**CURRICULUM VITAE**

**SUSAN J. BASERGA, M.D., Ph.D.**

**October 2021**

**EDUCATION**

B.S. *summa cum laude* with honors in Biology Yale College 1980

M. Phil. Dept. of Human Genetics Yale University 1984

M.D. *cum laude* Yale School of Medicine 1988

Ph.D. Dept. of Human Genetics Yale University 1988

**CAREER**

1988-1993 Post-doctoral fellow, Dept. of Molecular Biophysics & Biochemistry, laboratory of Joan Steitz, Ph.D., Yale University, New Haven, CT

1993-1999 Assistant Professor, Depts. of Therapeutic Radiology and Genetics, Yale School of Medicine, New Haven, CT

1999-2002 Associate Professor (Term), Depts. of Therapeutic Radiology and Genetics, Yale School of Medicine, New Haven, CT

2002-2007 Associate Professor (Tenure), Depts. Of Molecular Biophysics & Biochemistry, Genetics and Therapeutic Radiology, Yale University, New Haven, CT

2007- Professor, Depts. of Molecular Biophysics & Biochemistry, Genetics and Therapeutic Radiology, Yale University, New Haven, CT

2020- William H. Fleming MD Professor of Molecular Biophysics & Biochemistry

**ADMINISTRATIVE POSITIONS**

1998-2009 Associate Director for Academic Development, Yale MD/PhD program, Yale School of Medicine

2002-present Director of Medical Studies, Dept. of Molecular Biophysics & Biochemistry, Yale School of Medicine

2012-2020 Program Director, Predoctoral Program in Cellular and Molecular Biology, Yale University

2020-present Program Director, Predoctoral Program in Cellular, Molecular and Quantitative Biology, Yale University

**PROFESSIONAL HONORS AND RECOGNITION**

2018 Elected, National Academy of Inventors

2018 Winner, Connecticut Technology Council Woman of Innovation in Research & Leadership

2017, 2018 Connecticut Technology Council Woman of Innovation Finalist

2016 William C. Rose Award from the American Society for Molecular Biology and Biochemistry for outstanding contributions to biochemical and molecular biological research and a demonstrated commitment to the training of younger scientists

2014-2015 Bohmfalk Scholar in Medical Research

2014 The Charles W. Bohmfalk Prize for basic science teaching at the Yale School of Medicine (also nominated in 2008, 2010)

2012 Elected, Connecticut Academy of Science and Engineering

2007 Folkers Lecture on Biomedical Research, Yale MD/PhD Program

1988-1991 Leukemia Society of America Fellow

1988 AOA, Yale School of Medicine

1988 Medical Scientist Training Program Award for outstanding academic achievement in the MD/PhD program, Yale School of Medicine

1988 Janet M. Glasgow Memorial Achievement Citation from the American Medical Women's Association for scholastic achievement, Yale School of Medicine

1980 Edgar J. Boell Prize for Excellence in Biology, Yale College

1979 Phi Beta Kappa, Yale College

**FUNDING**

ACTIVE

**1R35GM131687** Baserga, PI 04/01/2019-03/31/2024

Novel regulatory networks driving human ribosome biogenesis $378,400

We willpinpoint how ribosomes are made in human cells, how this critical process is regulated in different tissues and diverse cell types throughout embryonic development, and how failures in this process lead to the human diseases of making ribosomes. Role: PI

RECENT COMPLETED RESEARCH SUPPORT

**Breast Cancer Alliance Exceptional Project Grant** Baserga, PI 02/02/2019-01/31/2020

Targeting the Nucleolus for Breast Cancer Therapy $100,000

We propose to apply a novel, highly quantitative, image-based cellular assay to small molecule discovery for breast cancer therapeutics. Role: PI

**1R01GM115710** Baserga, PI 09/01/2015-05/31/2019 (NCE)

Key factors in human ribosome biogenesis $240,000

The objective of this application is to undertake a focused, in-depth approach to investigate the molecular basis of a putative ribosomopathy, North American Indian Childhood Cirrhosis (NAIC), and in doing so further probe how ribosomes are made in human cells. Role: PI

**1R01GM122926** Baserga, PI 09/11/2017-08/31/2019 (NCE)

A new role for the PAX9 protein in ribosome biogenesis $190,000

This proposal is designed to answer important questions about the function of the PAX9 protein, a protein that when mutated causes the absence of most or all of the adult teeth as well as other facial malformations in families worldwide. Role: PI

**1R01GM122926 Diversity supplement** Baserga, PI 03/01/2019-8/31/2020 (NCE)

$22,575

This supplement is to support the work and education of an African-American Yale undergraduate, Maya Overton, in my laboratory. Role: PI, Mentor

**T32GM007223-45** Predoctoral Program in Cellular and Molecular Biology 07/01/2015-6/30/2020

Baserga, PI $1,368,408

This program continues to provide graduate students in several academic departments with rigorous experimental and intellectual training in a broad range of research projects that emphasize molecular and mechanistic approaches to studying basic biological questions. Role: Program Director, trainer

**T32 GM007223-42S1 Administrative Supplement** Baserga, PI 2016-2017

Predoctoral Program in Cellular and Molecular Biology $79,741

To develop a new course for PhD and MD/PhD students in Skill Development for Diverse Scientific Careers

