

CURRICULUM VITAE

Date of preparation Sept. 22, 2007

PERSONAL DATA

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Languages English, Chinese,
 French (Alliance Française, Diploma; London University, Ordinary Levels)
Citizenship USA

EDUCATION

Wellesley College
Degree: B.A. with highest honors in chemistry

Harvard-MIT Program in Health Sciences and Technology
Harvard Medical School, Boston, MA
Degree: M.D. cum laude

Committee on Higher Degrees in Biophysics
Graduate School of Arts and Sciences
Harvard University, Cambridge, MA
Degree: Ph.D.

POSTGRADUATE TRAINING

Internship in Internal Medicine
University of California, San Diego, CA

First year Resident in Internal Medicine
University of California, San Diego, CA

Second year Resident in Internal Medicine/Medical Staff Fellow
NHLBI, National Institutes of Health, Bethesda, MD

Medical Staff Fellow
NHLBI, National Institutes of Health, Bethesda, MD

Senior Staff Fellow
Clinical Hematology Branch, National Institutes of Health, Bethesda, MD

BOARD CERTIFICATION

1987 American Board of Internal Medicine

ACADEMIC APPOINTMENTS

10/92 - 6/01 Assistant Professor (tenure-track)
Department of Biochemistry and Molecular Biophysics,
Washington University School of Medicine,
St. Louis, MO 63110

7/01 - Assistant Professor (tenure-track)
Department of Pharmacology
The University of Michigan Medical School
Ann Arbor MI 48109-0632

2) Molecular role of CSF-1 and CSF-1 receptor in human breast cancer

SCIENTIFIC ACTIVITIESJournal review

1990 – current ad hoc reviewer for Blood, BMC Molecular Biology, Journal of Biological Chemistry, Journal of Immunology, Journal of Neurochemistry, Life Sciences, Oncogene, Science, Trends in Cell Biology

Editorial Boards

2005 - Frontiers in Bioscience, managing editor for a forthcoming issue “Biology of the macrophage in human diseases”, launch date Jan 2007

Study sections

Oct. 21-22, 2002 ad hoc reviewer for the Diabetes, Endocrinology and Metabolism B committee (NIDDK Education Project Grants: institutional training grants (T32, T35), mentored awards (K01, K08, K23, K25), conference grants and R25)

Other Grant Reviews

May 2006 reviewer for University of Michigan Faculty Grants and Awards

HONORS AND AWARDS

1964 - 1969 Hongkong Government 5-year Merit Scholarship
1972 - 1975 Mayling-Soong Scholarship, Wellesley College
1975 - 1976 M.A. Cartland-Schackford Medical Scholarship, Wellesley College
1974 Phi Beta Kappa (elected Junior year of College)
1975 Durant Scholar of Wellesley College (graduation from college with highest honors)
1980 - 1984 NIH Medical Scientist Training Program Fellowship
1984 Graduation from Harvard Medical School with honors
1994 Beckman Young Investigators Program, finalist
1994 Who's Who amongst Asian Americans
2006 University of Michigan Undergraduate Research Opportunity Program Recognition Award for Outstanding Research Mentorship

