

Catherine Magill, Ph.D.

Curriculum vitae

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EDUCATION:

Post-Doctoral Training

1990 - 1993

Harvard University

Department of Biochemistry and Molecular Biology

Cambridge, Massachusetts

Life Sciences Research Foundation Postdoctoral Fellowship - Supported by The Burroughs Wellcome Fund

Advisor: Douglas A. Melton, Ph.D.

Professor of Molecular Embryology

- The role of activin and the activin receptor during mesoderm and neural induction in *Xenopus laevis* development.
- Identification of novel mesoderm and neural inducers in *Xenopus laevis* development.

Doctoral Training

1984 - 1990

Stanford University School of Medicine

Department of Neurobiology

Stanford, California

Ph.D. in Neuroscience

Advisor: Uel J. McMahan, Ph.D.

Professor of Neurobiology, Stanford University School of Medicine

Co-Advisor: Richard H. Scheller, Ph.D.

Professor of Biology, Stanford University

- Identification and characterization of agrin, a post-synaptic organizing molecule, in motor neurons of *Torpedo californica*, frog, chicken and rat.

Doctoral Training - Rotation, Fall 1984

Mentor: Dr. Peter B. Sargent, Dept. of Cell Biology, Stanford University School of Medicine

- Electron microscopic study (serial section reconstruction) of synaptic boutons in the cardiac ganglion of *Xenopus laevis* during development.

Pre-Doctoral Education

1981 - 1983

University of California - Berkeley

Berkeley, California

Arts Bachelor in Neurobiology

Undergraduate Research Assistant, 1981 - 1984.

Mentor: Dr. Gunther S. Stent, Dept. of Molecular Biology, U.C. Berkeley

- Enzyme localization during the development of the central nervous system of the leech.

PROFESSIONAL POSITIONS:

Freelance scientific consultant and medical writer/editor, April 2005 to present

- Consultant for small biotech company to support pharmacology and preclinical sciences activities to determine the efficacy of several lead molecules in inflammatory disease models.
- Wrote conference reports on Parkinson's Disease, Stem Cell Technology and Lung Cancer treatments
- Wrote and edited project reports, scientific manuscripts and grant applications
- Wrote material for a Medical Content Provider's projects: including validating prescription drug dosing guidelines for a computer software system, writing scripts for informed consent videos, culling medical news highlights from medical news sources.
- Wrote content and developed animation for PowerPoint slide presentations to be used as educational and training materials for pharmaceutical company executives and sales professionals, and physicians, in the area of oncology – included modules focused on traditional cytotoxic agents as well as cellular signaling through EGFR, VEGF, mTOR and broad spectrum kinase inhibitors currently approved for in use (or being evaluated for use) in the treatment of lung, breast and colorectal cancers.
- Director of the 2012 Pacific Coast Conference, AMWA Regional Conference. May 6-9, 2012, at Asilomar Conference Center, Pacific Grove, CA. Selected and invited speakers and workshop leaders; planned and hosted the event.
- Subject area expert for the redesign of a bioresearch supply company's external website
- President of the Northern California chapter of the American Medical Writer's Association (AMWA) – 10/07 – 10/08, 5/09 – 4/11
- Programs Chair of the Northern California chapter of AMWA (6/07-present)
- Workshop Coordinator (AMWA National Executive Committee), AMWA Annual Conference in Milwaukee, WI, 2010

Celera, Axys and Arris Pharmaceutical Corp., January 1996 to January 14, 2005. Axys was formed upon the merger of Arris Pharmaceutical Corp. with Sequana Therapeutics, January 1998. Celera acquired Axys November 16, 2001.

Director, Cell Biology (November 2003 – January 2005)

Director, Molecular and Cellular Pharmacology (Sept. 2001 – November 2003)

Director, Pharmacology and Cell Biology (January 1999 – September 2001)

Group Leader, Pharmacology (August 1998 - January 1999)

Group Leader, Cell Biology (March 1998 - August 1998)

Senior Scientist (September 1997 - March 1998)

Scientist (January 1996 - September 1997)

