

CURRICULUM VITAE

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Education

1995 Ph.D. Experimental Oncology, University of Chieti, Italy
1991 Residency Pharmacology and Toxicology, University of Naples, Italy
1987 M.D. "Federico II" University of Naples, Italy

Postgraduate training:

1988-1989 Postdoctoral Fellow
Institute of Pharmacology University of Naples, Italy
1988 Visiting Scientist, Laboratory of Cellular and Molecular Neurophysiology
National Institutes of Health, NICHD, Bethesda, MD
(August-October)
1989 Visiting Scientist, Laboratory of Cellular and Molecular Neurophysiology
National Institutes of Health, NICHD, Bethesda, MD
(August-October)
1990 Visiting Scientist, Laboratory of Cellular and Molecular Neurophysiology
National Institutes of Health, NICHD, Bethesda, MD
(August-October)
1990-1994 Research Associate
Department of Neuroscience, University of Naples, Italy
1991 Visiting Scientist, Laboratory of Cellular and Molecular Neurophysiology
National Institutes of Health, NICHD, Bethesda, MD
(August-October)

Employment History

1994 Instructor, Department of Neurobiology, Pharmacology and Physiology
The University of Chicago
1997 Research Assistant Professor, Department of Neurobiology, Pharmacology and
Physiology, The University of Chicago
2000 Research Assistant Professor, Department of Pharmacology and Physiology
Drexel University College of Medicine
2003-2006 Assistant Professor, Department of Pharmacology and Physiology
Drexel University College of Medicine
2006-present Associate Professor, Department of Pharmacology and Physiology
Drexel University College of Medicine
2007-present Associate Professor, Department of Pathology and Laboratory Medicine
Drexel University College of Medicine (Secondary Appointment)

Certification and Licensure

1987 Italian Board of Certification to Medical Profession

Honors and awards

Italian Association for Research (CNR), Postdoctoral Fellowship (1990)
Research Fellowship, Italian Society of Pharmacology, (1994)
Fellowship for recent PhD graduates, The University of Naples, Italy (1996)
Award “Biagio Lo Scalzo” for Distinguished Pharmacological Research
Italian Society of Pharmacology, (1999)
Young Scientist Award, Drexel University College of Medicine (2006)

Memberships and offices in professional societies

1989-now Society for Neuroscience
1987-now Italian Society for Pharmacology
2004-now American Association for Cancer Research
2004-now Metastasis Research Society

Professional Committees and administrative service**Institutional Committees**

2002-now MD/PhD Student Admission Interviewer.
2006-2007 Co-Director of the Pharmacology/Physiology Graduate Program.
2006-2007 Graduate Students Steering Committee (Pharmacology and Physiology)
2007-now Graduate Program Core Curriculum Sub-committee
2007-now DUCOM Research Committee of the Faculty (voting member)
2007-now DUCOM IT Sub-Committee

Reviewer of grants for extramural funding sources

2005 US Army Research and Material Command (USAMRMC)
Peer-Reviewed Medical Research Program (PRMRP)
Investigator Initiated Grants
2006 National Cancer Institute, NIH
Special Emphasis Panel – ZCA1 SRRB-3 (01)
RFA CA-06-014 “Tumor Microenvironment Network”
2007 US Army Research and Material Command (USAMRMC)
DOD - Breast Cancer Research program – SIA3
Synergistic Idea Award Panel
2007 US Army Research and Material Command (USAMRMC)
DOD - Breast Cancer Research program – CBY3
Idea Award Panel
2008 US Army Research and Material Command (USAMRMC)
DOD - Breast Cancer Research program – CBY3
Concept Award Panel
2008 National Institute of General Medical Sciences Cancer Institute, NIH
Special Emphasis Panel – ZGM1 MBRS-X (CB)
Minority Biomedical Research Support in Genetics
2008 US Army Research and Material Command (USAMRMC)
DOD - Breast Cancer Research program – CBY3, TRN-1
Predoctoral Training Award Panel

Reviewer of manuscript for journal publications

Cancer Research
 Clinical Cancer Research
 Oncogene
 British Journal of Cancer
 Laboratory Investigation
 International Journal of Cancer
 Journal of Biological Chemistry
 Journal of Neurochemistry

Membership on Editorial Boards

International Journal of Oncology

Educational Activities

1993 Lecturer, Medical Pharmacology, 2nd year medical students, University of Naples, Italy.

2004-now **Endocrine Physiology**, IFM medical program

2006-now **Endocrine Physiology** PIL medical program

2005-now **Advanced Cell Biology**, graduate students.