GRANT SUPPORTPast

- 1992 - 1993 American Cancer Society Institutional Research Grant, IRG #IN-36-34
 “Structure-function studies of serine phosphorylation in the colony stimulating factor-1 receptor”
 PI: Angel Lee; Total amount: \$ 13,750
- 1993 - 1994 National Science Foundation Research Planning Grant, MCB-9306519
 “Regulation of signal transduction in the colony stimulating factor-1 receptor by serine/threonine phosphorylation”
 PI: Angel Lee; Total amount \$ 18,000
- 1993 - 1994 Washington University New Investigator Award
 “Structure-Function Studies of the Colony Stimulating Factor-1 Receptor: Implications for Hematopoietic Differentiation”
 PI: Angel Lee; Total amount \$ 10,000
- 1993 - 1995 American Heart Association, Missouri Affiliate, Grant-in-Aid
 “Structure-function studies in the colony stimulating factor-1 receptor (*c-fms*), implications for atherogenesis”
 PI: Angel Lee; Total amount \$ 66,000
- 1994 - 1998 National Institutes of Health, R01 DK48929
 “Molecular Role of *c-fms* in breast cancer pathogenesis”
 PI: Angel Lee; Amount \$ 416,471 (direct), \$ 716,476.41 (total)
- 1998 - 1999 no cost extension
- 2001 - 2005 National Institutes of Health, 1R01 CA85368-01A1
 “Mechanism of CSF-1 receptor growth, survival promotion”
 PI: Angel Lee. Start date: 2/1/01
 Amount: \$ 676,000 (direct); \$1,041,392 (total)
- 2005 - 2006 No cost extension

Pending

- 2007 - 2012 National Institutes of Health (submitted 7/5/07) R01 HL086927-A2
 "Signal transduction mechanisms that regulate macrophage formation and function"
 PI: Angel Lee.
 Amount: \$ 1,250,000 (direct)

MEMBERSHIPS AND OFFICES IN PROFESSIONAL SOCIETIES AND ORGANIZATIONSI. Professional societies

- 1975 Sigma Xi
- 1991 American Association for the Advancement of Science
- 1993 American Society for Biochemistry and Molecular Biology
- 1993 American Society for Microbiology
- 1999 American Society of Hematology

II. Organizations

1996 - 2001 Alvin J. Siteman Cancer Center at Washington University in Saint Louis
 2001 - 2005 The University of Michigan Cancer Center
 2001 - The University of Michigan Diabetes Research and Training Center
 2001 - 2005 Bioinformatics Program faculty affiliate, University of Michigan

TEACHING ACTIVITIESI. LECTURING ACTIVITIES

WASHINGTON UNIVERSITY

1993 - 1996 taught tyrosine kinase signaling in a graduate course on signal transduction
 1997 taught carbohydrate metabolism in the course "Molecular Foundations of Medicine" for first year medical students

UNIVERSITY OF MICHIGAN

2002 - present antivirals, antifungals, anti-TB drugs in Pharm 660, a core course
 2002 - present student seminar series faculty evaluator for CMB 850
 2005 - present course director for a new course (Pharm 618) "Topics in Signal Transduction Based Therapeutics"

II. LABORATORY TRAINING ACTIVITIES

WASHINGTON UNIVERSITY

1992 - 2000 Member of Training Program in Cellular and Molecular Biology, NIH T32GM007067 (PI: Kendall Blumer)

Postdoctoral Trainees

John G. Moffat	1994-1996	(Ph.D. U. of Otago, New Zealand; now a Research Associate, UC-Santa Barbara, California)
William Reisdorf, Jr.	1996-1997	(Ph.D. U. of Michigan, W. W. Keck Fellow, now in Bioinformatics Administration, GSK)
Sundaram Nambirajan	1997-1998	(Ph.D. Jawaharlal Nehru University, India, now a Postdoctoral fellow, Cincinnati's Children's Hospital)
Ture Lii	1999	(Ph.D., University of Minnesota, now in the Private sector, Singapore)

Graduate Trainees

Denise Dewald	Masters thesis, candidate for the M.D./M.A. program
Raymond Yeh	Ph.D. rotation student

Undergraduate Trainees

Khanh Nguyen	Howard Hughes Summer Fellow, 1993
Kristi Lea	Lab assistant, 1994-5
Cathy Diec	Lab assistant, 1995-6
Bhavna Lall	Independent Study in Biology, 1996

