development, Invited Speaker, Delphi, Greece (05/23/02).

Cold Spring Harbor, Course: Molecular Cloning of Neural Genes, Invited Speaker (07/02/02)

Children's Hospital, Cincinnati, OH,(07/17/02).

University of Chicago, Neurobiology, Chicago, Il (10/21/02)

Northwestern University, Developmental Neuroscience, Chicago, Il (12/05/02)

2003

Gubenkian Institute, Lisbon, Portugal (2/3/03)

UCLA, Department of Molecular Neuroscience, Los Angeles, LA (02/11/03)

Division of Molecular Neurobiology, MRI, Mill Hill, UK (02/23/03)

UK Glial Club. Invited Speaker, London, UK, (02/27/03)

Neuroscience, Mt. Sinai, New York, NY (03/05/03)

Sloan Swartz center for Cognitive Neuroscience, Salk Institute, San Diego, SD (04/01/03)

Joint Program for Neuroscience, UCSD, San Diego, SD (04/02/03)

Department of Neuroscience, University of Western Ontario, London, CA (04/23/03)

ASN meeting, Invited Speaker, Long Beach, CA, (05/06/03)

Developmental Genetics Program, Memorial Sloan Kettering, New York, NY (05/15/03)

Department of Neuroscience, Harvard, Boston MA (06/12/03)

Cold Spring Harbor, Course: Molecular Cloning of Neural Genes, Invited Speaker (07/14/02)

Chicago, Department of Neurobiology, Chicago, Il (10/02/03)

Wesleyan University, Department of Biology, Middletown, CT (11/20/03)

2004

Department of Neurobiology, University of Utah, Salt Lake City, UT (01/15/04)

Gubenkian Institute, Lisbon, Portugal (2/2-4/04)

University of Lund, Institute for Stem Cell Research, Lund, Sweden (04/6-7/04)

Karolinska Institute, The center for excellence, Stockholm, Sweden (04/8/04)

Yale University, Department of Neurobiology, New Haven, NY (06/08/04)

MRC Developmental Neurobiology, Kings College, London (06/11/04)

Max Planck Institute for Molecular Genetics, Berlin (06/14/04)

Jackson Laboratory, Bar Harbor, ME (07/15/04)

Symposium Speaker, Annual Society for Neuroscience meeting. NY, NY (08/18/04)

IFAA meeting, Symposium Co-Chair, Kyoto, JP (08/27/04)

3rd Conference of the Genetic Society, invited speaker, Weimar, GE (09/27/04)

Cornell University, Department of Neuroscience, NY, NY (10/15/04)

Columbia University, Department of Pathology, NY, NY, (10/25/04)

Karolinska Institute, Neurobiology, Stockholm, SE (12/03/04)

University of Texas, Austin, Department of Neurobiology, Austin, TX (12/13/04)

2005

Department of Molecular Biology and Genetics, Southwestern University, TX (01/11/05)

Department of Neurobiology, Northwestern University, Chicago, Il (01/25/05)

Montreal Neurological Institute, Montreal, Quebec, Canada (02/16/05)

MRC Developmental Neurobiology, Kings College, London (03/03/05)

CSH Imaging Meeting, Invited Speaker, CSH, NY (03/13/04)

CEDB meeting, Invited Speaker Karolinska Institute, Stockholm, Sweden (04/17/05)

Harvard Medical School, Department of Genetics, Boston, MA (03/31/05)

Cleveland Clinic, Department of Neurobiology, Cleveland, OH (04/14/05)

Cortical Development Meeting, Organizer and Speaker, Greece (05/12-15/05)

Fred Hutchinson Cancer Research Center, Division of Basic Science, Seattle, WA (06/07/05)

CSH Mouse Course, Invited Speaker, CSH, NY (06/20/0)

CSH Cell Biology of Addication Course, Invited Speaker, CSH, NY (08/09/05)

International Society of Developmental Biology, Invited Speaker, Sydney, AU (9/1-7/05)

UCSD, Department of Biology, SD, CA (9/26/05)

International Committee on Cortical Interneuron Classification, Invited Member, Petilla, SP (10/5-7/05).

