

CURRICULUM VITAE

ALEXANDER S. BRODSKY, PH.D.

**1. Name and Title**

Alexander S. Brodsky, Ph. D.  
Assistant Professor of Medical Science  
Department of Molecular Biology, Cell Biology and Biochemistry  
Brown University  
70 Ship St., G-E4  
Providence, RI 02903

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**2. Home Address**

34 Harrison St.  
Newton, MA 02461

**3a. Education**

- B.A. University of Pennsylvania, Biochemistry, Bachelor of the Arts in Biochemistry, 1992. Magna Cum Laude
- *Phi Beta Kappa, 1992*
  - *Ben Franklin Scholars, 1989-1992*
  - *University Scholars, 1989-1992*
- M.S. University of Pennsylvania, 1993. Biochemistry. "DNA Dynamics in Viscoelastic Solutions".
- PhD Massachusetts Institute of Technology, 1998, Biological Chemistry. "Structure and Dynamics of HIV-2 TAR-Argininamide Complex by NMR Spectroscopy".

**3b Post-graduate Training**

1998-2005 Post Doctoral Fellow, Biochemistry and Genomics, The Dana-Farber Cancer Institute/Harvard Medical School

**3c. Post-graduate Honors and Awards**

2003-2008 NHGRI K22 Genome Scholar Career Award, NIH  
2002 Best new and innovative project-Cancer Biology Retreat, DFCI  
2001-2003 Research Award, Claudia Adams Barr Program for Innovative Basic Science  
2000 RPI/RNA Award for Young Scientists for most significant paper in RNA  
1999-2002 Ruth L. Kirschstein National Research Service Award (NRSA), NIH Postdoctoral Fellowship, National Research Service Award

**4. Professional Appointments**

- 2005-present Assistant Professor of Medical Science, Department of Molecular Biology, Cell Biology and Biochemistry, Brown University, Providence, RI
- 2005-present Assistant Professor of Medical Science, Center for Genomics and Proteomics, Brown University, Providence, RI
- 2006-present Assistant Professor of Medical Science, Center for Computational Molecular Biology, Brown University, Providence, RI

## 5. Completed Publications

### 5a. Books/Monographs

None

### 5b. Chapters in Books

None

### 5c. Refereed Journal Articles

\* Corresponding author

Vang, S., Wu, H.-T., Fischer, A., Miller, D.H., MacLaughlan, S., Douglass, E., Steinhoff, M., Collins, C., Smith, P.J. Brard, L., **Brodsky, A.S.** (2013) "Identification of Ovarian Cancer Metastatic miRNAs" PLoS One, 8(3) e58226 [Epub March 12, 2013] (PMID: 23554878, PMCID: PMC3595263).

Lu, S., Vincent, M. A., Mangray, S., Cleveland, K., Shillingford, N., Schorl, C., **Brodsky, A.S.**, Resnick, M. B. (2012) "MicroRNA Profiling in Mucosal Biopsies of Eosinophilic Esophagitis Patients Pre and Post Treatment with Steroids and Relationship with mRNA Targets" PLoS One, 7(4) e40676 [Epub July 16, 2012] (PMID: 22815788, PMCID: PMC3398046).

Moore, R.G., Lange, T.S., Robinson, K., Kim K.K., Uzun, A, Horan, T.C., Kavar, N., Yano, N., Chu, S.R., Mao, Q., Brard, L., DePaepe, M.E., Padbury, J.F., Arnold, L.A., **Brodsky, A.**, Shen, T.L., Singh, R.K. (2012) "Efficacy of a non-hypercalcemic vitamin-D2 derived anti-cancer agent (MT19c) and inhibition of fatty acid synthesis in an ovarian cancer xenograft model" PLoS One; 7(4):e34443. Epub 2012 Apr 3. (PMID: 22509304, PMCID: PMC3317945.)

Miller D.H., Fischer A., Chu K.F., Burr R., Hillenmeyer S., Brard L., and **Brodsky, A. S.\*** (2011) "T0901317 Inhibits Cisplatin Induced Apoptosis in Ovarian Cancer Cells" Int. J. Gynecol. Cancer [Epub Sep 5, 2011] (PMID 21921802, PMCID: PMC3203312).

Stuckey, A., Fischer, A., Miller, D.H., Hillenmeyer, S., Kim, K.K., Singh, R.K., Raphael, B. J., Brard, L., and **Brodsky, .A.S.\*** (2011) "Integrated Genomics of Ovarian Xenograft Tumor Progression and Chemotherapy Response". BMC Cancer, Jul 22; 11(1): 308 [Epub]. (PMID 21781307, PMCID: PMC3155912).