Albert Mendelson	Independent Study in Biology, 1996
Akemi Winn	Independent Study in Chemistry, 1996
Gaurav Patel	Independent Study in Biology, 1997
Jeremy Brodsky	Lab assistant, 1997-8
Heng-Li Lin	Independent Study, 1996-1997, Howard Hughes Summer Fellow, 1997, Honors thesis in Biology, 1997-8 Medical Student, Tufts University, 1998-02 Residency in Plastic Surgery (Mount Sinai School of Medicine)
Bethany Swanson	Lab assistant, 1998-9
Arshad Khanani	Howard Hughes Summer Fellow, 1999
Lin Lin	Summer Scholars Program, 1999
Debi Moschetta	Lab assistant, 2000 - 2001

UNIVERSITY OF MICHIGAN

2001 - Member of the Training Program in Cellular and Molecular Biology (Director, Jessica Schwartz)

2001 - Member of the Training Program in Cancer Biology (Director, Michael Imperiale)

2001 - Member of the Medical Scientist Training Program (Director, Roger Koenig)

2002 - Member of the Training Program in Pharmacological Sciences and Bio-related Chemistry

Postdoctoral trainees

Cynthia Rohde	2002-2004	(Ph.D. Biochemistry, University of Wisconsin-Madison, 2002; joined Pfizer Global R&D)
Aaron Robida	2004-2005	(Ph.D. Pharmacology, Emory University, Atlanta, 2004)
Kuljeet Kaur	2006	(Ph.D. Physiology, University of Manitoba, 2006)

Doctoral trainees, thesis work

Yingwei Mao, M. Sc. University of New Jersey, School of Medicine and Dentistry

Ph. D. 2002-2005, Degree awarded 12/2005

Title: The scaffolding molecule, Gab2, is a key regulator in neural stem cell biology and hematopoietic cell signaling

Current position: postdoctoral fellow, Picower Institute of Learning and Memory, Massachusetts Institute of Technology, Cambridge, Mass

Doctoral trainees, laboratory rotations

Alice Lam, B.Sc. University of Chicago, MSTP rotation student, Summer 2002

Jessica O'Konek, B.Sc. University of Wisconsin, Eau-Claire, PIBS rotation student, Fall 2002

Sunil Patel, B. Sc. Rice University, Houston, Texas, Fall 2003

Reagan Kelly, B. Sc., Rochester Institute of Technology, Rochester, Fall 2003

Taylor Eaves, B. Sc., University of Kansas, Summer 2005

Undergraduate Trainees

Jason Schrum, University of Michigan	Work-study lab assistant, 2001-2002 Current: graduate student, BBS Program, Harvard Medical School
Liz Chung, University of Michigan	Work-study lab assistant, 2002
Katie Lockwood, University of Michigan	Work-study lab assistant, 2002
Bhumit Patel, University of Michigan	Work-study lab assistant, 2003-2005 Independent study (Chem 398), Spring & Fall 2004

Reda Jaber, University of Michigan

Jennifer MacDonald, University of Michigan

Current: medical student, University of the Virgin Islands
Work-study lab assistant, 2005-present
Undergraduate Research Opportunity Program, 2006
Independent study (Psych 326), Fall 2006
Independent study (Chem 398), Fall 2006, Winter 2007, Lab assistant Summer 2007

COMMITTEE AND ADMINISTRATIVE ACTIVITIES

WASHINGTON UNIVERSITY

Faculty advisor

Cori Society of Washington University School of Medicine
Washington University chapter of Asian Pacific American Medical Student Association

UNIVERSITY OF MICHIGAN

Admissions Committee

2001-02 Graduate Admissions Committee for the Program in Biomedical Sciences (Bioinformatics)
2003-04 Graduate Admissions Committee for the Program in Biomedical Sciences (Pharmacology)