- Led cell-based target validation group, which used RNAi, antisense, antibodies and small molecules to functionally "validate" molecular targets for a small-molecule medicinal chemistry approach, in the areas of oncology, autoimmunity and inflammation, through academic collaborations and in-house efforts.
- Coordinated cell biological and *in vivo* studies to support the establishment of new projects on molecular targets associated with cancer progression and inflammatory processes.
- Identified and prioritized CROs and academic labs that ran animal models of interest and oversaw the evaluation of compounds in those models.
- Developed relationships with academic thought-leaders for multiple projects and therapeutic areas. Worked with these researchers to narrow the focus of our projects, identify other academic researchers who might help and to have them evaluate our compounds in their cell-based and animal models.
- Coordinated the establishment of a variety of animal models in-house, used for both biomarker and efficacy studies:
- Oversaw the evaluation of proprietary compounds in animal models of oncology and inflammation to support project teams.
- Led efforts to develop biomarkers associated with drug targets to confirm pathway modulation as a part of the validation process, and for further use in preclinical compound evaluation and development.

- Project team leader of Urokinase inhibitor project, coordinated biological studies of angiogenesis and cancer growth and metastasis. Led up to 30 persons on the project team. Led the evaluation of a variety of non-oncology indications as therapeutic targets for urokinase inhibitors.
- Project team leader of Cathepsin S project, coordinated biological studies of cysteine proteases in inflammation and autoimmunity. Led up to 25 persons on the project team. Scientific lead in the establishment of a corporate partnership for this project with Rhone-Poulenc Rorer (now Aventis). Established and maintained long-term collaborative relationships with members of the academic community, whose research supported the biological rationale for this and related targets in a variety of inflammatory and autoimmune diseases.
- Led project team in development of psoriasis as a proprietary indication for Celera's Cathepsin S inhibitors. Developed relationships with CROs and academic labs to evaluate the role of cathepsin S in psoriasis. Led biological team to develop a bioassay to evaluate the level of cathepsin S inhibition in human PBMCs for use in preclinical and clinical studies.
- Established a cell biology and pharmacology laboratory to support cancer and inflammatory disease programs at Axys. Supervised up to 22 research personnel: 10 Ph.D.s and 12 Research Associates. Purchased equipment and managed budget necessary to support research functions – including establishing and maintaining fluorescence microscopy, flow cytometry and High Content image analysis capabilities.

Khepri Pharmaceuticals, Inc., October 1993 to December 1995. Arris acquired Khepri in December 1995.

Preclinical Department Head (June 1995 – December 1995)

Scientist (October 1993 – June 1995)

- Established and maintained contract studies with outside research organizations (academic and CROs) for the evaluation of potential protein and small molecule chemical therapeutics in animal models of arthritis, osteoporosis and cancer metastasis and growth.
- Supervisory responsibilities for 2 Ph.D.s and 2 Research Associates.
- Scientific responsibilities: development of cell-based *in vitro* assays for measuring cytokine levels, cellular proliferation, cellular migration, cell cycle, apoptosis, tissue destruction, cancer growth and metastasis.

Teaching Experience

Teaching Assistant in Neuroanatomy (medical and graduate students), Stanford University School of Medicine: Winter Quarters, 1986 - 1990

Developed and taught a 3 hr workshop entitled "Introduction to Cancer Biology" at the AMWA annual conference: 2008-2012

Awards and Fellowships

Graduation with Highest Honors and High Distinction in General Scholarship, College of Letters and Sciences, U.C. Berkeley, 1983

National Science Foundation Graduate Fellowship: 1984 - 1987

Katherine D. McCormick Fund Grants: 1986, 1987

AAUW Educational Foundation American Fellowship (Dissertation): 1988

Life Sciences Research Foundation Fellowship: 1990 - 1993

Science Scholar, The Mary Ingraham Bunting Institute of Radcliffe College: 1993 (declined)

Additional Training

AMWA Core Curriculum Program certificates:

Editing/Writing – 4/18/07

Freelance – 10/25/08

Advanced – 10/22/11

Volunteer Activities

Committee Chair for Troop 57, Palo Alto Boy Scout Troop – 119 scouts. Manage adult volunteers, run meetings, oversee scout program, approve trips. June 2009 – present

Associate Advisor and Committee Chair for Venture Crew 57, Palo Alto Venture Scout Troop – 12 scouts (coed, high school). Plan and led activities, administrative connection with BSA. Sept. 2009 – present

PTSA Vice-President for Communications, Palo Alto High School. Aug 2010 – June 2011

Professional Affiliations

American Association for the Advancement of Science
American Association for Cancer Research
American Medical Writer's Association
American Society for Cell Biology
Association for Women in Science
Bay Area Biomedical Consultant's Network
Inflammation Research Association
International Society for Stem Cell Research
Northern California Science Writers Association
Women in Cancer Research

PUBLICATIONS

Articles written as a freelance scientific medical writer:

Magill, Catherine. Summary of "Empowering PowerPoint's Potential"; AMWA Regional Conference, Asilomar, April 2005. The Pacemaker (Journal of AMWA) Sept. 2005, pp 3-4.

http://www.amwancal.org/pacemaker/archive/PDF/Pacemaker_2005_September.pdf.