Wood, J., Hillenmeyer, S., Lawrence, C., Chang, C., Hosier, S., Lightfoot, W., Mukerjee, E., Jiang, N., Schorl, C., **Brodsky, A.S.**, Neretti, N., and Helfand, S. L. (2010) "Chromatin remodeling in the aging genome of Drosophila", Aging Cell, 9(6) 971-8, Epub 2010 Oct 21 (PMID: 20961390, PMCID: PMC2980570).

Bronson, M. W., Hillenmeyer, S., Park, P. W., and **Brodsky, A. S.\*** (2010) "Estrogen Coordinates Translation and Transcription Revealing a Role for NRSF in Human Breast Cancer Cells" *Mol Endo*, Jun;24(6):1120-35. Epub 2010 Apr 14 (PMID: 20392875, PMCID: PMC2875799).

Neretti, N., Wang, P. Y, **Brodsky, A. S.**, White, K. P., Rogina, B., and Helfand, S. L. (2009) "Long-live Indy induces reduced mitochondrial ROS production and oxidative damage", *Proc Natl Acad Sci USA* 106 2277 (PMID: 19164521, PMCID: PMC2629441).

McKee, A. M., Neretti, N., Carvalho, L. E., Meyer, C.A., Fox, E. A., **Brodsky, A. S.\***, and Silver, P. A. (2007) "Exon expression profiling reveals stimulus-mediated exon use in neural cells", *Genome Biology* Aug 2;8(8):R159 [Epub ahead of print] (designated highly accessed). (PMID: 17683528, PMCID: PMC2374990).

Gama-Carvalho, M, Barbosa-Morais, N. L., **Brodsky, A. S.**, Silver, P. and Carmo-Fonseca, M. (2006) "Genome wide identification of functionally distinct subsets of cellular mRNAs associated with two nucleocytoplasmic-shuttling mammalian splicing factors" *Genome Biology* Nov 30;7(11):R113 [Epub ahead of print] (designated highly accessed). (PMID: 17137510, PMCID: PMC1794580).

Carroll, J. S., Meyer, C. A., Song, J., Li, Wei, Geistlinger, T. R., Eeckhoutte, J., **Brodsky, A. S.**, Keeton, E.K., Fertuck, K. C., Hall, G. F., Wang, Q., Bekiranov, S., Sementchenko, V., Fox, E. A., Silver, P. A., Gingeras, T. R., Liu, X. S., Brown, M. (2006) "Genome-wide Analysis of Estrogen Receptor Binding Sites" *Nature Genetics* 38 1289-97 Epub 2006 Oct. (PMID: 17013392).

Swinburne, I, Meyer, C. A., Liu, X. S., Silver, P.A.\* and **Brodsky, A.S.\*** (2006) "Genomic Localization of RNA-binding Proteins Reveals Links Between pre-mRNA Processing and Transcription" *Genome Research*, 16(7), Epub Jun 12 2006. (PMID: 16769980, PMCID: PMC1484458).

**Brodsky, A. S.\***, Meyer, C. A., Hall, G., Swinburne, I., Keenan, B. K., Liu, X., Fox, E. A., and Silver, P. A. (2005) "Genomic Mapping of RNA Polymerase II Reveals Sites of Co-Transcriptional Regulation in Human Cells" *Genome Biology* 6(8):R64, Epub Jul 15. (PMID: 16086846, PMCID: PMC1273631) (designated highly accessed).

Carroll, J. S., Liu, X. S., **Brodsky, A. S.**, Li, W., Szary, A. J., Shao, W., Meyer, C. A., Hestermann, E. V., Geistlinger, T. R., Fox, E. A., Silver, P. A., Brown, M. (2005) "Chromosome-wide Mapping of Estrogen Receptor Binding Reveals Long-range Combinatorial Regulation" *Cell* 122 33-43. (PMID: 16009131).

**Brodsky AS**, Silver PA. "Identifying Proteins that Affect mRNA Localization in Living Cells" (2002) *Methods* 26(2) 151-155. (PMID: 12054891).

**Brodsky, A.S.\***, Johnston, A.P., Trau, M., and Silver P.A. (2003) "Analysis of RNA-protein interactions by flow cytometry" *Curr Opin Mol Ther.* 5 235-40. (PMID: 12870432)

**Brodsky, A. S.\*** and Silver, P. A. (2002) "A microbead-based system for identifying and characterizing RNA-protein interactions by flow cytometry" *Mol Cell Proteomics*, 1 922-929. (PMID: 12543929).