2001-now **Graduate Physiology**
 (Physiology 503) Endocrine Physiology

2006-now **Graduate Pharmacology**
 (Pharmacology 512) Cancer Chemotherapeutic Agents.

Graduate Students, Postdoctoral Fellows and Postgraduate Medical Trainees**1. Graduate Students**

Nathan Dolloff, PhD student,	Graduated 2007
Whitney Jamieson, PhD student,	expected graduation 2010
Julia D'Ambrosio (Fox) PhD student,	expected graduation 2010
Michael Russell, PhD student	expected graduation 2010

2. Postdoctoral fellows and Postgraduate Medical Trainees

Silvia Stan, 2004-2006

3. Thesis Committees

1. Jeegar Patel, PhD student,	graduated 2006
2. Elaine Smolock, PhD student (Chair)	graduated 2007
3. Jason Williams, PhD student (Chair)	graduated 2007
4. Catherine Choi, MD, PhD student	graduated 2007
5. Rajarshi Sengupta, PhD student	graduated 2009
6. Emmanuelle Schindler, MD, PhD student	
7. Lizalynn Dias, PhD student	

8. Lisa Jones, PhD student
9. Shaun Goodyear, PhD student
10. Kenishia Turner, PhD student
11. Jaclyn Nicolai, PhD student (Chair)
12. Michael Amatangelo, PhD student

Bibliography

Published Papers

1. Di Renzo G.F., M. Tagliatela, S. Amoroso, L.M.T. Canzoniero, V. Basile, A. Fatatis and L. Annunziato. Pharmacological characterization of serotonin receptors involved in the control of prolactin secretion. **European Journal of Pharmacology** 162, 371-373, (1989)
2. Tagliatela M., L.M.T. Canzoniero, S. Amoroso, A. Fatatis, G.F. Di Renzo and L. Annunziato. Cobalt-sensitive and dihydropyridine-insensitive stimulation of dopamine release from tuberoinfundibular neurons by high extracellular concentration of barium ions. **Brain Research** 488, 114-120, (1989)
3. Di Renzo GF, Tagliatela M., Canzoniero L., and Fatatis A. Lack of evidence for an involvement of adenosine receptors in the control of TSH secretion in the rat. **Neuroendocrinology Letters** 12, 113-119 (1990)
4. Di Renzo GF., Galbiati E., Tagliatela M., Fatatis A., Canzoniero L. and Annunziato L. A pharmacological study on the possible mechanisms underlying changes in TSH secretion in aged male rats. **Neuroendocrinology Letters** 13, 377-385 (1990)
5. Tagliatela M., L. Canzoniero, G. Di Renzo, A. Fatatis, T. Yasumoto and L. Annunziato. Effect of maitotoxin on cytosolic Ca^{2+} levels and membrane potential in purified rat brain synaptosomes. **Biochimica Biophysica Acta**, 1026: 126-132, (1990)
6. Fatatis A., L. Holtzclaw and J.T. Russell. Secretion from rat neurohypophysial terminals (neurosecretosomes) rapidly inactivates despite continued elevation of intracellular Ca^{2+} . **Brain Research** 574: 33-41, (1992)
7. Fatatis A., Bassi A., Mita G., Di Renzo GF. And Annunziato L. LAN-1 human neuroblastoma cells are provided of endothelin-1 receptors linked to $[Ca^{2+}]_i$ elevation. **Functional Neurology** 3, 239-242 (1992)
8. Fatatis A. and J.T. Russell. Spontaneous changes in intracellular calcium concentration in Type-1 astrocytes from rat cerebral cortex in primary culture. **GLIA** 5: 95-104, (1992)
9. Fatatis A., A. Bassi, M. Monsurro', G. Sorrentino, G. Mita, G.F. Di Renzo and Annunziato. LAN 1: A human neuroblastoma cell line with M_1 and M_3 muscarinic receptor subtypes coupled to intracellular Ca^{2+} elevation and lacking of Ca^{2+} channels activated by membrane depolarization. **Journal of Neurochemistry** 59: 1-9, (1992)