Doctoral Qualifying Exam Committees

Daniel Heikka, Program in Cell and Molecular Biology, April 2002
Brian Gentry, Pharmacology, May 2002
Aaron Roseboom, Program in Cell and Molecular Biology, 2003
Sarah Bradley, Program in Cell and Molecular Biology & MSTP, 2003
Joshua Bauer, Pharmacology, May 2003
Erin Booth, Pharmacology, May 2003
Christopher Evelyn, Pharmacology, May 2004
Adam Kuszak, Pharmacology, May 2004
Matt Pratt-Hyatt, Program in Cell and Molecular Biology, July, 2004
Steve Yang, Program in Cell and Molecular Biology & MSTP, May 2005 (chair)
Sean Serraguard, Pharmacology, May 2005
Andrew Kaczorowski, Program in Cell and Molecular Biology, June 2007

Doctoral Dissertation Committees

Yingwei Mao, Pharmacology (Chair) 2002-2005
Adam Salmon, Program in Cell and Molecular Biology, 2003-
Carlos Santos, Bioinformatics, 2005-
Philip Lapinski, Microbiology & Immunology, 2005-

Medical Scientist Training Program

Career Advisory Panel, 2002-

Search Committees

Junior faculty search, Geriatrics Center, 2002-2003

Bioinformatics systems modeling faculty, 2003

Other Committees

University of Michigan Medical School ADVANCE Leaders in Science Seminar Series Organizing Committee (ALISSOC), 2003-2005

University of Michigan Department of Pharmacology Seminar Committee, 2005-present

Cellular and Molecular Biology (CMB) Program Annual Symposium Poster Session co-coordinator, 2007

PRESENTATIONS

Invited lectures

- 1993 Seminar speaker for the Hematology-Oncology Seminar Series, Washington University Medical School
- 1993 Speaker at the "Research Agenda", Dept. of Biochemistry & Molecular Biophysics, Washington University Medical School
- 1996 Speaker at the Cancer Genetics Program Meeting, Washington University Cancer Center, Dec. 1996
- 2000 Seminar speaker, Title: "CSF-1 receptor signaling: old molecule, new surprises", Dept. Hematology-Oncology, University of Pittsburgh School of Medicine, May 2000
- 2000 Seminar speaker, Title "CSF-1 receptor signaling in breast cancer and myelopoiesis", Dept. Hematology-Oncology, Vanderbilt University School of Medicine, Nov. 2000
- 2000 Seminar speaker, Title "CSF-1 receptor signaling in breast cancer and myelopoiesis", Dept. of Pediatrics, University of Iowa School of Medicine, Nov. 2000
- 2001 Seminar speaker, Title "CSF-1 receptor signaling: mechanisms for growth and survival", Dept. of Pharmacology, Case Western Reserve University School of Medicine, Jan. 2001
- 2001 Seminar speaker, Title "CSF-1 receptor signaling: mechanisms for growth and survival", Dept. of Microbiology and Immunology, Indiana University School of Medicine, Jan. 31, 2001
- 2001 Seminar speaker, Title "CSF-1 receptor signaling: mechanisms for growth and survival", Dept. of Pharmacology, University of Colorado Health Sciences Center, Feb. 27, 2001
- 2001 Seminar speaker, Title "CSF-1 receptor signaling: mechanisms for growth and survival", Dept. of Pharmacology, University of Michigan School of Medicine, Mar. 20 2001
- 2001 Seminar speaker, Title "CSF-1 receptor: signaling pathways in cell growth and survival", Dept. of Pharmacology Retreat, University of Michigan School of Medicine, Oct 11., 2001
- 2001 Seminar speaker, Title "CSF-1 receptor: signaling pathways in cell growth and survival", The Phosphate Club (Sponsored by the Cancer Center and the Diabetes Research and Training Center), University of Michigan School of Medicine, Dec. 6, 2001
- 2002 Seminar speaker, Title "Colony Stimulating Factor-1 receptor: signaling pathways in cell growth and survival", Dept. of Cell and Developmental Biology, University of Michigan School of Medicine, Nov. 27, 2002