Dayie, K., **Brodsky, A. S.**, and Williamson, J. R. (2002) "Base Flexibility in HIV-2 TAR RNA Mapped by Solution  $^{15}\text{N}$ ,  $^{13}\text{C}$  NMR Relaxation" J. Mol. Biol., 317 263-278. (PMID: 11902842).

**Brodsky, A. S.** and Silver, P. A. (2000) "Pre-mRNA Processing Factors are Required for Nuclear Export" RNA, 6 1737 (**Awarded paper of the year in RNA**). (PMID: 11142374, PMCID: PMC1370044)

**Brodsky, A. S.**, Erlacher, H.A., and Williamson, J.R. (1998) "NMR Evidence for a Base Triple in the HIV-2 TAR-C-G.C+ Mutant Argininamide Complex", Nuc Acids Res, 26 1991-1995. (PMID: 9518494, PMCID: PMC147484).

**Brodsky, A. S.** and Williamson, J. R. (1997) "The Solution Structure of the HIV-2 TAR-Argininamide Complex" J. Mol. Biol. 267 634-649. (PMID: 9126842).

#### **5d. Non-refereed journal articles**

Brodsky, A. S. and Silver, P. A. "Identifying Proteins that Affect mRNA Localization in Living Cells" Methods 26 151-5 (2002).

Hennig, M., Williamson, J. R., Brodsky, A. S., and Battiste, J. L. "Recent Advances in RNA Structure Determination by NMR" Curr Prog in Nuc Acid Chem, 7.7.1-7.7.29 (2000).

Brodsky, A. S. and Silver, P. A. "Nuclear Transport HEATs Up", Nat Cell Biol, 1 E66-E67. (1999)

Tan, R., Brodsky, A., Williamson, J.R., and Frankel, A.D. "RNA Recognition by HIV-1 Tat and Rev" Seminars in Virology, 8 186-193 (1997).

#### **5e. Book Reviews**

None

#### **5f. Abstracts**

13. Ellermeier, C., Cleveland, K., Brodsky, A.S. and Resnick, M. "Differential MicroRNA Expression in Colorectal Cancer Patients Presenting with Synchronous Hepatic Metastases" U, nited States & Canadian Academy of Pathology's 102<sup>nd</sup> Annual Meeting, Abstract accepted.

12. Alexander S. Brodsky, Hsin-Ta Wu, Souriya Vang, Benjamin J. Raphael, and Laurent Brard "miRNA Regulators of Ovarian Cancer Metastasis that Predict Patient Outcomes" Noncoding RNAs and Cancer, Jan 8-11, 2012, Poster Presentation by Alexander S. Brodsky.

11. Alexander S. Brodsky, Hsin-Ta Wu, Souriya Vang, Benjamin J. Raphael, and Laurent Brard, "From Tumors to the Laboratory and Back Again: Genomic Analysis of Ovarian Cancer Metastasis Reveals a Predictive Gene Signature and Therapeutic Targets" Translation of the Cancer Genome, Oct 15-18, 2011, Poster Presentation by Alexander S. Brodsky.

10. Alexander S. Brodsky, Daniel H. Miller, Elijah Douglass, Souryia Vang, Andrew Fischer, Shannon MacLaughlan, Katrin Kristjansdottir, Margaret Steinhoff, Laurent Brard "Integrated

Genomics Reveals Candidate Metastatic Drivers of Ovarian Cancer” Cold Spring Harbor, N.Y. Apr 26-30, 2011. Poster Presentation by Alexander S. Brodsky.

9. Fischer, A., Kristjansdottir K, Miller, D. H., MacLaughlan S., Lapuk, A., Collins, C., Disilvestro, P., Steinhoff, M., Brard, L., Brodsky, A.S., Integrated Genomics Reveals Candidate Metastatic Drivers of Ovarian Cancer MRS/AACR Joint Conference on Metastasis and the Tumor Microenvironment, Sept 12-15, 2010. Poster Presentation by A. S. Brodsky.

8. Stuckey AR, Fischer A, Miller DH, Hillenmeyer S, Kim KK, Ritz A, Raphael BJ, Brard L, Brodsky AS. Developing an Integrated Genomic Approach to Explore the Antitumor Activity of Vitamin D and Derivatives to Treat Ovarian Cancer. 30<sup>th</sup> Meeting of the New England Association of Gynecologic Oncologists, Booth Bay, ME, Jun 11-13, 2010. Oral Presentation by AR Stuckey.

7. MacLaughlan S, Fischer A, Kristjansdottir K, Ritz A, Raphael B, Steinhoff M, Brodsky A, Brard L. Genetics of Primary and Metastatic Ovarian Cancer. 101<sup>st</sup> Annual AACR Meeting, Washington, DC, April 17- 21, 2010. Poster Presentation by L. Brard.