10. Savarese D. M. F., J.T. Russell, A. Fatatis and L.A. Liotta. Type IV collagen stimulates PTX-insensitive increase in intracellular calcium: potential role in tumor cell motility. **Journal of Biological Chemistry** 267: 21928-21935, (1992)
11. Russo T., A.R. Mogavero, R. Ammendola, M. Mesuraca, F. Fiore, A. Fatatis, G. Salvatore and F. Cimino. Immortalization of a cell line showing some characteristics of the oligodendrocyte phenotype. **Neuroscience Letters** 159: 159-162, (1993)
12. Fatatis A., L.A. Holtzclaw, R. Avidor, D.E. Brenneman and J.T. Russell. Vasoactive intestinal peptide increases intracellular calcium in astroglia: synergism with α -adrenergic receptors. **Proceedings of the National Academy of Sciences, USA** 91:2036-2040, (1994)
13. Fatatis A., Caporaso R., Iannotti E., Bassi A., Di Renzo G.F. and L. Annunziato. Relationship between time of activation of phospholipase-C linked plasma membrane receptors and reloading of intracellular Ca^{2+} stores in LAN-1 human neuroblastoma cells. **Journal of Biological Chemistry** 269: 18021-18027, (1994)
14. Fatatis A., A. Bassi, E. Iannotti, N. Caso, G.D. Mita, G.F. Di Renzo and L. Annunziato. Appearance of depolarization and maitotoxin induced $[Ca^{2+}]_i$ elevation in single LAN-1 human neuroblastoma cells upon exposure to retinoic acid. **Journal of Neurochemistry** 63, 1900-1907, (1994)
15. Di Renzo G., Amoroso S., Bassi A., Fatatis A., Cataldi M., Colao A., Lombardi G. and L. Annunziato Role of the Na^+-Ca^{2+} and Na^+-H^+ antiporters in prolactin release from anterior pituitary cells in primary culture. **European Journal of Pharmacology** 294, 11-15, (1995)
16. Fatatis A. and R.J. Miller. Sphingosine and sphingosine-1-phosphate differentially modulate PDGF-BB induced Ca^{2+} signaling in transformed oligodendrocytes. **Journal of Biological Chemistry** 271, 295-301, (1996)
17. Meucci O., Fatatis A., Holzwarth J. and R.J. Miller. Developmental regulation of the toxin sensitivity of Ca^{2+} permeable AMPA receptors in cortical glia. **Journal of Neuroscience** 16, 519-530, (1996)
18. Fatatis, A. and R.J. Miller. PDGF-induced Ca^{2+} signaling in the CG4 oligodendroglial cell line and in transformed oligodendrocytes expressing the α -PDGF receptor. **Journal of Biological Chemistry** 272, 4351-4358, (1997)
19. Moss, J., Yuan, C.S., Fatatis, A. and Attele, A. Effects of histamine on intracellular calcium transients recorded with fura-2 in renal pacemaker cells in guinea pig. **Inflammation Research** 46, S95-S96, (1997)
20. Meucci, O., Fatatis, A., Simen, A.A., Bushell, T.J., Gray, P.E. and R.J., Miller. Chemokines regulate hippocampal neuronal signaling and gp120 neurotoxicity. **Proceedings of National Academy of Sciences, USA** 95, 14500-14505, (1998)
21. Fatatis, A. and R.J. Miller. Cell cycle control of PDGF-induced Ca^{2+} signaling through modulation of sphingolipid metabolism. **FASEB Journal**, 13, 1291-1301, (1999)