Role: PI, course organizer, lecturer

RECENT STUDENT FELLOWSHIPS

5F30 DK109582 Samuel Sondalle, PI 04/01/2016-03/31/18

NIH/NIDDK $28,224

**Probing the pathogenesis of North American Indian Childhood Cirrhosis**

Role: Sponsor/mentor

1F31DE026946Katherine Farley, PI 05/01/2017-4/30/2019

NIH/NIDCR $37,976

**PAX9, ribosome biogenesis and congenital disease**

Role: Sponsor/mentor

1F31AG058405 Lisa Ogawa McLean, PI 01/01/2018-09/30/20

NIH/NIA $44,040

**The intersection of Alzheimer’s disease and ribosome biogenesis**

**through Amyloid Beta Precursor Protein Binding Family B Member 1**

**(APBB1; FE65)**

Role: Sponsor/mentor

NASA Connecticut Space Grant Consortium Cecelia Harold, PI 10/31/19-5/30/20

**Defining a new understanding of breast cancer development in women** $8,000

**for long-term space missions**

Role: Sponsor/mentor

NSF Graduate Research Fellowship Cecelia Harold, PI 2020-2023

F31DE030332 Mason McCool, PI 09/20/2020-09/28/2023

**CRK regulation of ribosome biogenesis and craniofacial development** $46,320

Role: Sponsor/mentor

**TEACHING COMMITMENTS DISCHARGED**

**Director of Medical Studies, MB&B (since 2002)**

**MBB 550a and MBB 800a Molecules to Systems course (medical biochemistry)-** **Course Director/Thread Leader, Lecturer and Conference/Workshop Facilitator.** The biochemistry portion of this course consists of 20 lectures and 11 biochemistry conference sections. I give 12 X 50 minute lectures. I am the Conference Section Facilitator for one of the MBB800a advanced biochemistry small group sections that meets 11 X 80 minutes. I have been Course Director and Lecturer every year since 2002 and Conference Facilitator in MBB800a every year since 2010.

**MBB676b Responsible Conduct of Research-Course Director, lecturer-**1 lecture onpresenting data to the scientific community: manuscripts, databases and publication since 2002. I have been **Course Director/Organizer** since 2011.

**B&BS 550b Skill Development for Diverse Scientific Careers-Course Director, lecturer-**In 2016 Iwrote and was granted an Administrative Supplement for the parent training grant that I am Program Director of, T32 GM007223, to develop a new course for our graduate students in the biological sciences. It launched in the spring of 2017 and was repeated in the spring of 2019 with co-organizers Tony Koleske and Barbara Kacmierzcak.

**MBB Qualifying Exam and Fellowship Writing Workshops for MB&B graduate students**-yearly 2002-2013, 2015

**CBIO/GENE/MCDB 901b First Year Introduction to Research Ethics: Scientific Integrity in Biomedical Research-Course Director**-led 8 X 1 hour sessions, yearly 1997-2007.

**Laboratory trainee totals:** Graduate students: 6 current; 15 graduate students who have completed their PhDs all of whom are engaged in science-related careers. Post-doctoral fellows: 8, all of whom are engaged in science-related careers. Undergraduate/high school/post-bacc: 1 current; 22 past. Under-represented group trainees: current: 1 graduate student; past: 2 graduate students, 3 undergraduates, 1 high school student. The high school student and one of the undergrads had Diversity Administrative Supplements on my NIH grant.

**2020-2021 Ph.D. students:** Lisa Ogawa McLean (MB&B); Mason McCool (MB&B); Carson Bryant (MB&B); Cecelia Harold (Genetics), Yan Chang (Genetics), Tyler Brown (Genetics), Courtney Brown (MB&B).

**2020-2021 Post-doctoral fellows**: Emily McFadden, PhD (Duke University); Emily Sutton (University of Oregon)

**Qualifying exam committees 2020-**Brigitte Naughton, MB&B; Corben Renken, Cell Biology.

**Qualifying exam committees 2021-**Matthew Wang, MBB; Ranuka Ramanathan, MCDB.

**Graduate student thesis committees 2020-2021-** Cole Lewis (MB&B); Ephrath Tesfaye (MCDB); Dahyana Arias Escayola (MB&B); Justin Toh (Microbiology); Corben Renken (Cell Biology).

**Mentoring of junior faculty-**Elizabeth Tran, PhD, Associate Professor at Purdue University, aided in R01 re-submission; “official” mentor for Carson Thoreen, PhD, Associate Professor of Cellular and Molecular Physiology, Yale University School of Medicine; Hui Zhang, MD, PhD, Assistant Professor of Genetics and Pediatrics, Yale University School of Medicine; Wendy Gilbert, PhD, Associate Professor of Molecular Biophysics & Biochemistry, Yale University; member of mentoring committees for Kai Zhang and Lily Kabeche, both Assistant Professors in Molecular Biophysics & Biochemistry, Yale University; Franziska Bleichert, Assistant Professor in MB&B.

**PROFESSIONAL SERVICE**

**Peer Review Groups/Grant Study sections/National Committees**

2021 Expert panelist for setting passing standards for Step 1 of the National Board of Medical Examiners licensing examination for medical students (basic science)

2021-present ASBMB representative to the Council of Faculties and Academic Societies of the AAMC

2020, 2021 Grant reviewer for the Breast Cancer Alliance

2019-present Co-founder and Chair, Women in Biochemistry and Molecular Biology Committee; American Society for Biochemistry and Molecular Biology.