The GABAergic System, Invited Speaker, CSH, NY (10/31/05-11/02/05)

Department of Cell Biology, Invited Speaker, Duke University 11-29-05

Department of Neurobiology, Invited Speaker, UNC 12-1-05

2006

Department of Neuroscience, Brandis, Boston, MA (02/01/06)

Department of Pathology, Harvard, Boston, MA (03/01/06)

Department of Neuroscience, Johns Hopkins, Baltimore, MD (03/02/06)

Janelia Farms, HHMI, Leesburg, VA (04/13/06)

Max Planck Institute, Tubingen, Germany (04/25/06)

Max Planck Institute, Dresden, Germany (04/27/06)

Department of Neuroscience, University of Lisbon (05/25/06)

Department of Neuroscience, University of Pittsburgh, (06/12/06)

Harvard Stem Cell, Symposium and Think Tank (06/19/06)

GRC Neural Development (invited speaker), Salva Regina University, Newport, RI (08/28/06)

Wenndrott transcription factors in the CNS,(invited speaker) Stockholm, SE ((09/12-17/06)

Harvard Stem Cell Think Tank (Discussant) Cambridge, MA, (09/29-10/1)

Pasteur Institute (invited lecturer) Paris France (10/05-10/06)

Beckman Symposum on Stem Cells (invited speaker) (11/02-11/03)

NYU Center for Neural Science, (invited speaker) (11/20)

CSH Meeting on Inhibition (invited speaker) (12/6-12/10)

Department of Molecular Biology and Genetics, Mt Sinai (12/14)

2007

Division of Developmental Biology, Children's Hospital, Cincinnatti, OH (1/17)

Neurobiology Research Group, Kings College, London, UK (1/19)

Novartis Symposium, invited speaker, London, UK (2/6-8)

Department of Neuroscience, Albert Einstein University (2/28)

NINDH neuroscience program, NIH, Bethesda, MD (3/5)

Janelia Farm HHMI, Mouse Tool Kit Meeting, invited speaker (3/18-21)

McKnight Brain Institute, Gainsville FL, invited speaker (3/29)

Stem Cell Institute, UCSF, San Francisco, CA, invited speaker (4/11)

Department of Neurobiology, University of Michigan, invited speaker (5/9)

Participant, Christopher Reeve Stem Cell workshop, NY, NY (5/11-12)

Department of Neuroscience, Washington University, St.Louis, MO (5/25)

Participant, Harvard Stem Cell think tank, Boston, MA (6/12-13)

Satellite IBRO cortical development meeting, invited speaker Cairns, AU (7/8-12)

IBRO symposium on neural stem cells, invited speaker Melbourne, AU (7/16)

GRC Inhibition in the nervous system, invited speaker Waterville, ME (8/22-27)

Nobel Form Meeting on Dopaminergic Neurons, Stockholm, SE 8/29 to 9-01)

Department of Neurobiology, University of Kentucky, invited speaker Louisville, Kt (9/20)

Neural Development Meeting, invited speaker, Capri, IT (10/11-17)

Department of Neurobiology, invited speaker Utrich, Holland (11/10)

Potsdam Meeting on Neural Development, Berlin, Germany (11/13-17)

IRCM institute for regenerative medicine, Montreal, Canada (12/3)

2008

Department of Neuroscience, University of Utah, Salt Lake City UT (1/15)

Picower Center, MIT, Cambridge, MA (2/6)

Allen Brain Institute, Seattle, WA (2/19)

Department of Neuroscience, Vanderbilt, Memphis, TN, (3/6)

Department of Neuroscience, Lund, SE (3/12)

Department of Neuroscience, Eugene, OR (5/8)

Alfred Fessard Lecture, Paris, France 5/21

3rd Cortical Development, Organizer and Speaker, Chania, Crete (5/22-24)

Stoneybrook, Department of Pharmocology, NY, (6/2)

Institute of Molecular Biology, Taipai, Taiwan (6/6)

Neurocure, Berlin, Germany (6/12)

Neural Development, GRC, Hong Kong, China (6/11-13)

Stowers Institute, Kansas City MO (9/15)

Case Western, Cleveland OH (10/02)

Institute of Neuroscience, Shanghai, China (11/20)

West China University, Stem cell symposium, invited speaker, Chendu, China (11/21-22).