22. Meucci, O., Fatatis, A, Simen A.A. and R.J. Miller. Expression of CX3CR1 chemokine receptors on neurons and their role in neuronal survival. **Proceedings of the National Academy Sciences, USA**, 97: 8075-8080, (2000)
23. Khan, M.Z., Brandimarti, R., Musser B.J., Resue, D.M., Fatatis, A. and O. Meucci. The chemokine receptor CXCR4 regulates cell cycle proteins in neurons. **J. Neurovirology**, 3: 300-314, (2003)
24. Brandimarti R., Khan M.Z., Fatatis A., Meucci O. Regulation of cell cycle proteins by chemokine receptors: A novel pathway in human immunodeficiency virus neuropathogenesis? **J. Neurovirology** 10 (suppl, 1) 1-5, (2004)
25. Shulby, SA, Dolloff, NG, Stearns, ME, Meucci O. and Fatatis A. CX3CR1-fractalkine expression regulates cellular mechanisms involved in adhesion, migration and survival of human prostate cancer cells. **Cancer Research** 64: 4693-4698 (2004).
26. Khan, M.Z., Brandimarti, R, patel, J.P., Huynh, N., Wang, J., Huang, Z., Fatatis, A. and O. Meucci. Apoptotic and antiapoptotic effects of CXCR4: Is it a matter of intrinsic efficacy? Implications for HIV neuropathogenesis. **Aids Res. Human Retrov.** 20: 1063-1071 (2004).
27. Khan M.Z, Shimizu S., Patel J., Nelson A., Le M-T., Mullen-Przeworski A., Brandimarti R., Fatatis A., and Meucci O. "Regulation of neuronal p53 activity by CXCR4". **Molecular and Cellular Neurosciences** 30, 58-66 (2005).
28. Dolloff N.G, Shulby S.S., Nelson A.V, Stearns M.E., Johannes G.J, Thomas J.D., Meucci O. and Fatatis A. "Bone-metastatic potential of human prostate cancer cells correlates with Akt/PKB activation by alpha Platelet Derived Growth Factor Receptor", **Oncogene** 24, 6848-6854, (2005).
29. Dolloff N.G. and Fatatis A. Bone stromal cells activate the Akt pathway in bone metastatic prostate cancer cells through transactivation of the alpha-receptor for Platelet Derived Growth Factor. **Clinical Cancer Research** 11, 9848s-9049s, (2005). Meeting Abstract.
30. Dolloff N.G., Russell M.R., Loizos N. and Fatatis A. Human bone marrow activates the Akt pathway in metastatic prostate cells through transactivation of the alpha Platelet-derived Growth factor receptor. **Cancer Research** 67 555-562. (2007).
* Faculty of 1000 – Biology – "Recommended paper".
31. Jamieson W.L., Shimizu S., D'Ambrosio J.A., Meucci, O. and Fatatis A. The CX3CR1 receptor is expressed by the prostate gland as its chemokine ligand fractalkine is detected in bone marrow and cleaved by an androgen-dependent mechanism: potential role in skeletal metastasis from prostate adenocarcinoma. **Cancer Research** 68, 1715-1722 (2008).
32. Russell MR, Jamieson WL, Dolloff NG and Fatatis A. Antibody-mediated blockade of alpha PDGF receptor inhibits early prostate skeletal metastases. **Oncogene** 28, 412-412 (2009)
33. D'Ambrosio J and Fatatis A. Osteoblasts modulate Ca²⁺ signaling responses in bone-metastatic prostate and breast cancer cells. **In Preparation**

Books and chapters in books

- Fatatis, A. and Douglas E. Brenneman: Characterization of the Na^+ - Ca^{2+} exchange in astrocytes. In *Differentiation and Function of Glial Cells*. Editor Alan R. Liss, Inc. (1990).
- Di Renzo, G.F., Bassi, A., Fatatis, A., Amoroso, S., Colao, A., Caso, N., Caporaso, R., Lombardi, G., Nappi, C. e Annunziato, L: Role of the Na^+ - Ca^{2+} exchanger in the control of prolactin release from anterior pituitary cells in primary culture. In *Neuroendocrinology of female reproductive function*. Edited by U. Montemagno, C. Nappi, F. Petraglia and A.R.Genazzani - The Parthenon Publishing Group, NY, USA. (1992)
- Annunziato, L., Tagliatalata, M., Canzoniero, L.M.T., Fatatis, A. and Di Renzo G.F.: The Na^+ - Ca^{2+} exchanger in central nerve endings: the relationship between its pharmacological blockade and dopamine release from tuberoinfundibular hypothalamic neurons. In *Neurochemistry International*. Edited by Pergamon Press. (1992)
- Annunziato L., Fatatis A., Tagliatalata M., Canzoniero L.M.T., Bassi A. and Di Renzo G. Maitotoxin, a reliable tool to study calcium homeostasis in neuronal cells. In *Aspects of synaptic transmission 2: Acetylcholine, Sigma Receptors, CCK and Eicosanoids, Neurotoxins*. Editor T.W. Stone, Taylor & Francis, (1993)
- Fatatis A., Bassi A., Iannotti E., Di Renzo GF. And Annunziato L. Differential response of IP_3 -sensitive intracellular Ca^{2+} stores to multiple polyphosphoinositide hydrolysis-coupled receptors in single human neuroblastoma cells. *British J. Pharmacol.* 111, 41 (1994)
- Fatatis A. " Bone tropism and Cancer". In **Encyclopedia of Cancer**, 2nd Edition. (Springer), 2008.