2018-2022 Permanent member, NIH Molecular Genetics A study section

2017 NIH Cellular and Molecular Biology of Neurodegeneration

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2016-2022 Public Affairs Advisory Committee, American Society for Molecular Biology and Biochemistry

2016 Beckman Scholars Program Advisory Panel (reviewed approx. 30 institutional applications for this nationwide undergraduate science program)

2016, 2017 Women of Innovation Committee, Connecticut Technology Council (reviewed for yearly awards to CT women scientists and engineers)

2016 Reviewer, First Aid for the Basic Sciences textbook, Biochemistry

2015 Fellowship review panel for F05 U Cell Biology, Developmental Biology and Bioengineering, CSR, NIH

2015, 2011, 2009, 2005

Biochemistry Subject Examination for National Board of Medical Examiners-Reviewer

2013 Special Emphasis Panel for training grant review, NIGMS, NIH.

2012 Special Emphasis Panel for training grant review, NIGMS, NIH. Chair.

2011 NIH P41 review panel-National Resource for Automated Molecular Microscopy, The Scripps Research Institute, La Jolla, California

2007-2012 Member, Biomedical Research and Research Training (BRT-A) study section for training grant review, NIGMS, NIH

2006 Special Emphasis Panel for training grant review, NIGMS, NIH

2006 ad hoc grant reviewer for NIH Molecular Genetics A study section

2005 ad hoc grant reviewer for NIH Molecular Genetics A study section

1997-2008 Member, Research Careers in Minority Institutions Program, External Advisory Committee, University of Puerto Rico

1993-present ad hoc grant reviewer for the National Science Foundation (NSF); the Medical Research Council of Canada; the Netherlands Organization for Scientific Research, Wellcome Trust, The Austrian Science Fund, The Leverhulme Trust and the Medical Research Council, UK, The Swiss National Science Foundation

1992Co-chair of a working group on the education of women in science (undergraduate through doctoral), Women in Biomedical Careers: Dynamics of Change, sponsored by the Office of Research on Women's Health, National Institutes of Health, June.

**Journal Service**

1993-present Reviewer for: *BBA***,** *Blood, Cell/Molecular Cell, EMBO J., EMBO Reports, Experimental Cell Research, Gene, Genes and Development, Journal of Biological Chemistry, Journal of Cell Biology, International Journal for Parasitology, Molecular and Cellular Biology, Molecular Biology of the Cell, RNA, Nucleic Acids Research, Physiological Genomics, Trends in Biochemical Sciences, Trends in Cell Biology, Proceedings of the National Academy of Sciences USA, Science, Nature Structure and Molecular Biology*

**Professional Organizations**

Membership: RNA Society, American Society for Biochemistry and Molecular Biology, American Society for Cell Biology, American Society for Microbiology, The Beaumont Medical Club, Yale History of Medicine.

**Meeting Planning**

2021 Session chair, Emerging Roles for the Nucleolus, ASBMB

2019 Session chair and co-author of meeting proceedings, Emerging Roles for the Nucleolus, ASBMB.

2017 Session chair and co-author of meeting proceedings, Emerging Roles for the Nucleolus, ASBMB.

2010, 2012 Co-organizer, Wellcome Trust Sub Nuclear Structures and Disease, Hinxton, UK

2009 Co-organizer, Ribosome Synthesis meeting, Regensburg, Germany

2006 Organizer, 7th International Conference on Ribosome Synthesis, Airlie Conference Center, Virginia

2004 RNA Society meeting, session chair

2003 Organizer, 6th International Conference on Ribosome Synthesis, Arcachon, France

**Yale University Service**

**FAS Committees**

2018 Reviewer, Keck Foundation Internal Proposals

2018-2021 Graduate School of Arts and Sciences Executive Committee

2015-2018 Cryo-EM Search Committee, Dept. MB&B

2015-2016 Science Teaching Fellows Working Group

2015-2016 Physical Sciences and Engineering Tenure Appointments Committee (PSETAC)

2013-2014 University Budget Committee

2012-present Yale Center for Molecular Discovery Advisory Board

2010-2011 Graduate School Faculty Advisory Committee

2009-2011 Biological Sciences Advisory Committee (BSAC/TACBS)

2009-2010 Committee on Regulations and Discipline, Graduate School

2008-2017 Beckman Scholars Program, Chair (for undergraduate scientific research)

2008-2009 NEASC reaccreditation committee Standard Five “Faculty”

2006-2011 Steering Committee, Yale College

2006-2011 HHMI Undergraduate Science Program Steering Committee

2006-2007 Teaching Support Committee

2004-2009 STARS Advisory Committee

**School of Medicine**

2021-present Advisory Council, Office of Physician-Scientist and Scientist Development

2015 Reviewer for Yale Discovery Fund Letters of Intent for the Yale Cancer Center

2015, 2016 Reviewer for the Rudolph J. Anderson Postdoctoral Fellowship for "... research and investigation in biochemistry..."

2012 Committee chair and reviewer, Leslie Ann Warner Fellowship Grants, Yale Cancer Center

2012-2018 Genetics Graduate Education Steering Committee

2011-2016 Cancer Biology Initiative Steering Committee and Search Committee

2007-present Preclinical Course Directors' Committee/Course Director and Thread Leaders

2007-2008 Search Committee, Chair of Cell Biology

2006-2007 LCME Medical Students Committee

2005-2009 Yale Council on the Medical Humanities and the Arts

2005 Search Committee, Chair of Laboratory Medicine

2004-present Predoctoral Training Program in Genetics, Executive Committee

2004 Educational Mission Task Force

2003-present Medical Library Committee (current Chair)

2002-2005 Funds and Fellowships Committee

2002 Search Committee, Cancer Center Director

2000-2009 Member, Executive Committee and Reviewer, Anna Fuller Fund Fellowship Grants

2000-2005 Reviewer, Leslie Ann Warner Fellowship Grants, Yale Cancer Center

2000-2001 Tercentennial Committee

1999-present Executive Committee of the Association of Yale Alumni in Medicine

1999 Search Committee, Deputy Dean for Education

1998 Basic Science Liaison, Donaghue Women’s Health Initiative

1991-2009 MD/PhD program admissions committee

1990-present Yale Graduate School Alumni Fund Agent, Dept. of Genetics

1985-2008 Dean's Board on Sexual Harassment (finished as Chair)

1980-2000 Committee on the Status of Women

**Patents:**

To Yale University, "Genetically Engineered Low Oxygen Affinity Mutants of Human Hemoglobin" James J. Fischer and Susan J. Baserga, co-inventors (#5,173,426 on 12/22/ 1992).