- 2006 Seminar speaker, Title " Signaling mechanisms that regulate proliferation and survival in myelopoiesis and neurogenesis", Dept. of Pharmacology Retreat, University of Michigan School of Medicine, Sept. 21, 2006
- 2006 Seminar speaker, Title "Signaling mechanisms that regulate proliferation and survival in myelopoiesis and neurogenesis", Dept. of Pharmacology, Wayne State University Medical School, Detroit, Nov. 17, 2006
- 2007 Seminar speaker, Title "The Scaffolding protein Gab2, is a CSF-1R effector that regulates macrophage production", The Phosphate Club (Sponsored by the Cancer Center and the Diabetes Research and Training Center), University of Michigan School of Medicine, March 8, 2007
- 2007 Seminar speaker, Title: "Dissecting CSF-1 receptor pathways that regulate macrophage production", Dept. of Microbiology and Immunology, University of Michigan School of Medicine, Mar 15, 2007

Presentations at National Meetings

- 1989 Speaker, Title "Signal Transduction in the M-CSF Receptor Occurs via an Intermolecular Mechanism" presented at the plenary session of the American Society of Hematology Annual Meeting, Atlanta
- 1990 Speaker, Title "Glycophorin-CSF-1-Receptor Hybrids Allow Functional Dissection of the Different Tyrosine Kinase Domains", presented at the American Society of Hematology Annual Meeting, Boston
- 1996 Speaker, Title "CSF-1 and cAMP cooperate to activate the MAP kinase pathway in myeloid cells but cAMP antagonizes CSF-1 stimulated proliferation ", presented at the Conference on Tyrosine Phosphorylation & Cell Signaling, Salk Institute, San Diego
- 1998 Speaker, Title "Rescue Of A CSF-1 Receptor Defective In Mitogenic And Survival Responses By An Activated PI3-Kinase", presented at the American Society of Hematology Annual Meeting, Miami
- 1999 Speaker, Title "PI3-kinase and protein kinase C are upstream activators in the CSF-1-stimulated MAP kinase cascade in myeloid cells ", presented at the American Society of Hematology Annual Meeting, New Orleans
- 2003 Platform presentation by C. Rohde (postdoctoral fellow in Lee Lab) "An essential role for the juxtamembrane domain of the Colony Stimulating Factor-1 Receptor (CSF-1R) in receptor downregulation" at the American Society of Hematology Annual Meeting, San Diego, CA.