Abstracts

- 12th Biennial Meeting of the International Society for Neurochemistry (1989) "Differentiation and function of glial cells": Characterization of the Na^+ - Ca^{2+} exchange in astrocytes. Rome, Italy.
- 19th Annual Meeting of the American Society for Neuroscience (1989) Selective activation of Ca^{2+} entrance through voltage-operated channels or through the Na^+ - Ca^{2+} antiporter in rat brain synaptosomes: methodological and pharmacological indications. Phoenix, Arizona.
- 19th Annual Meeting of the American Society for Neuroscience (1989) Cytosolic Ca^{2+} levels and membrane potential monitoring in brain synaptosomes: effect of marine toxins with agonistic and antagonistic properties on Ca^{2+} channels. Phoenix, Arizona.
- 10th International Biophysics Congress (1990) Spontaneous oscillations of intracellular calcium concentration in rat astrocytes. Vancouver, Canada.
- 20th Annual Meeting of the Society for Neuroscience (1990) Vasoactive Intestinal Polipeptide (VIP) causes intracellular calcium oscillation in astrocytes. St. Louis, Missouri.
- 5th International symposium on VIP and Related Peptides (1991) VIP acts synergistically with an adrenergic receptors to increase intracellular calcium concentration in astroglia. Shizuoka, Japan.
- 21th Annual Meeting of the Society for Neuroscience (1991) Characterization of intracellular calcium increase induced by M_1 and M_3 receptor subtypes stimulation in LAN-1 human neuroblastoma cells. New Orleans, Louisiana.
- 22nd Annual Meeting of Society for Neuroscience (1992) LAN-1 human neuroblastoma cells become responsive to membrane depolarization and maitotoxin induced $[\text{Ca}^{2+}]_i$ increase after retinoic acid induced differentiation.. Anaheim, California.

- 23rd Annual Meeting of Society for Neuroscience (1993) CEINGE clone 3, a new immortalized brain cell line possess bradykinin, endothelin-1, ATP and PDGF receptors coupled to intracellular Ca²⁺ elevation Washington, D.C.
- 25th Annual Meeting of Society for Neuroscience (1995) PDGF-BB induced Ca²⁺ responses in cells of the oligodendrocytes lineage are modulated by sphingolipids. San Diego, California
- 26th Annual Meeting of Society for Neuroscience (1996) Ca²⁺ signaling induced by PDGF-BB in normal and transformed oligodendrocytes: correlation with the cell cycle. Washington D.C.
- 29th Annual Meeting of Society for Neuroscience (1999). Effect of chemokines and the HIV-1 protein gp120 on NFkB activation in hippocampal neurons. Miami Beach, Florida.
- AACR International Conference on Molecular Targets and Cancer Therapeutics (2005). Bone stromal cells activate the Akt pathway in bone metastatic prostate cancer cells through transactivation of the alpha-receptor for Platelet Derived Growth Factor. Philadelphia, PA
- 97th Annual Meeting of the American Association for Cancer Research (2006). Bone stromal cells activate the Akt pathway in bone metastatic prostate cancer cells through transactivation of the alpha-receptor for Platelet Derived Growth Factor. Washington, D.C.
- 4th International Conference on Tumor Microenvironment: progression, therapy and prevention (2007). Osteoblasts modulate calcium signaling in bone-metastatic prostate cells: an in vitro and in vivo study. Florence (Italy).

Alessandro Fatatis

Comment:

Invited speaker

- ImClone Biosystems (2008). PDGFR α in skeletal metastases and effects of the IMC-3G3 antibody in pre-clinical models.
- Lankenau Institute for Medical Research (2008). Alpha receptor for Platelet-Derived Growth Factor and bone-metastatic potential of prostate cancer cells.

Presentations

- 12th Annual Meeting of the European Neuroscience Association (1989) Discrimination of ⁴⁵Ca²⁺ uptake through voltage-operate channels and/or the Na⁺-Ca²⁺ antiporter in brain synaptosomes. Turin, Italy.
- 22nd Annual Meeting of Society for Neuroscience (1992) Different sensitivity of IP₃-dependent intracellular Ca²⁺ stores by multiple phosphoinositide linked receptors in human neuroblastoma cells. Anaheim, CA.
- 96th Annual Meeting of the American Association for Cancer Research (2005) The expression of Platelet Derived Growth Factor alpha correlates with the bone-metastatic potential of human prostate cancer cells. Anaheim, CA.
- 97th Annual Meeting of the American Association for Cancer Research (2006). Role of the chemokine fractalkine (CX3CL1) and its receptor CX3CR1 in skeletal metastasis from cancer. Washington, D.C.
- 99th Annual Meeting of the American Association for Cancer Research (2008). Osteoblasts modulate calcium signaling in bone-metastatic prostate and breast cells. An *in vitro* and *ex-vivo* study. San Diego, CA.