To Yale University, “Method for increasing tissue oxygenation using...” James J. Fischer and Susan J. Baserga, co-inventors (#5,770,560 on 6/23/1998).

**BIBLIOGRAPHY**

**Scientific/medical papers**

**Peer-reviewed original research**

1. Rossini, M., **Baserga, S.**, Huang,C.H., Ingles, C.J., and Baserga, R. Changes in RNA Polymerase II in a cell cycle-specific temperature sensitive mutant of hamster Cells. J. Cell Phys. (1980) 103:97-103.

2. **Baserga,S.J.**, Linnenbach,A.J., Malcolm,S., Ghosh,P., Malcolm,A.D.B., Takeshita,K., Forget,B.G., and Benz,E.J., Jr. Polyadenylation of human mitochondrial ribosomal RNA transcripts detected by molecular cloning. Gene (1985) 35:305-312.

3. **Baserga,S.J.** and Benz,E.J., Jr. Nonsense mutations affect ß Globin mRNA metabolism. Proc.Natl.Acad.Sci.USA (1988) 85:2056-2060.

4. Atweh,G., **Baserga,S.J.** and Brickner,H.E. Detecting small mutations in expressed genes by a combination of S1 Nuclease and RNase A. Nuc. Acids Res. (1988) 16:8709.

5. Magnus,T., **Baserga,S.J.**, Stolle,C., Takeshita,K. and Benz,E.J., Jr. Metabolism of non translatable mRNAs arising from premature termination codons. Annals N.Y. Acad.Sci. (1990) 612:55-66.

6. **Baserga,S.J.**,Yang,X.W. and Steitz,J.A. An intact Box C sequence is required for binding of fibrillarin, the protein common to the major family of nucleolar snRNPs.EMBO J. (1991) 10:2645- 2651.

7. **Baserga,S.J.**, Yang,XW. and Steitz,J.A. Three pseudogenes for human U13 snRNA belong to class III. Gene (1991) 107:347-348.

8. **Baserga,S.J.** and Benz,E.J.,Jr. ß-Globin Nonsense Mutation: Deficient accumulation of mRNA occurs despite normal cytoplasmic stability. Proc.Natl.Acad.Sci. USA (1992) 89:2935-2939.

9. **Baserga,S.J.**, Gilmore-Hebert, M. and Yang,X.W. Distinct molecular signals for nuclear import of the nucleolar snRNA, U3. Genes Dev. (1992) 6:1120-1130.

10. Dunbar,D.A., Ware,V.C. and **Baserga,S.J.** The U18 small nucleolar RNA is not essential for pre-rRNA processing in *Xenopus laevis* oocytes. RNA (1996) 2:324-333.

11. Dunbar,D.A., Wormsley,S., Agentis,T.M. and **Baserga,S.J.** Mpp10p, a U3 small nucleolar ribonucleoprotein component required for pre-18S rRNA processing in yeast. Mol. Cell. Biol. (1997) 17:5803-5812.

12. Lee,S.J. and **Baserga,S.J.** Functional separation of pre-rRNA steps revealed by truncation of the U3 small nucleolar ribonucleoprotein component, Mpp10. Proc. Natl.Acad.Sci. USA (1997) 94:13,536-13,541.

13. Westendorf,J.M., Konstantin,K.N., Wormsley,S., Shu,M.D., Matsumoto-Taniura,N., Pirollet,F., Klier,F.G., Gerace,L., and **Baserga,S.J.** M phase phosphoprotein 10 (MPP10) is a human U3 snoRNP component. Mol. Biol. Cell (1998) 9:437-449.

14. Dunbar,D.A. and **Baserga,S.J.** The U14 snoRNA is required for 2’-O-methylation of the pre- 18S rRNA in Xenopus oocytes. RNA (1998) 4: 195-204.

15. Lee, S.J. and **Baserga, S.J.** Imp3p and Imp4p: two specific components of the U3 small nucleolar ribonucleoprotein that are required for pre-18S rRNA processing. Mol. Cell. Biol. (1999) 19:5441-5442.

16. Lyman, S.K., Gerace, L. and **Baserga, S.J.** Human Nop5/Nop58 is a component common to the box C/D small nucleolar ribonucleoproteins. RNA (1999) 5:1597-1604.

17. Dunbar, D.A., Wormsley, S., Lowe, T. and **Baserga, S.J.** *Trypanosoma brucei* has many box C/D small nucleolar RNAs with the potential to guide 2’-0-ribose methylation of rRNA. J. Biol. Chem. (2000) 275 :14767-14776.

18. Dunbar, D.A., Chen, A.A., Wormsley, S. and **Baserga, S.J.** The genes for small nucleolar RNAs in *Trypanosoma brucei* are organized in clusters and are transcribed as a polycistronic RNA. Nuc. Acids Res. (2000) 28: 2855-2861.

19. Dunbar, D.A., Dragon, F., Lee, S.J. and **Baserga, S.J.** A nucleolar protein related to ribosomal protein L7 is required for an early step in large ribosomal subunit biogenesis. Proc. Natl. Acad. Sci. USA (2000) 97: 13027-13032.

20. Wormsley, S., Samarsky, D.A., Fournier, M.J., and **Baserga, S.J.** An unexpected, conserved segment of the U3 snoRNA is required for Mpp10p association. RNA (2001) 7:904-919.