6. Stuckey AR, Kim KK, Singh RK, Fischer A, Miller D, Hillenmeyer S, Ritz A, Raphael B, Brodsky AS, Brard L. Developing an Integrated Genomic Approach to Explore the Antitumor Activity of Vitamin D and Derivatives to Treat Ovarian Cancer. 41<sup>st</sup> Annual Meeting of the Society of Gynecologic Oncologists, San Francisco, CA, March 14-17, 2010. Selected Oral Presentation by AR Stuckey.

5. Bronson, M. and Brodsky, A. S. (2009) “Estrogen Coordination of Protein Synthesis” Steroid Hormones in Cancer and Development Gordon Conference, Holderness, New Hampshire. Poster Presentation by A. S. Brodsky.

4. Bronson, M. and Brodsky, A. S. (2009) “Estrogen Coordination of Protein Synthesis” The 14<sup>th</sup> Annual Meeting of the RNA Society, Madison, WI. Poster Presentation by M. Bronson.

3. Brodsky, Alexander S. and Silver, Pamela A. (2004) “Mapping RNA-protein Interactions using ChIP-chip” RNA Processing Gordon Conference Andover, New Hampshire. Poster Presentation by A. S. Brodsky.

2. Brodsky, Alexander S. And Silver, Pamela June 1999 “The Role of Pab1p in mRNA Export” RNA 1999, 4<sup>th</sup> Annual Meeting of the RNA Society, Edinburgh, Scotland. Poster Presentation by A. S. Brodsky

1. Brodsky, A. S. and Willimason, J.R. (1996) “The Solution Structure of the HIV-2 TAR-arginine Complex” International Conference on Magnetic Resonance Keystone, CO. Poster Presentation by A. S. Brodsky.

### **5g. Invited Lectures**

\* An abstract of the talk was included in the meeting’s proceedings.

15. December 2011 “Ovarian Cancer Metastasis”, 6<sup>th</sup> Annual BioNES Conference Bristol, RI.

14. June 2011 “Translating Translation: Regulation of Protein Synthesis by Hormones and Metastasis”, SUNY Albany, Albany, N.Y.

13. March 2011 “Translating Translation: Regulation of Protein Synthesis by Hormones and Metastasis”, Roswell Park Cancer Institute, Buffalo, N.Y.
12. Feb 2011 “Translating Translation: Regulation of Protein Synthesis by Hormones and Metastasis”, Dartmouth College, Hanover, NH.
11. May 2010 “Genomic Remodeling in Ovarian Cancer Metastasis”, Vancouver General Hospital, Vancouver, Canada.
10. May 2010 “Post-Transcriptional Regulation by Estrogen”, University of California San Francisco Medical School. San Francisco, CA.
- \* 9. September 2007 “Hormone Regulated Expression and Splicing Using Exon and Junction Arrays”. RECOMB Computational Cancer Biology meeting, San Diego, CA.
8. August 2007 “Hormones, Cancer, and RNA Genomics”. Wellesley College, Wellesley, MA.
- \* 7. July 2006 “Using CHIP-chip to Explore Co-Transcriptional pre-mRNA Processing” ENCODE meeting, Bethesda, MD, 2006.
6. May 2004 “Coordination between RNA Processing and Transcription” Bowdoin College Biology Seminar Series, Brunswick, ME, 2004.
5. February 2003 “High Throughput Measurement of RNA-Protein Interactions” University of Pennsylvania Biochemistry seminar series, Philadelphia, PA.
- \* 4. June 2001 “Regulation of mRNA Export by Protein Methylation of Hrp1” RNA 2001, RNA society, Banff, Canada.
- \* 3. June 2000 “Analysis of mRNA Nuclear Export in Living Cells Reveals Distinct Pathways” RNA 2000, (RNA society) Madison, WI.
- \* 2. June 1998 “The Solution Structure of the HIV-2 TAR-Arginine Complex” HIV Structural Biology Meeting, NIH, Bethesda, MD.
1. March 1996 “The Solution Structure of the HIV-2 TAR-Arginine Complex” Macromolecular Structure Function Series, MIT, Cambridge, MA.

**5h. Papers Read**

n/a

**5i. Work in Review**

n/a

**5j. Work in Progress**

**5k. Patents**

Miller, D. H., Casella, C., Lynch, K., **Brodsky, A.S.** “Statins and Oxysterols in Drug Combinations for Treatment of Cancer” Pending 61/740,792.

Wu, H.T., Brard, L., and **Brodsky, A.S.** “MicroRNAs As Diagnostic Biomarkers And Therapeutics For Ovarian Cancer And Metastatic Tumors That Disseminate Within The Peritoneal Cavity”, Filed April 15, 2012, PCT/US2012/0333.