Peer-reviewed

1. Gelin, B., Lee, A. W.-M. and Karplus, M. (1983) " Hemoglobin Tertiary Structural Change on Ligand Binding: its role in the Cooperative Mechanism", *J. Mol. Biol.* 171:489-559.
2. Lee, A. W.-M. and Karplus, M. (1983) "Structure-Specific Modeling in Hemoglobin" *Proc. Natl. Acad. Sci. USA* 80:7055-7059.
3. Lee, A. W.-M., Karplus, M., Poyart, C. and Bursaux, E. (1988) "Analysis of Proton Release in Oxygen Binding by Hemoglobin: implications for the Cooperative Mechanism" *Biochemistry* 27:1285-1301.
4. Lee, A. W.-M. and Nienhuis, A. W. (1990) "Mechanism of Kinase Activation in the Receptor for Colony-stimulating factor-1" *Proc. Natl. Acad. Sci. USA* 87:7270-7274. ([pdf](#))
5. Redner, R., Lee, A. W.-M., Osawa, G. and Nienhuis, A. W. (1992) "Variable Pattern of Jun and Fos Gene Expression in Different Hematopoietic Cell Lines during Interleukin-3 induced entry into the Cell Cycle" *Oncogene* 7:43-50.
6. Lee, A. W.-M. and Nienhuis, A. W. (1992) "Functional Dissection of Structural Domains in the Receptor for Colony-Stimulating Factor 1" *J. Biol. Chem.* 267:16472-16483. ([abstract](#))
7. Lee, A. W.-M. (1992) "Signal Transduction by the Colony-stimulating factor-1 receptor; a comparison to other Receptor Tyrosine Kinases" in *Current Topics in Cellular Regulation* 32:73-181
8. Lee, A. W.-M. (1999) "Synergistic Activation of Mitogen-Activated Protein Kinase by Cyclic AMP and Myeloid Growth Factors opposes Cyclic AMP's Growth-Inhibitory Effects" *Blood* 93:537-553. ([pdf](#))
9. Lee, A. W.-M., Sundaram Nambirajan and J. G. Moffat (1999) "CSF-1-activates MAPK-dependent and p53-independent pathways to induce growth arrest of hormone-dependent human breast cancer cells" *Oncogene* 18:7475-7492. ([pdf](#))
10. Lee, A. W.-M. and States, D. J. (2000) "Both Src-Dependent and Independent Mechanisms Mediate Phosphatidylinositol 3-Kinase Regulation of Colony-Stimulating Factor-1-activated MAP Kinases in Myeloid Progenitors" *Mol. Cell. Biol.* 20:6779-6798. ([pdf](#))
11. Lee, A. W.-M. and States, D. J. (2000) "Guide to CSF-1R (CD115)" *Protein Reviews on the Web* 1:13-21. Editor: Stephen Shaw, Reviewer: E. R. Stanley. http://www.ncbi.nlm.nih.gov/PROW/guide/CSF-1_R
12. Rohde, C. M., Schrum, J. and Lee, A. W.-M. (2004) "A juxtamembrane domain tyrosine in the colony stimulating factor-1 receptor (CSF-1R) regulates ligand-induced kinase function and receptor degradation" *J. Biol. Chem.*, 279:43448-43461
13. Mao, Y. W. and Lee, A. W.-M. (2005) "A Novel Role for Gab2 in bFGF-mediated Cell Survival during Retinoic Acid-induced Neuronal Differentiation", *J. Cell Biol.* 170:305-16.
14. Lee, A. W.-M. and States, D. J. (2006) "Colony Stimulating Factor-1 requires PI3-kinase mediated glycolysis for proliferation and survival in myeloid cells" *Cell Death Differ.* 13:1900-1914.
15. Yang, P., Whelan, R. J., Mao, Y. W., Lee, A. W., Carter-Su, C. and Kennedy, R. T. (2007) "Multiplexed detection of protein-peptide interaction and inhibition using capillary electrophoresis" *Anal. Chem.* 79:1690-5.
16. Chen, J., Blackwell, T., Fermin, D., Menon, R., Gao, J., Lee, A.W., States, D. J. (2007) Evolutionarily Conserved Gene Expression Response Profiles. *OMICS* 11:96-122.
17. Chen, Y., Blackwell, T.W., Chen, J., Gao, J., Menon, R., Lee, A. W.-M., States, D. J. (2007) "Integration of genome and chromatin structure with gene expression profiles to predict c-Myc recognition site binding and function" *PLoS Computational Biology* 3:e63 (doi:10.1371/journal.pcbi.0030063).

Invited reviews, book chapters and meeting proceedings

18. Lee, A. W.-M. (1981) in "Effects of Energy Minimization on the Structure of Human Deoxy and Carbonmonoxy Hemoglobin" in the *Proceedings of the C.E.C.A.M Workshop* on "Nonbonded Interactions and the Specificity of Protein Association and Folding", Univ. Libre de Bruxelles, Brussels, Belgium, ed. Wodak, S.
19. Karplus, M., Case, D., Gelin, B., Huynh, H., Lee, A. W.-M. and Szabo, A. (1989) "Structure and Function of Hemoglobin; the Cooperative Mechanism" in *Allosteric Enzymes*, ed. G. Herve, pg. 27-59, CRC Press, Inc.
20. Lee, A. W.-M. (2007) "Signaling pathways downstream of the Colony Stimulating Factor-1 Receptor in myeloid cells" Invited review in the special issue "Biology of the macrophage in human disease" for *Frontiers in Bioscience* (in preparation)

Manuscripts (submitted/in preparation)