21. Yang, J.M., **Baserga, S.J.**, Turley, S.J., and Pollard, K.M. Non-fibrillarin snoRNP proteins are targets of autoantibodies in xenobiotic-induced autoimmunity. Clin. Imm. (2001) 101:38-50.

22. Wehner, K.A. and **Baserga, S.J.** The sigma70-like motif: a eukaryotic RNA binding domain unique to a superfamily of proteins required for ribosome biogenesis. Mol. Cell (2002) 9:329-339.

23. Wehner, K.A., Ayala, L., Kim, Y. Young, P., Hosler, B.A., Lorson, C. **Baserga, S.J.**, Francis, J. W. Survival motor neuron protein in the nucleolus of mammalian neurons. Brain Research (2002) 945:160-173.

24. Dragon, F., Gallagher, J.E.G., Compagnone-Post, P.A., Mitchell,B.M., Porwancher, K.A., Wehner, K.A., Wormsley, S., Settlage, R.E., Shabanowitz,J., Osheim, Y., Beyer, A.L., Hunt, D.F. and **Baserga, S.J.** A large nucleolar U3 ribonucleoprotein required for 18S rRNA biogenesis. Nature (2002) 417:967-970. Commentary in Chemistry and Biology (9, 777-780, 2002) and Current Biology (12, R623-R624, 2002).

25. Wehner, K.A., Gallagher, J.E.G. and **Baserga, S.J.** Components of an inter-dependent unit within the SSU processome regulate and mediate its activity. Mol. Cell. Biol. (2002) 22:7258-7267.

26.Meskauskas, A., Baxter, J.L., Carr, E.A., Yasenchak, J., Gallagher, J.E.G., **Baserga, S.J**. and Dinman, J. Delayed rRNA processing results in significant ribosome biogenesis and functional defects. Mol. Cell. Biol. (2003) 23:1602-1613.

27. Granneman, S., Gallagher, J.E.G., Vogelzangs, J., Horstmann,W., van Venrooij, W.J., **Baserga, S.J.** and Pruijn, G.J.M. The human Imp3 and Imp4 proteins form a ternary complex with hMpp10, which only interacts with the U3 snoRNA in 60-80S ribonucleoprotein complexes. Nuc. Acids Res. (2003) 32:1877-1887.

28. Gallagher, J.E. and **Baserga, S.J.** Two-hybrid Mpp10p interaction-defective Imp4 proteins are not interaction defective *in vivo* but do confer specific pre-rRNA processing defects in *Saccharomyces cerevisiae*. Nuc. Acids Res. (2004) 32:1404-1413.

29. Gallagher, J.E., Dunbar, D.A., Granneman, S., Mitchell, B.M., Osheim, Y., Beyer, A.L. and **Baserga, S.J.** RNA polymerase I transcription and pre-rRNA processing are linked by specific SSU processome components. Genes Dev. (2004) 18:2506-2517.

30. Bernstein, K.A. and **Baserga, S.J.** The SSU processome is required for cell cycle progression at G1. Mol. Biol. Cell (2004) 15:5038-5046.

31. Bernstein, K.A., Gallagher, J.E.G., Mitchell, B.M., Granneman, S. and **Baserga, S.J.** The small-subunit processome is a ribosome assembly intermediate. Euk. Cell (2004) 3:1619-1626.

32. Osheim, Y.N., French, S.L., Keck, K.M., Champion, E.A., Spasov, K., Dragon, F., **Baserga, S.J**. and Beyer, A.L. Pre-18S ribosomal RNA is structurally compacted into the SSU processome prior to being cleaved from nascent transcripts in *Saccharomyces cerevisiae*. Mol. Cell (2004) 16:943-954.

33. Granneman, S., Nandineni, M.R. and Baserga, S.J. The putative NTPase Fap7 mediates cytoplasmic 20S pre-rRNA processing through a direct interaction with Rps14. Mol. Cell. Biol. (2005) 25:10352-10364.

34. Bernstein, K.A., Granneman, S., Lee, A., Manickam, S. and **Baserga, S.J.** A comprehensive mutational analysis of yeast DExD/H box RNA helicases involved in large ribosomal subunit biogenesis. Mol. Cell. Biol. (2006) 26:1195-1208.

35. Granneman, S., Bernstein, K.A., Bleichert, F. and **Baserga,S.J.** A comprehensive mutational analysis of yeast DExD/H box RNA helicases required for 18S rRNA synthesis. Mol. Cell. Biol. (2006) 26:1183-1194.

36. Zhang, X., Champion, E.A., Tran, E., Brown II, B.A., **Baserga, S.J**. and Maxwell, E.S. The coiled-coil domain of the Nop56/58 core protein is dispensable for sRNP assembly but is critical for archaeal box C/D sRNP-guided nucleotide methylation. RNA (2006) 12: 1092-1103, PMCID: PMC1464844.

37. Granneman,S.\*, Lin,C.Y.\*, Champion, E.A., Nandineni, M.R., Zorca, C., and **Baserga, S.J**. The nucleolar protein Esf2 interacts directly with the DExD/H box RNA helicase, Dbp8, to stimulate ATP hydrolysis. Nuc. Acids Res. (2006) 34: 3189-3199. \* these two authors contributed equally. PMCID: PMC1483223.

38. Bleichert,F., Granneman,S., Osheim,Y.N., Beyer,A.L. and **Baserga, S.J.** The PINc domain protein Utp24, a putative nuclease, is required for the early cleavage steps in 18S rRNA maturation. Proc. Natl. Acad. Sci USA (2006) 103: 9464-9469, PMCID: PMC14800430.