**6. Research Grants**

**6a. Active Funding**

The Mary Kay Foundation 7/1/2013-6/30/15  
*New Approaches to Target Mevalonate Synthesis for Ovarian Cancer*  
Role: PI

The goal of this project is to determine the role of SREBP-2 in mediating oxysterol statin synergy to treat ovarian cancer.

**6b. Completed Grants**

11. Brown University COBRE Center for Cancer Signaling Networks pilot funds  
“Dynamic Translational Profiling”

Principal Investigator: **Alexander S. Brodsky**

\$5,000, 4/1/2012-3/31/2013

This grant aims to measure the rate of association and dissociation with ribosomes for each mRNA using metabolic labeling and biochemical fractionation.

10. DOD CDMRP Idea Expansion Award

“Origins of DNA Replication and Amplification in the Breast Cancer Genome”

Principal Investigator: Susan Gerbi, **Co-principal investigators: Alexander S. Brodsky** and Ben Raphael

\$500,000, 9/1/2010-8/31/2012

This grant aims to map replication origins genome-wide in breast cancer.

9. Brown University COBRE Center for Cancer Signaling Networks pilot funds

“Mitochondrial Genomics of Cancer”

Principal Investigator: David Rand, **Co-principal investigators: Alexander S. Brodsky** and Ben Raphael

\$39,375, 8/1/2011-2/28/2012

This grant aims to determine the diversity of mitochondrial DNA in ovarian tumors and ovarian cancer cell lines in response to chemotherapy.

8. NIH/NCRR ARRA Supplement

“Mechanisms of cisplatin resistance in ovarian tumors”

Principal Investigator: Peter Smith, **sub-contract PI Alexander S. Brodsky**

\$244,000, 11/1/2009-10/31/2011

This grant aims to develop assays to measure cisplatin concentration and activity *in vivo* and to determine specific genes that mediate cisplatin efficacy in tumors.

7. Susan G. Komen Breast Cancer Foundation

“Role of estrogen in breast cancer gene amplification”

Principal Investigator: Susan Gerbi, **Co-principal Investigators: Alexander S. Brodsky** and Ben Raphael

\$480,000, 10/1/2008-9/30/2011

This grant aims to investigate how estrogen may directly regulate re-replication in breast cancer cells.

6. Ellison Medical Foundation

“An Integrated Genomic Approach to Probe Aging Gene Expression Programs”

**Principal Investigator, Alexander S. Brodsky**

\$200,000, 8/1/2007-7/31/2011

The goal of this grant is to determine the global changes and important regulatory mechanisms during using a variety of modern genomic strategies.

5. Women’s Center of Excellence Seed Award

“Exploring Cisplatin Sensitivity of Primary and Metastatic Ovarian Tumors”

**Principal Investigator, Alexander S. Brodsky**

\$20,000, 11/1/2008-10/31/2009

This grants aims to understand how genetic differences between primary and metastatic tumors may affect chemotherapy responses.

4. **DOD CDMRP Synergy IDEA Award**

“Hormonal involvement in breast cancer amplification”

Principal Investigator: Susan Gerbi, **Co-principal Investigators: Alexander S. Brodsky** and Ben Raphael

\$500,000, 9/1/2007-8/31/2009

This grant aims to test the role of estrogen in driving gene amplification in breast cancer.

3. **OVPR Research Seed Funding Award, Brown University.**

“Developing an integrated genomic approach to explore the antitumor activity of vitamin D and derivatives to treat ovarian cancer”

**Principal Investigator, Alexander S. Brodsky**

\$90,000, 3/2007-2//2008

The goal of this grant is to lay the foundation for the development of ovarian cancer therapeutics by understanding drug mechanism through global analysis.

2. **Genome Scholar Award, 7 K22 HG002488, NHGRI, NIH**

”Genome Wide Protein-RNA Interactions”

**Principal Investigator, Alexander S. Brodsky**

\$1,050,500, 9/2003-8/2008

The goal of this grant is to develop approaches to map RNA-protein interactions and gain insight into post-transcriptional regulation.

1. **Pilot/Feasibility Study Grants 2006, Center for Molecular Toxicology RI-INBRE Program**

“Exploring Nucleocytoplasmic Shuttling of Metabolic Enzymes”

**Principal Investigator, Alexander S. Brodsky**

\$15,000, 5/2006-4/2007

The goal of this grant is to determine the how metabolic enzymes move between the nucleus and cytoplasm.