Cold Spring Harbor Laboratories, Cold Spring, NY 12/01

2009

Yale, Department of Neurobiology, New Haven, NY (1/14)

UC Santa Cruz, Department of Biology, Santa Cruz, CA (2/20)

Plenary Speaker, American Society of Neurochemistry, Charleston, SC (02/7-9)

German Society of Neuroscience, Symposium speaker, Gottingen, Germany (03/25-28)

Simons Research Meeting, SFARI scholar, New Orleans, LO (3/31-4/2)

L'ecole Normale, Biology Department, Paris, Fr (4/11)

University of Laussane, Neurobiology, Laursanne, Switzerland (04-14)

GRC synaptic Plasticity, Invited Speaker, Newport, RI (05/7-12)

Gensat Meeting, The Rockefeller University, New York, NY (05/15)

Cortical Interneuron and disease, Mallorca, Spain (06/21-26)

CSH Neurobiology Course, Alumni Plenary Lecture, CSH, NY (07/10)

Cortical Development conference, Invited Speaker, Awaji Island, Japan (10/06-11)

SFN satellite cortical interneuron symposium, Annual Meeting, Chicago, Il (10-16)

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UTSW, Department of Neuroscience, Dallas, Tx (10/28)

Cell Signalling Meeting, Invited Speaker, Tuscany, Italy (11/8-12) Scripps, UCSD, Invited Speaker, San Diego, CA (12/1)

2010

Site visit to Kings College London, Neurobiology Program, London UK (1/24-25)

Plenary Speaker, The Miami Project, Miami, FL (2/3)

Caltech, Department of Neurobiology, Pasadena, CA (2/18)

University of Montreal, Department of Neurobiology, Montreal, Canada (3/25)

Winter Brain Conference, Invited Speaker, Solden, Austria (4/5-8)

Penn University, Department of Neurobiology, Philadelphia, PA (4/21)

ISDN meeting, Symposium Speaker, Lisbon Portugal (6/7-9)

FENS meeting, Symposium Speaker, Amsterdam, Holland, (6/29-7/3)

Sante Fe Retreat, Santa Fe, New Mexico (8/7-14)

GRC Conference in Neural Development, Salva Regina, RI (8/14-20)

SFARI Meeting, Washington, DC (8/12-14)

NYU Skirball Institute Retreat, Cranwell Resort, Lenox, MA (10/18-21)

KITP Meeting, University of California, Santa Barbara (11/2-4)

2011

Plasticity Workshop- National Institutes of Health (1/13-14)

A visit to the University of Basel, Switzerland, Labortory of Sylvia Arber (2/8-11)

MIT McGovern Symposium, Boston (5/9-10)

The 4th Cortical Development Meeting in Crete, Greece (5/19-21)

Gordon Research Conference, Inhibition in the CNS, Colby College (7/24-29)

SFARI Meeting in Washington, DC (9/18-20)

Grand Rounds at Albert Einstein College of Medicine (9/22)

ISN Workshop in Athens, Greece (8/27-30)

NYU Skirball Institute Retreat, Cranwell Resort, Lenox, MA (10/18-20)

Developmental Disturbances in the Nervous System- Charité - Universitätsmedizin Berlin

A visit to the University of Minnesota, Laboratory of Yoshiki Yanagawa (12/2)

Teaching in Bangalore and Mumbia Meeting in India (12/21-1/14)

2012

NYU Abu Dhabi University and College for conference (2/13-17)

Seth Grant Lecture Blitz, Japan, Laboratory of Tomomi shimogori (2/19-26)

A visit to University of Texas San Antonio, Texas, Laboratory of Gary Gaufo (4/5-6)

National Institutes of Health-Brown University Joint Retreat, Providence, RI (4/15-17)

NYU Neuroscience Retreat, Mohonk Mountain, New Paltz, NY (4/19-21)

Bibliography

Original reports

van der Kooy D, <u>Fishell G</u>. Neuronal birthdate underlies the development of striatal compartments. *Brain Res* 1987; 401: 155-161.