39. Bernstein, K.A., Bleichert, F., Bean, J.M., Cross, F.R\*. and **Baserga, S.J\***. Ribosome biogenesis is sensed at the Start cell cycle checkpoint. Mol. Biol. Cell (2007) 18:953-964. \*these two authors contributed equally. PMCID: PMC1805094

40. Champion, E.A., Lane, B.H., Jackrel, M.E., Regan, L. and **Baserga, S.J.** A direct interaction between the Utp6 half-a-tetratricopeptide repeat domain and a specific peptide in Utp21 is essential for efficient pre-rRNA processing. Mol. Cell. Biol. (2008) 28: 6547-6556, PMCID: PMC2573231.

41. Champion, E.A., Kundrat, L., Regan, L. and **Baserga, S.J.** A structural model for the HAT domain of Utp6 incorporating bioinformatics and genetics. Protein Engineering, Design & Selection (2009) 22: 431-439. PMCID: PMC2699269

42. Bleichert. F.,Gagnon, K.T. Brown II, B.A Maxwell,, E.S., Leschziner, A.E., Unger, V.M. and **Baserga,S.J.** A dimeric structure for archaeal box C/D small ribonucleoproteins. Science (2009) 325:1384-1387, PMCID PMC2975540.

43. Freed, E.F. and **Baserga. S.J.** The C-terminus of Utp4, mutated in childhood cirrhosis, is essential for ribosome biogenesis. Nuc. Acids Res. (2010) 38: 4798-4806, PMCID: PMC3001065.

44. Bleichert, F. and **Baserga, S.J.** Dissecting the role of conserved box C/D sRNA sequences in di-sRNP assembly and function. Nuc. Acids Res. (2010) 38:8295-305, PMCID: PMC3001065.

45. Charette, J.M. and **Baserga, S.J.** The DEAD-Box RNA helicase-like Utp25 is an SSU processome component. RNA (2010) 16: 2156-69, PMCID: PMC2957055.

46. Dutca, L., Gallagher, J.E., and **Baserga, S.J.** The initial U3 snoRNA:pre-rRNA base-pairing

interaction required for pre-18S rRNA folding revealed by in vivo chemical probing. Nuc. Acids Res. (2011) 39:5164-80, PMCID: PMC3130255.

47. Lim Y.H., Charette J.M., and **Baserga S.J.** Assembling a protein-protein interaction map of the SSU processome from existing datasets. PLoS One. (2011) 6:e17701, PMCID: PMC3053386.

48. Freed, E.F., Prieto, J.L., McCann, K.L., McStay, B. and **Baserga, S.J.** NOL11, implicated in the pathogenesis of North American Indian Childhood Cirrhosis, is required for pre-rRNA transcription and processing. PLoS Genetics (2012) 8:e1002892, PMCID: PMC3420923.

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**Reviews, chapters, books**

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26. **Baserga, S.J.** and DiMario, P.J. Meeting Report: Emerging Roles for the Nucleolus 2017. Mol. Biol. Cell (2018) 29: 773-775. PMC5905290

27. Farley-Barnes, K.I. and **Baserga, S.J.** Ribosome biogenesis and its role in cell growth and proliferation in the liver. The Liver – Biology and Pathobiology, edited by Irwin Arias, Harvey Alter, James Boyer, David Cohen, Snorri Torgeirsson, David Shafritz, and Allan Wolkoff, 6th edition.

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* Among top 50 downloaded papers in the JBC March-April 2020 (1074 times)

30. McCool, M.A.\*, Bryant, C.J.\* and **Baserga, S.J.** MicroRNAs and long non-coding RNAs as novel

regulators of ribosome biogenesis. Biochem Soc Trans (2020) 48: 595-612. \* equal contributions PMC7200637

31. Harold, C.M.\*, Buhagiar, A.F\*., Cheng, Y\*. and **Baserga, S.J.** Ribosomal RNA transcription regulation in breast cancer. Genes (Basel) 2021 Mar 29;12(4):502.doi: 10.3390/genes12040502. \*equal contributions [PMC8066022](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc8066022/)

**History of Women in Medicine papers/exhibits:**

**1. Original articles**

1. **Baserga, Susan J.** and Lisa Anderson.Women and the Yale University School

of Medicine: The First Ten Years, 1916-1926. 1979. Exhibit for the Yale School of

Medicine Historical Library.

2. **Baserga, Susan J.:** The Early Years of Coeducation at the Yale University

School of Medicine. The Yale Journal of Biology and Medicine (1980) 53: 181-190.

3. **Baserga, Susan J.** Louise Farnam and her Colleagues: First Women Graduates

of the Yale School of Medicine. 1986. Exhibit for the Yale School of Medicine

Historical Library.

4. **Baserga,S.J.**, Calhoun,D.W. and Calhoun,L.H. Ella Clay Wakeman, Yale

School of Medicine, 1921. Yale Journal of Biology and Medicine (1995) 68:171-190.

5. Published work on history of women featured in President Salovey’s Notes from Woodbridge Hall September 26, 2016 on the occasion of the 100th anniversary of the admission of women to the Yale School of Medicine

**Community Engagement, Education and Public Policy:**

2021: Published paper reporting our success in innovation in graduate education. Claydon, J., Farley-Barnes, K. and **Baserga. S**. “Building Skill-Sets, Confidence and Interest for Diverse Scientific Careers in the Biological and Biomedical Sciences.” FASEB BioAdvances (2021) (Bioscience Careers Special Collection) https://doi.org/10.1096/fba.2021-00087

2021: Organized the Women in Biochemistry and Molecular Biology (WiBMB) hosting of Sharon Milgram, PHD April 27 at the 2021 Experimental Biology Meeting. The title of her talk was “Painful and important lessons about resilience and wellness for scientists” followed by a panel discussion. The event was attended by 130 people. A follow-up networking event was held May 6, attended by 30 people with an international reach, including participants from Norway, Canada, India, and Egypt.