**6c. Proposals Submitted/under review**

1. NIH/NCI

“Mevalonate Metabolism in Ovarian Cancer”



The goal of this proposal is to determine how mevalonate biosynthesis is regulated and the function of the master transcription regulator SREBP-2 in ovarian cancer cell survival.

**6d. Proposals in Preparation**

1. NIH/GM

“Coordination of Gene Expression from the Nucleus to the Polysomes”

Principal Investigator: Alexander S. Brodsky

The goal of this grant is to investigate how multiple levels of gene expression work together and how this coordination differs in proliferating and growth arrested cells.

**7. Service**

**7a. Service to the University**

2010-2011	MCB executive committee
2010	Chair MCB department retreat
2009	vice-chair MCB department retreat
2008-2009	MCB graduate program admission committee
2008-2009	Systems Biology faculty search committee
2007	MCB executive committee
2006-2007	MCB graduate program admission committee

**7b. Service to the Profession**

**1) Grant Review**

**Ad-hoc external reviewer, 2010**

January 2010 United States-Israel Binational Science Foundation.

**Ad-hoc external reviewer, 2008**

October 2008 NSF

**Ad-hoc external reviewer, 2007**

October 2007 NSF

**Ad hoc external reviewer, 2006**

October 2006 NSF

**2) Journals and Textbooks**

Reviewer for Journals, 2005-present

Nature Methods (1)

PNAS (1)

International Journal of Cancer (2)

PLoS One (>5)

Cancer Research (1)

BMC Cancer (1)

**3) Reviewer of Textbooks**

None

**7c) Chair of Meeting Symposium**

None

**7d) Outside reader for Ph. D. thesis defense**

None

**7e) Professional Societies**

2007-present RNA Society  
1993-present AAAS

**7f) Reagent Made on Market**

None

**8. Academic Honors and Awards**

**8a. Fellowships**

4. 2003-2005 NHGRI Genome Scholar  
3. 2001-2003 Claudia Adams Barr Fellowship  
2. 1999-2002 Ruth L. Kirschstein National Research Service Award (NRSA), NIH  
1. 1992 Phi Beta Kappa

**8b. Awards**

2. 2002 Best new and innovative project, DFCI Cancer Biology retreat  
1. 2000 RPI/RNA Award for Young Scientists for most significant paper in RNA

**8c. Honors and Awards Received by Students and Trainees**

*Graduate Students*

2007 Selena Gell, Brown University, *National Science Foundation Graduate Research Fellowship, Honorable Mention*

*Undergraduate Students*

2006 Jolene Draper, Brown University, UTRA Fellow  
Dipal Shah, Brown University, UTRA Fellow  
2007 Rashidah Green, Brown University, UTRA Fellow  
Matt Akamatsu, Brown University, UTRA Fellow  
2009 Daniel Miller, Brown University, UTRA Fellow  
Katrina Chu, Brown University, SRA Fellow  
2010 Risa Burr, Brown University, UTRA Fellow  
2011 Lauren Comisar, Brown University, UTRA Fellow  
Kerry Lynch, Brown University, UTRA Fellow  
2012 Wesley Duran, Brown University, UTRA Fellow  
James Zhang, Brown University, UTRA Fellow

**9. Teaching**

**9a. Graduate Training & Teaching Activities**

1) *Advisor for Ph.D. Thesis Research/Graduate Student Trainees*

**1. Michael Bronson June, 2006 – August, 2010**

Position Graduate Student, Molecular Biology, Cell Biology and Biochemistry, Brown University, 2005 – present (B.S., Southern Connecticut State University)

Thesis Project: Identification of Post-Transcriptional Regulation by Estrogen in Breast Cancer

2) *Rotating Graduate Student Trainees*

**5. Katherine Watkins**

Position Molecular Biology, Cell Biology and Biochemistry, Brown University, 2008 (BA, Skidmore College)

Research Project: Nuclear Receptor Signaling Mediating Tamoxifen Resistance Mechanisms

**4. Yuko Hasegawa**

Position: Molecular Biology, Cell Biology and Biochemistry, Brown University, 2007, (BS, Univ. of Wyoming)

Research Project: Determine Co-Transcriptionally Bound RNAs using RNA-ChIP

**3. Anupriya Dutta**

Position: Graduate Student, Molecular Biology, Cell Biology and Biochemistry, Brown University, 2007 (B.S., Rutgers University)

Research Project: Determine Co-Transcriptionally Bound RNAs using RNA-ChIP

**2. Selena Gell**

Position: Graduate Student, Molecular Biology, Cell Biology and Biochemistry, Brown University, 2006 (B.A., Brandeis University)