21. Grifka, H., Mao, Y., Jaber, R. and Lee, A. W.-M. "Essential role of Gab2 in CSF-1-dependent macrophage development" (in preparation)
22. Lee, A. W.-M. "Atypical protein kinase C regulates Colony Stimulating Factor-1 induced activation of the mitogen activated protein kinase pathway in myeloid cells" (in preparation)

Meeting abstracts

1. Lee, A. W.-M., Feingold, E. and Nienhuis, A. W. (1989) "Signal Transduction in the M-CSF Receptor Occurs via an Intermolecular Mechanism" Abstr. 172, Plenary Session at the 31st Annual Meeting of the American Society of Hematology, Atlanta, Georgia.
2. Lee, A. W.-M. and Nienhuis, A. W. (1990) "Mechanism of Ligand Activation in the CSF-1 Receptor" Abstr. F227, *J. Cell. Biochem.* suppl. 14B.
3. Redner, R., Osawa, G., Lee, A. W.-M. and Nienhuis, A. W. (1990) "Immediate early response of jun and fos genes to hematopoietic growth factors", Abstr., American Society of Clinical Investigators, Washington, D.C.
4. Lee, A. W.-M. and Nienhuis, A. W. (1990) "Glycophorin-CSF-1-Receptor Hybrids Allow Functional Dissection of the Different Tyrosine Kinase Domains", Abstr. 595, 32nd Annual Meeting of the American Society of Hematology, Boston, Massachusetts.
5. Lee, A. W.-M. and Nienhuis, A. W. (1991) "Structure and Function Relationships in the CSF-1 Receptor", Abstr. D129, *J. Cell. Biochem.* suppl. 15B.
6. Lee, A. W.-M. (1993) "Subcellular distribution and activation of Phosphatidylinositol 3-kinase following platelet-derived growth factor and colony stimulating factor-1 stimulation", Gordon conference on Cancer, Salve Regina University, Rhode Island.
7. Moffat, J. G. and Lee, A. W.-M. (1995) "Expression of CSF-1 receptor alters morphology of MCF-7 breast cancer cells", Gordon conference on Cancer, Salve Regina University, Rhode Island.
8. Lee, A. W.-M. (1996) "CSF-1 and cAMP cooperate to activate the MAP kinase pathway in myeloid cells but cAMP antagonizes CSF-1 stimulated proliferation", platform presentation, Conference on Tyrosine Phosphorylation & Cell Signaling, The Salk Institute, San Diego.
9. Lee, A. W.-M. (1997) "CSF-1, PKA and Ha-ras cooperate to initiate monocytic differentiation in myeloid cells", Keystone Symposium on Hematopoiesis, Tamarron, Colorado.