2021: January. ASBMB Council presentation on Women in Biochemistry & Molecular Biology Committee.

2020: November. Catalyst of the opportunity to view the film “Picture a Scientist” as Chair of the Women in Biochemistry and Molecular Biology Committee, American Society of Biochemistry and Molecular Biology. I organized a virtual panel discussion for November 2 that featured filmmaker, Sharon Shattuck. We had 1900 registrants to view the film and about 340 attendees at the panel discussion. The impact of the event extended worldwide as I was contacted by similar organizations in Canada and Australia asking how they could do an event like this for their equivalent scientific organizations.

2020: August. Sponsored Factuality: Just the Facts training at Yale for structural inequality in America (virtual) as Program Director for the Predoctoral Program in Cellular, Molecular and Quantitative Biology. We had about 50 participants (all career stages) from Yale.

2020: Panelist for discussion on a virtual screening of a new Ken Burns PBS film on The Gene: An Intimate History through Detroit Public Television (via Zoom) [https://www.youtube.com/watch?v=sCydGzVi\_aQ](https://nam05.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DsCydGzVi_aQ&data=02%7C01%7Csusan.baserga%40yale.edu%7Cbaec6a45923c4d5ff0b908d7d76e72d0%7Cdd8cbebb21394df8b4114e3e87abeb5c%7C0%7C0%7C637214741683507846&sdata=rV310njompJMW%2BIOr%2F1qm5uvGF8z2Y%2FZmdeKKWWJOlA%3D&reserved=0)

2020: ASBMB Council in January, April

2020: Yale’s 12th annual Women’s Empowerment Leadership Conference women conference at the Omni, Health Care Careers Panel, February.

2019: Premedical Mental Health Panel, Yale College, November.

2019: “True Blue: a woman biomedical scientist at Yale over the decades.” Women in Medicine Keynote lecture to celebrate women in medicine month. Yale School of Medicine, September.

2019: NIGMS TWD Program Directors’ Meeting, July.

2019: Women in Science, Brandon University, June, Manitoba, Canada.

2019: Ribowest career panel, June, Winnipeg, Canada.

2019: Co-founder of Women in Biochemistry and Molecular Biology Committee, ASBMB, April. First Chair of the Committee

2019: Capitol Hill Day ASBMB PAAC, March.

2019: Metamorphosis: Perspectives on Science and Mentorship Along the Career Trajectory

Celebration of Joan Steitz and her career, Yale, March.

2019: Chosen to participate in photo tribute to accomplishments at the Yale School of Medicine at the State Capitol, Hartford, CT February.

2019: STARS1 (support of women and underrepresented groups) talk at Ezra Stiles College, Yale College, February.

2019: Featured on segment on WTNH Channel 8 for the Connecticut Technology Council’s Women of Innovation Awards.

2018: National Research Mentoring Network-trained mentor, Yale.

2018: NIH Train the Trainers Program July 16-17 2018 (resiliency, conflict resolution, and mental health).

2018: Organizing committee, session moderator and speaker on history at 100 Years of Women at Yale School of Medicine celebration, June 1.

2018: Panel for Women’s Networking Group, ASBMB Experimental Biology meeting, April. Attended by 50-70 people.

2018: Capitol Hill Day ASBMB PAAC, April.

2018: Navigating New NIGMS Training Guidelines, Feb. 12, AAMC Learning Center, Washington, DC

2017: Panelist: Next Generation Research Initiative. The National Academy of Sciences, Engineering, and Medicine. Board on higher education and workforce. July 13, 2017

2017: Yale School of Medicine Alumni Reunion history talk on the 100th anniversary of the admission of women, June.

2017: Hamden High School Biochemistry Mini-Symposium lab participant

2017: Exploring Careers Speed-Networking Event. ASBMB, Experimental Biology meeting.

2017: UPenn Resilience and well-being program for Yale Medicine Physicians (October, November)

2017: Recruited graduate students for Yale BBS at ASBMB, Experimental Biology meeting, April.

2017: Capitol Hill Day ASBMB PAAC, April

2017: CURE at the University of St. Joseph, West Hartford, CT, March 27. Talk on “Resilience and ribosomes: practicing persistence in life and in the lab.”

2016-present: member of American Society of Biochemistry and Molecular Biology (ASBMB) Public Affairs Advisory Committee (PAAC)

2015: Yale Minority Student Research Network talk, led discussion on unconscious bias at Yale University, October

2015 and 2017: Recruited graduate students for Yale BBS at the NIH Graduate & Professional School Fair, July

2013: When to put down your pipette…and start writing. Yale Graduate School Writing Center. September

**Invited Scientific Lectures:**

2021: Emerging Roles of the Nucleolus (my laboratory had 2 talks, 1 poster)

2021: Yale Innovation Summit, invited pitch for RiboRupt Biotech (160 virtual attendees)

2021: University of Pennsylvania, May, virtual

2020: Blavatnik semifinalist. Selected to pitch RiboRupt Biotech at the Office of Cooperative Research’s Pitchfest, December.

2020: University of Texas at Austin, December, virtual

2020: Keynote, Cold Spring Harbor Translational Control meeting, September, virtual.

2019: Blavatnik semifinalist. Selected to pitch RiboRupt Biotech at the Office of Cooperative Research’s Pitchfest, December.

2019: University of New Haven, The Alvine Life Sciences Innovation and Professional Enrichment Program. October.