Research Project: Determine Co-Transcriptionally Bound RNAs using RNA-ChIP

**1. Michael Bronson**

Position: Graduate Student, Molecular Pharmacology and Physiology, Brown University, 2005 (B.S., Southern Connecticut State University)

Research Project: Estrogen Regulation of Alternative Splicing

3) *Member of PhD Advisory & Thesis Committee*

**10. Hsin-Ta Wu** Brown University CCMB Graduate Program, 2011-Present  
Thesis Advisor: Benjamin Raphael

**9. John Urban** Brown University MCB Graduate Program, 2011-2012  
Thesis Advisor: Susan Gerbi

**8. Waihong Chung** Brown University Pathology Graduate Program, 2011-2013  
Thesis Advisor: Jack Wands

**7. Jennifer Wardell** Brown University Pathology Graduate Program, 2011-Present  
Thesis Advisor: Richard Freiman

- 6. Eric Lim** Brown University MCB Graduate Program, 2007-2011  
Thesis Advisor: William Fairbrother
- 5. Edward Peckham** Brown University MCB Graduate Program, 2007-2012  
Thesis Advisor: John Sedivy
- 4. Yuko Hasegawa** Brown University MCB Graduate Program, 2007-2012  
Thesis Advisor: Mitch Sogin
- 3. Steve Rhieu** Brown University Biomedical Engineering, 2007-2011  
Thesis Advisor: Tayhas Palmore
- 2. Chui Sun Yap** Brown University MCB Graduate Program, 2007-2008  
Thesis Advisor: John Sedivy
- 1. Heng Lian** Brown University Applied Mathematics, 2007  
Thesis Advisor: Charles Lawrence

4) *Member of Master's Advisory & Thesis Committee*  
None

**9b. Undergraduate Training & Teaching Activities**

1) Advisor for Undergraduate Independent Study & Senior Honors Thesis (Bio195/196)

**12. Wesley Durand**

Position: Brown University Student Research Assistant

January 2012-September 2012

Research Project: Identifying miRNAs associated with metastasis in colorectal cancer

Awards - *UTRA fellow, Summer 2012*

**11. James Zhang**

Position: Brown University Student Research Assistant

January 2012-July 2012

Research Project: Developing metastatic biomarkers to predict patient survival

Awards - *UTRA fellow, Summer 2012*

**10. Lauren Comisar**

Position: Brown University Undergraduate Student Research Assistant, Senior,

Sept-2011-May 2012

Research Project miRNAs mediating ovarian cancer metastasis

Awards —*UTRA Fellow, Summer 2011*

—*Honors Senior Thesis completed May 2012, with a grade of 'A'*

**9. Kerry Lynch**

Position: Brown University Undergraduate Student Research Assistant, Senior,

Sept-2011-May 2012

Research Project Development of New Combination Therapy for Ovarian Cancer

Awards —*UTRA Fellow, Summer 2011*

—*Honors Senior Thesis completed May 2012, with a grade of 'A'*

**8. Risa Burr**

Position: Brown University Undergraduate Student Research Assistant, Junior,  
Sept 2009-Dec 2010  
Research Project: Estrogen Regulation of mRNA Nuclear-Cytoplasmic Transport  
Awards —*UTRA Fellow, Summer 2010*  
—*Honors Senior Thesis completed May 2011, with a grade of 'A'*

**7. Katrina Chu**

Position: Brown University Undergraduate Student Research Assistant, Senior  
May 2009-Dec 2009  
Research Project: LXR Signaling Protects Ovarian Cancers from Chemotherapy  
Awards —*SRA Fellow, Summer 2009*

**6. Daniel Miller**

Position: Brown University Undergraduate Student Research Assistant, Senior,  
Jan 2008-Dec 2009  
Research Project: Nuclear Receptor Signaling Mediating Chemotherapy in Ovarian  
Cancer Cells  
Awards —*UTRA Fellow, Summer 2009*

**5. Rashidah Green**

Position: Brown University Undergraduate Student Research Assistant, Senior, October  
2006 – Present  
Research Project: Identifying RNA Binding to LDH  
Awards —*UTRA Fellow, Summer 2007*

**4. Mathew Akamatsu**

Position: Brown University Undergraduate Student Research Assistant, January 2007-August  
2007  
Research Project: Nuclear Localization of Metabolic Enzymes  
Brief Description: From the work of Jolene and Geoff, Matt aimed to verify and extend their findings  
on kinases and conditions that affected LDH localization.  
Awards —*UTRA Fellow, Summer 2007*

