

John P. Aris, PhD

Department of Anatomy and Cell Biology
 1333 Center Drive
 University of Florida
 Gainesville, FL 32610-0235
 Email: johnaris@ufl.edu
 Office: 352-273-6868

Academic Positions

1999- Associate Professor, Department of Anatomy and Cell Biology, UF
 1991-99 Assistant Professor, Department of Anatomy and Cell Biology, UF

Administrative Positions

2017- Chair, Pre-clerkship Course Committee, College of Medicine, UF
 2009- Program Director for Education, Department of Anatomy and Cell Biology, UF

Postdoctoral Training

1988-91 Research Associate, HHMI, Rockefeller University, NY, NY, Advisor: Günter Blobel
 1985-88 Postdoctoral Fellow, Rockefeller University, NY, NY, Advisor: Günter Blobel

Education

1985 PhD, Biological Sciences, Stanford University, Stanford, CA, Advisor: Robert D. Simoni
 1979 BS, Chemistry & Biology, Jacksonville University, Jacksonville, FL

Teaching (current courses directed)

<u>Term</u>	<u>Course</u>	<u>Role</u>
Fall	Foundations of Medicine	Director for 12-week course for first year MD students
Spring	Histology	Director for 8-week course for first year DMD students
	Protein Trafficking	Director for 5-week advanced course for PhD students
	Mechanisms of Aging	Director for 5-week advanced course for PhD students
	Human Histology	Director for 15-week course for undergraduate students

National Service

2013-16 USMLE Step 1 Physiology and Cell Biology TMDC meeting, NBME
 2012 US Medical Licensing Examination (USMLE) Step 1 Test Material Development Committee (TMDC) workshop, National Board of Medical Examiners (NBME)

University Service

2018 Reviewer, Summer Health Professions Education Program
 2017- Judge, Graduate Student Research Day, Poster Sessions
 2015 Member, Provost's Task Force on College of Medicine Undergraduate Courses
 2013-14 University Curriculum Committee, COM Representative

College Service

2018- Member, Medical Student Interview Committee
 2017- Chair, Course Directors Committee (preclerkship curriculum)
 2017- Member, Committee for Program Evaluation and Student Assessment
 2017- Mentor, Small Group Mentoring Program (for first year PhD Students)
 2017 Judge, Graduate Student Education Initiative Award
 2015-17 Member, ICBR Monoclonal Antibody Core Laboratory Advisory Group
 2014-15 Member, Admissions Committee, Biomedical Sciences (BMS) PhD Program
 2014-15 Co-Director, Molecular Cell Biology (MCB) Concentration, BMS PhD Program

2013-15 Judge, Graduate Student Research Competition, MCB Concentration
 2012-17 Member, Course Directors Committee, College of Medicine
 2011-17 Interviewer (ad hoc), Admissions Committee, BMS PhD Program
 2012 Judge, Medical Guild Graduate Student Research Competition, BMS PhD Program
 2011-12 Member, Curriculum Design Committee, College of Medicine
 2010 Member, Search Committee, Director of School of Physicians Assistant Studies
 2010 Judge, Graduate Student Research Competition, MCB Concentration
 2009-12 Member, Medical Student Admissions Committee, College of Medicine
 2008 Judge, Graduate Student Research Competition, MCB Concentration
 1999-00 Faculty Council, College of Medicine, Departmental Representative
 1999-00 Member, Admissions Committee, BMS PhD Program
 1995 Judge, Medical Guild Graduate Student Research Competition, BMS PhD Program
 1995-8 Member, Selection Committee, Joseph and Leila Applebaum Visiting Professorship
 1995-6 Member, Core Curriculum Design Committee, BMS PhD Program
 1995-6 Member, Advisory Board, Associate Dean for Graduate Education