2019: North Carolina RNA Society, October, Raleigh-Durham, NC

2019: Emerging roles of the nucleolus, October, Kansas City, MO

2019: RiboWest 2019, June, Canada

2018: Ribosome Synthesis meeting, August, Canada (talk given by student, Lisa Ogawa)

2018: ASBMB Experimental Biology meeting talk, April, San Diego, CA

2018: 9th International Congress on Schwachman-Diamond-Bodian Syndrome, April, Houston, TX

2018: 15th Diamond Blackfan Anemia International Consensus Conference, March, Atlanta, GA

2017: Yale MD/PhD Retreat-panelist at “Sounding Board”

2017: Cell Bio 601a, Yale School of Medicine, Ribosomopathies

2017: Interurban Club, November

2017: Emerging Roles of the Nucleolus, ASBMB, October. Session chair.

2017: The Biology of RNA-Protein Interactions, Regensburg, Germany, October

2017: Trinity College, Dublin, October

2017: RNA Society, Prague, Czech Republic. Talk given by graduate student, Katie Farley-Barnes.

2017: Oregon Health Sciences University, March

2017: Hampton University, March.

2017: Protein-RNA Interactions, Banff, Alberta, CA, February.

2016: RNA Center Retreat, Yale, September

2016: OddPol meeting, University of Michigan, June

2016: West Virginia University, April

2016: ASBMB William C. Rose Lecture, San Diego, CA.

2016: Science on Saturdays, “The Promise of Poop” Yale University

2015: University of Oklahoma, November

2015: Demystifying Peer Review, Yale School of Medicine, May

2015: NIEHS, March

2015: Purdue University, March

2014: Tufts University School of Medicine, Developmental, Molecular and Chemical Biology, December

2014: 4th Yale Biophysics & Structural Biology Symposium

2014: OddPol meeting, June

2013: “The promise of poop” Genetics Department Journal Club. December

2013: Ribosomes 2013, July

2013: American Society for Biochemistry and Molecular Biology Annual meeting, Boston, April

2013: Vanderbilt University, April

2012: 2nd annual RNA Center Retreat, Yale University

2012: The 9th International Conference on Ribosome Synthesis, Banff, Canada

2012: Subnuclear Structures and Disease, The Wellcome-Trust, Cambridge, UK

2012: Panelist, New Directions for Cellular and Molecular Biology, Biology at Yale, Yale Biology Alumni Conference, Yale GSAS.

2012: The University of Pennsylvania

2012: Junior PI Retreat, Yale University

2011: AASLD The Liver Meeting, San Francisco, CA, November 2011 (talk given by student, Emily Freed)

2011: Leadership in Biomedicine Lecture Series for Students, March 30, 2011, Yale School of Medicine

2011: Brown University

2011: New York Academy of Sciences, The Cellular Functions of RNA Nucleases

2011: Scripps, Florida

2010: Northwestern

2010: Yale U Liver Center Mini-Retreat, Betts House, New Haven

2010: RNA Society 2010 meeting (talk given by postdoctoral fellow, Laura Dutca) Seattle, WA

2010, 2012: Sub-Nuclear Structures and Disease, Wellcome Trust, Hinxton Organizer and speaker

2010: Young PI Lunch, Genetics Dept.

2010: Yale Sch. of Medicine Liver Center Retreat, Water's Edge Resort & Spa, Westbrook CT

2010: External Reviewer for Molecular and Cellular Biology Program, University of Iowa

2009: American Society for Cell Biology, 49 th Annual meeting

2009: 8th International Conference on Ribosome Synthesis (talk given by student, Franziska Bleichert), Regensburg, Germany

2009: ASBMB, Experimental Biology 2009 meeting (talk given by student, Franziska Bleichert) New Orleans, LA

2008: GREAT (Graduate Research Education and Training) Group meeting representative from Yale, Seattle WA

2008: NIDDK, Ribosomes and Their Role in Disease, Rockville, MD

2008: RNA Society meeting 2008-talk given by my student, Franziska Bleichert

2008: OddPols 2008, Quebec

2008: The Nucleolus and Disease, UK

2006: 7th International Conference on Ribosome Synthesis, Airlie Conference Center, Virginia-talk given by my student, Kara Bernstein

2006: Yeast Meeting 2006, Princeton, NJ- talk for a workshop on how to write a grant

2006: EMBO workshop on The Nucleolus, York, UK,

2005: RNA Biology VI: Tool and Target, Research Triangle Park, North Carolina

2005: Riboclub Opening Session, Canada

2005: RNA Society Meeting 2005-talk given by my post-doctoral fellow, Sander Granneman

2004: Duke University, November

2004: The Cell Nucleus, June 2004, Kristineberg, Sweden

2004: RNA Society meeting 2004-talk given by my student, Jen Gallagher

2003: 6th International Conference on Ribosome Synthesis, Arcachon, France-talk given by my student, Jen Gallagher

2003: RNA Society meeting 2003-talk given by my student, Jen Gallagher

2003: UCLA

2003: University of Texas, Austin

2003: RNA Editing Gordon Conference, Ventura, CA

2002: University of Connecticut

2002: MD Anderson

2002: University of Texas, Southwestern

2002: University of Chicago

2002: University of Virginia

2001: Nucleic Acids Gordon Conference, Newport, RI

2001: RNA Society meeting 2001-talk given by Francois Dragon, post-doctoral fellow

2001: UMDNJ

2001: Wesleyan University

2000: University of California at Berkeley

2000: University of California at Santa Cruz

2000: University of Arizona

2000: 5th International Conference on Ribosome Synthesis, Lake Tahoe, CA-talk given by my post-doctoral fellow, Francois Dragon

1998: MGH Cancer Center

1997: Symposium on RNA Biology, Research Triangle Park, North Carolina

1997: RNA Society