**3. Jolene Draper**

Position: Brown University Undergraduate Student Research Assistant, January 2006 –  
May 2007  
Research Project: Nuclear Localization of Metabolic Enzymes  
Brief Description: Jolene investigated how kinases and stress conditions may affect nuclear  
localization of GAPDH, LDH and SirT1.  
Awards —*UTRA Fellow, Summer 2006*

**2. Geoffrey D'Cruz**

Position: Brown University Undergraduate Student Research Assistant, October 2006 –  
May 2007  
Research Project: Nuclear Localization of Metabolic Enzymes  
Brief Description: Geoff investigated how kinases may affect nuclear localization of lactate  
dehydrogenase which may be a novel mechanism to control cell growth.  
Awards —*Honors Senior Thesis completed May 2007, with a grade of 'A'*

**1. Dipal Shah**

Position: University Undergraduate Student Research Assistant, Sophomore,  
January 2006-August 2006

Research Project Developing conditions for siRNA Screening

Awards: — *UTRA Fellow, Summer 2006*

*2) Advisor for Undergraduate Initiatives*

2006-2008 International Genetically Engineered Machines (iGEM) Advisor  
iGEM is a group of undergraduates that works during the semester and during the summer on truly independent novel projects in synthetic biology. I advise and help coordinate their activities.

**9c. Brown Course Teaching**

Ratings: 1 is high, 5 is low

**2012**

Biol1270 Advanced Biochemistry  
Course Leader: Alexander Brodsky  
Enrollment: 27  
Course Evaluation: 1.95 (22/22 undergraduate 3.00 (5/5/ graduate)  
Teach Evaluation: 2.14 (22/22 undergraduate 2.80 (5/5graduate)

**2011**

Biol1270 Advanced Biochemistry  
Course Leader: Alexander Brodsky  
Enrollment: 16  
Course Evaluation: 1.73 (15/15 undergraduate 1.00 (1/1/ graduate)  
Teach Evaluation: 1.93 (14/15 undergraduate 1.00 (1/1 graduate)

**2010**

Biol1270 Advanced Biochemistry  
Co-course Leaders: Alexander Brodsky and Rebecca Page  
Enrollment: 24  
Course Evaluation: 2.11 (18/22 undergraduate) 3.0 (2/2 graduate)  
Teach Evaluation: 2.5 (18/22 undergraduate) 1.5 (2/2 graduate)

Biol 2290B Mechanisms of Protein Synthesis and Impact on Human Disease

Course Leader: Alexander Brodsky  
Enrollment: 3  
Course Evaluation: 3.00 (2/3 graduate)  
Teach Evaluation: 2.50 (2/3 graduate)

**2009**

Biol 1270 Advanced Biochemistry  
Co-course Leaders: Alexander Brodsky and Rebecca Page  
Enrollment: 15  
Course Evaluation: 2.50 (8/14 undergraduate) 1.0 (1/1 graduate)  
Teach Evaluation: 2.75 (8/14 undergraduate) 1.0 (1/1 graduate)

Biol 2290B Dissection of Genetic and Molecular Mechanisms

Co-course Leaders: Tricia Serio, Michael McKeown, Alexander Brodsky  
Enrollment: 4

Biol 154 Molecular Genetics  
Guest Lecturer  
Enrollment: 30

**2008**

Biol 2490A Nuclear Receptors  
Co-course Leaders: Alexander Brodsky and Michael McKeown  
Enrollment: 6  
Course Evaluation: 1.2  
Teaching Evaluation: 1.17

Biol 1270 Advanced Biochemistry  
Co-course Leaders: Alexander Brodsky and Rebecca Page  
Enrollment: 13  
Course Evaluation: 1.83  
Teaching Evaluation: 2.5

Biol 2130 Techniques in Molecular & Cellular Sciences  
Guest Lecturer  
Enrollment: 8

**2007**

Biol 127 Advanced Biochemistry  
Co-course Leaders: Alexander Brodsky and Rebecca Page  
Enrollment: 27  
Course Evaluation: 2.2  
Teaching Evaluation: 2.9

Biol 154 Molecular Genetics  
Guest Lecturer  
Enrollment: 30

Biom 286 Molecular Mechanisms of Human Disease  
Guest Lecturer  
Enrollment: 8

Biol 213 Techniques in Molecular & Cellular Sciences  
Guest Lecturer  
Enrollment: 8

**2006**

Biol 127 Advanced Biochemistry  
Co-course Leaders: Alexander Brodsky and Rebecca Page  
Enrollment: 20  
Course Evaluation: 1.99  
Teaching Evaluation: 2.77

Biol 154 Molecular Genetics

Guest Lecturer  
Enrollment: 40

Biol 213      Techniques in Molecular & Cellular Sciences  
Guest Lecturer  
Enrollment: 10