10. Lee, A. W.-M., Nambirajan, S., Moffat, J. and Dewald, D. (1998) "CSF-1 can function as a proliferative or anti-proliferative agent in human breast cancer cells", 14th Annual Meeting on Oncogenes, The Salk Institute, San Diego.
11. States, D. J., MacMillan, S., Albers, C., Beazley, K., Brownstein, B., Mazzarella, R. Nowotny, V., Lee, A. W.-M. (1998) "Evidence for large-scale heterogeneity in BRCA2 gene structure", 14th Annual Meeting on Oncogenes, The Salk Institute, San Diego.
12. Lee, A. W.-M., Nichols, T., Yeh, R., and Lin, H. (1998) "Rescue Of A CSF-1 Receptor Defective In Mitogenic And Survival Responses By An Activated PI3-Kinase", *Blood* 92: (10) 1969, Part 1, Suppl. 1, platform presentation, 40th Annual Meeting of the American Society of Hematology, Miami, Florida.
13. Lee, A. W.-M. (1999) "PI3-kinase and protein kinase C are upstream activators in the CSF-1-stimulated MAP kinase cascade in myeloid cells" *Blood* 94: (10) 2902, Part 1, Suppl. 1, platform presentation, 41st Annual Meeting of the American Society of Hematology, New Orleans, Louisiana.
14. States, D. J., Blackwell, T. W., Lee, A. W.-M. and Nowotny, V. (2000) "Transcription factor binding site clusters in the human genome are evolutionarily conserved and hypomethylated", *Blood* 96 (11) 2895, Part I, 42nd Annual Meeting of the American Society of Hematology, San Francisco, California.
15. Lee, A. W.-M. (2000) "CSF-1 mediated survival signals in myeloid progenitors", *Blood* 96 (11) 2917 Part 1, 42nd Annual Meeting of the American Society of Hematology, San Francisco, California.
16. Lee, A. W.-M. and States, D. J. (2001) "Distinct pathways function downstream of the CSF-1 receptor to mediate cell growth and survival", *Blood* 98 (11) 310, Part 1, 43rd Annual Meeting of the American Society of Hematology, Orlando, Florida.
17. Lee, A. W.-M. (2002) "PI3-kinase plays a critical role in CSF-1-dependent mitogenesis and survival", 8th Annual Meeting on Tyrosine Phosphorylation & Cell Signaling, The Salk Institute, San Diego.
18. Lee, A. W.-M. and Hayes, M. M. (2002) "Complex Role of the CSF-1 Receptor Juxtamembrane Region in Src Kinase Activation", *Blood* 100 (11) 2867, Part 1, 44th Annual Meeting of the American Society of Hematology, Philadelphia, PA.
19. Rohde, C. M. and Lee, A. W.-M. (2003) "An essential role for the juxtamembrane domain of the Colony Stimulating Factor-1 Receptor (CSF-1R) in receptor downregulation" *Blood* 102 (11), platform presentation, 45th Annual Meeting of the American Society of Hematology, San Diego, CA.
20. Mao, Y. W. and Lee, A. W.-M. (2003) "Gab2 functions in IL-3 and basic FGF-mediated cell survival" *Blood* 102 (11) 45th Annual Meeting of the American Society of Hematology, San Diego, CA.
21. McEachin, R. C., Hewegama, A., Veresh, K., Lam, A., Lee, A. W.-M. and States, D. J. (2003) "Integrated experimental and computational approach to the analysis of transcriptional regulation by cytokines in the early myeloid progenitor cell line 32D" *Blood* 102 (11), 45th Annual Meeting of the American Society of Hematology, San Diego, CA.

22. Chen, Y., Blackwell, T., Lee, A. W. and States, D. J. (2005) "A Computational Model for Identification of High Occupancy Myc Binding Sites and Prediction of Associated Target Genes" 13th Annual meeting for Intelligent Systems for Molecular Biology (ISMB), Detroit, MI
23. Mao, Y. W., Eves, P. T. and Lee, A. W.-M. (2005) "Complex roles of Gab2 and Gab3 in CSF-1-dependent signal transduction" *Blood* 106 (11) 47th Annual Meeting of the American Society of Hematology, Atlanta, Georgia.
24. Yang, P., Lee, A. W. and Kennedy, R. T. (2006) "Drug Screening and Quantitative Analysis of Protein-Protein Interactions Using Capillary Electrophoresis", 57th Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, Florida.
25. Lee, A. W. (2006) "Atypical protein kinase Cs promote CSF-1-dependent Erk activation and proliferation in myeloid cells", *Blood* 108 (11) 48th Annual Meeting of the American Society of Hematology, Orlando, Florida.
26. Lee, A. W., States, D. J. and Grifka, H. (2007) "Essential role of Gab2 in CSF-1-dependent Macrophage Development in the Bone Marrow". 49th Annual Meeting of the American Society of Hematology, Atlanta, Georgia.
27. MacDonald, Lee, A. W. and States, D. J. (2007) "Systematic Definition and Evolutionary Analysis of Macrophage genes: Evidence for Novel Host Defense Genes". 49th Annual Meeting of the American Society of Hematology, Atlanta, Georgia.