<u>Fishell G</u>, van der Kooy D. Pattern formation in the striatum: developmental changes in the distribution of striatonigral neurons. *J Neurosci* 1987; 7: 1969-1978.

- Takada M, <u>Fishell G</u>, Li ZK, van der Kooy D, Hattori T. The development of laterality in the forebrain projections of midline thalamic cell groups in the rat. *Brain Res* 1987; 432: 275-282.
- <u>Fishell G</u>, van der Kooy D. Pattern formation in the striatum: developmental changes in the distribution of striatonigral projections. *Dev Brain Res* 1989; 45: 239-255.
- <u>Fishell G</u>, Rossant J, van der Kooy D. Neuronal lineages in chimeric mouse forebrain are segregated between compartments and in the rostrocaudal and radial planes. *Dev Biol* 1990; 141: 70-83.
- <u>Fishell G</u>, van der Kooy D. Pattern formation in the striatum: neurons with early projections to the substantia nigra survive the cell death period. *J Comp Neurol* 1991; 312: 33-42.
- <u>Fishell G</u>, Hatten ME. Astrotactin provides a receptor system for CNS neuronal migration. *Development* 1991; 113: 755-765.
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- <u>Fishell G</u>, Mason CA, Hatten ME. Dispersion of neural progenitors within the germinal zones of the forebrain *Nature* 1993; 362: 636-638.
- <u>Fishell G</u>, Blazeski R, Godement P, Rivas R, Wang LC, Mason CA. Optical microscopy. Tracking fluorescently labeled neurons in developing brain. *FASEB J* 1995; 9: 324-334.
- <u>Fishell G.</u> Striatal precursors adopt cortical identities in response to local cues. *Development* 1995; 121: 803-812.
- Krushel LA, <u>Fishell G</u>, van der Kooy D. Pattern formation in the mammalian forebrain: striatal patch and matrix neurons intermix prior to compartment formation. *Eur J Neurosci* 1995; 7: 1210-1219.
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- Lim DA, <u>Fishell G</u>, Alvarez-Buylla A. Postnatal mouse subventricular zone neuronal precursors can migrate and differentiate within multiple levels of the developing neuraxis. *Proc Natl Acad Sci USA* 1997; 94: 14832-14836.
- Nothias F, Fishell G, Ruiz i Altaba A. Cooperation of intrinsic and extrinsic signals in the

- elaboration of regional identity in the posterior cerebral cortex. Curr Biol 1998; 8: 459-462.
- Na E, McCarthy M, Neyt C, Lai E, <u>Fishell G.</u> Telencephalic progenitors maintain anteroposterior identities cell autonomously. *Curr Biol* 1998; 8: 987-990.
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- Gaiano N, Nye J, <u>Fishell G.</u> Radial glia are specified through Notch Signaling. *Neuron* 2000; 26: 395-404.
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- Lee JD, Kraus P, Gaiano N, Nery S, Kohtz J, <u>Fishell G</u>, Loomis CA, Treisman JE. An acylatable residue of Hedgehog is differentially required in Drosophila and mouse limb development. *Dev Biol* 2001; 233: 122-136.
- Kohtz JD, Lee H-Y, Gaiano N, Segal J, Ng E, Larson T, Baker D, Garber EA, Williams KP, <u>Fishell G.</u> N-terminal fatty acylation of Sonic Hedgehog enhances the induction of rodent ventral forebrain neurons. *Development* 2001; 128: 2351-2363.
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- Nery S, <u>Fishell G.</u> Corbin J. The caudal ganglionic eminence is a novel source of distinct cortical and subcortical cell populations. *Nat. Neurosci.* 2002, 12, 1279-1287.
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