Magill, Catherine. A framework for development. The Scientist. Feb 8, 2006.

<http://www.the-scientist.com/blog/display/23100/>.

Magill, Catherine. Stumping for stem cells. The Scientist. June 13, 2006.

<http://www.the-scientist.com/blog/display/23641/>

Magill, Catherine. Plenary session coverage – The Stem Cell: Science, Ethics and Politics. The Northern California AMWA Chapter Conference, Berkeley, CA, March 12-15, 2006. AMWA Journal 21: 92-93

Afdhal, NH and JG McHutchison. Review article: pharmacological approaches for the treatment of thrombocytopenia in patients with chronic liver disease and hepatitis C infection. Aliment. Pharmacol. Ther. 26 (Suppl 1): 29-39. 2008

McGill (sp), C and D.R. Gandara. Highlights from: The Addario Lung Cancer Medical Institute Summit, June 17, 2008. Clin. Lung Cancer. 9:254-256. 2008.

Thesis:

Magill-Solc, Catherine. Molecules in Motor Neurons that Direct the Aggregation of Acetylcholine Receptors on Skeletal Muscle Fibers. Ph.D. Thesis. Stanford University. 1990.

Manuscripts in Peer Reviewed Journals

Glover, J.C., D.K. Stuart, H.T. Cline, R.E. McCamen, C. Magill, and G.S. Stent. Development of Neurotransmitter Metabolism in Embryos of the Leech *Haementeria ghilianii*. J. Neurosci. 7: 581-594. 1987.

Reist, N.E., C. Magill, and U.J. McMahan. Agrin-like Molecules in Synaptic Sites in Normal, Denervated and Damaged Skeletal Muscle. J. Cell Biol. 105: 2457-2469. 1987.

Nitkin, R.M., M.A. Smith, C. Magill, J.R. Fallon, Y-M.M. Yao, B.G. Wallace, and U.J. McMahan. Identification of Agrin. A Synaptic Organizing Protein from *Torpedo* Electric Organ. J. Cell Biol. 105: 2471-2478. 1987.

Magill-Solc, C. and U.J. McMahan. Motor Neurons Contain Agrin-like Molecules. J. Cell Biol. 107: 1825-1833. 1988.

- Rupp, F., D.G. Payan, C. Magill-Solc, D.M. Cowan and Scheller, R. H. Structure and Expression of a Rat Agrin. *Neuron*. 6: 811-823. 1991.
- Smith, M.A., C. Magill-Solc, F. Rupp, M.Y.-M. Yao, J.W. Schilling, P. Snow and U.J. McMahan. Isolation and characterization of a cDNA that encodes an agrin homolog in the marine ray. *Molec. & Cell. Neurosciences*. 3: 406-417. 1992.
- Cohen, A.J., P.A. Bunn, W. Franklin, C. Magill-Solc, C. Hartmann, B. Helfrich, L. Gilman, J. Folkvord, K. Helm and Y.E. Miller. Neutral Endopeptidase: variable expression in human lung, inactivation in lung cancer, and modulation of peptide induced calcium influx. *Cancer Research*. 56: 831-839. 1996.
- Papandreou, C.N., B. Usmani, Y. Geng, T. Bogenrieder, R. Freeman, S. Wilk, C.L. Finstad, V.E. Reuter, C.T. Powell, D. Scheinberg, C. Magill, H.I. Scher, A.P. Albino, and D.M. Nanus. Neutral Endopeptidase 24.11 Loss in Metastatic Human Prostate Cancer Contributes to Androgen-Independent Progression. *Nature Medicine*. 4: 50-57. 1998.
- Cohen, A.J., T. E. King, L.B. Gilman, C. Magill-Solc, Y.E. Miller. Neutral Endopeptidase: High expression in idiopathic diffuse hyperplasia of pulmonary neuroendocrine cells. *Am. J. Respir. Crit. Care Med*. 158: 1593-99. 1998.
- Cohen, A.J., W.A. Franklin, C. Magill, J. Sorenson, Y.E. Miller. Low Neutral Endopeptidase levels in bronchioalveolar lavage fluid of lung cancer patients. *Am. J. Respir. Crit. Care Med*. 159: 907-910. 1999.
- Magill, C., B. A. Katz, and R. L. Mackman. Emerging therapeutic targets in oncology: Urokinase-type plasminogen activator system. *Emerging Therapeutic Targets*. 3: 109-133. 1999.
- Biroc SL, Gay S, Hummel K, Magill C, Palmer JT, Spencer DR, Sa S, Klaus JL, Michel BA, Rasnick D, Gay RE. Cysteine protease activity is up-regulated in inflamed ankle joints of rats with adjuvant-induced arthritis and decreases with *in vivo* administration of a vinyl sulfone cysteine protease inhibitor. *Arthritis Rheum*. 44(3):703-11. 2001.
- McElvy, S, S.G. Greenberg, J.L. Mershon, C. Magill and K.E. Clark. Mechanism of Uterine Vascular Refractoriness to Endothelin-1 in Pregnant Sheep. *Am J Physiol Heart Circ Physiol*. 281(2):H804-12. 2001.
- Sendzik, M., J.W. Janc, R. Cabuslay, L. Honigberg, R.L. Mackman, C. Magill, N. Squires, and N. Waldeck. Design and synthesis of α -amino- β -hydroxy amide derivatives as inhibitors of MetAP2 and HUVEC growth. *Bioorg. & Med. Chem. Lett*. 14: 3181-3184. 2004.
- Spencer, J.R., Sendzik, M., Oeh, J., Sabbatini, P, Dalrymple, S.A., Magill, C., Kim, H.M., Zhang, P., Squires, N., Moss, K.G., Sukbuntherng, J., Graupe, D., Eksterowicz, J., Young, P.R., Myers, A.G., Green, M.J. Evaluation of antitumor properties of novel saframycin analogs in vitro and in vivo. *Bioorg. & Med. Chem. Lett*. 16: 4884-4888. 2006.
- Tai VW, Sperandio D, Shelton EJ, Litvak J, Pararajasingham K, Cebon B, Lohman J, Eksterowicz J, Kantak S, Sabbatini P, Brown C, Zeitz J, Reed C, Maske B, Graupe D, Estevez A, Oeh J, Wong D, Ni Y, Sprengeler P, Yee R, Magill C, Neri A, Cai SX, Drewe J, Qiu L, Herich J, Tseng B, Kasibhatla S, Spencer JR. Discovery and structure-activity relationship of 2-phenyl-oxazole-4-carboxamide derivatives as potent apoptosis inducers. *Bioorg Med Chem Lett*. 16:4554-8. 2006.

Book Chapters

- Magill, C., N.E. Reist, J.R. Fallon, R.M. Nitkin, B.G. Wallace, and U.J. McMahan. Agrin. In *Progress in Brain Research*. Vol. 71. pp 391-396. F.J. Seil, E. Herbert, B. Carlson (Eds.) Elsevier Science Publishers BV. Biomedical Division. Amsterdam. 1987.
- Smith, M.A., Y-M.M. Yao, N.E. Reist, C. Magill, B.G. Wallace, and U.J. McMahan. Identification of Agrin in Electric Organ Extracts and Localization of Agrin-like Molecules in Muscle and CNS. *J. exp. Biol*. 132: 223-230. 1987.
- Magill-Solc, C., N.E. Reist, and U.J. McMahan. Agrin-like Molecules in Synaptic Basal Lamina and in Motor Neurons. In *Molecular Neurobiology: Proceedings of the First NIMH Conference*. Ed. S. Zalcman and R. Scheller. USDHHS, PHS, NIMH, Rockville, MD. 1989.
- Magill-Solc, C. and U.J. McMahan. Agrin-like Molecules in Motor Neurons. *J. Physiol., Paris* 83: 18-21. *Gif Lectures in Neurobiology: Mechanisms underlying long lasting changes in neuronal properties: fact and perspectives*. Masson, Paris. 1989.
- Magill-Solc, C. and U. J. McMahan. Synthesis and Transport of Agrin-like Molecules in Motor Neurons. *J. exp. Biol*. 153: 1-10. 1990.