Department Service

2018 Judge, Poster Session, Florida Translational Cell Biology Symposium
 2016- Member, Educational Programs Committee (new MS and PhD degree programs)
 2015-17 Member, Search Committee, Associate or Full Professor (Education, Non-tenure track)
 2015 Member, Search Committee, Assistant Professor (Research, Non-tenure track)
 2013-14 Chair, Search Committee, Any Rank (Research, Tenure track)
 2013-14 Chair, Search Committee, Assistant Scientist (Research, Non-tenure track)
 2005-18 Organizer, Departmental Retreat (biennial)
 2009 Chair, Search Committee, Lecturer (Education, Non-tenure track)
 1994-5 Member, Search Committee, Chair, Department of Anatomy and Cell Biology
 1992-5 Member, Graduate Admissions Committee

Honors and Fellowships

2006-17 Exemplary Teacher Award, College of Medicine, UF
 1992 New Investigator Award, Division of Sponsored Research, UF
 1985 NRSA Postdoctoral Fellowship Award, National Institutes of Health
 1980 Predoctoral Fellowship Award, National Science Foundation
 1979 Annual Biology Major Award, Jacksonville University
 1978 Annual Chemistry Major Award, Jacksonville University
 1978 Phi Kappa Phi Honor Society Membership, Jacksonville University

Grant Support (PI or Co-PI)

2005-07 PI, NIH R21, Regulation of Yeast Life Span, \$327,375 (total)
 2002-03 PI, Ellison Medical Foundation, Extrachromosomal rDNA Circles: More Than Episomes with Origins, \$25,000 (total)
 2000-02 PI, American Cancer Society, Florida Division, Nucleolar Function and Cell Growth in Yeast, \$25,000 (total)
 1994-99 PI, NIH R01, Nucleolar Function and Cell Growth in Yeast, \$823,172 (total)
 1994-98 Co-PI (10% effort) NIH R01, G. S. Bennett, PI, Neurofilament Metabolism in Embryonic and Mature Neurons, \$780,806 (total)

Grant Review

2012 Rhode Island Research Alliance, AAAS Research Competitiveness Program (ad hoc)
 2010 Qatar National Research Fund (ad hoc)
 2010 American Geriatrics Society Foundation Research Scholar Award (ad hoc)
 2009 US Civilian Research & Development Foundation (ad hoc)
 2008 ETH Zurich Research Commission (ad hoc)

2005, 07 National Science Foundation (ad hoc)
2005-06 American Heart Association (ad hoc)
1997-01 American Cancer Society (ad hoc)

Journal Review (59 reviews)

Aging Cell, Autophagy, EMBO J, Experimental Gerontology, FEMS Yeast Research, J Biological Chemistry, J Cellular Biochemistry, J Cell Biology, J Cell Science, J Eukaryotic Microbiology, J Molecular Biology, Medical Science Educator, Molecular and Cellular Biology, Molecular Biology of the Cell, Nucleic Acids Research, PLoS Genetics, PLoS ONE, Rejuvenation Research, Yeast

Meeting / Abstract Review

International Association of Medical Science Educators, Posters, Annual Meeting 2012

Faculty Mentoring

2005-15 Mentor, 1-2 tenure-track and 2-3 non-tenure track faculty members annually

PhD Committees (listed by graduation date)

Chair or Co-chair (5 students)

2010 Arnold Seo, Department of Aging and Geriatric Research (co-chair)
2004 Alaric Falcón, Department of Anatomy and Cell Biology
2003 J. Michael Thomson, Department of Anatomy and Cell Biology (co-chair)
1998 Pei Wu, Department of Anatomy and Cell Biology
1997 Bo Hong, Department of Anatomy and Cell Biology

Member (42 students)

Current Hamzah Ahmed, Department of Physiology and Functional Genomics
Current John Calise, Department of Oral Biology
Current Emily Brown, Department of Ophthalmology
Current Justin Brown, Medical Physics Graduate Program
Current Kristen Skrubber, Department of Anatomy and Cell Biology
Current Rola Zeidan, Department of Physiological Sciences
2017 Allyson Shea, Department of Anatomy and Cell Biology
2017 William Godwin, Department of Biomedical Engineering
2016 Bryan Schwarz, Department of Biomedical Engineering
2016 Daniel Shabashvili, Department of Anatomy and Cell Biology
2015 Amy Geyer, Department of Biomedical Engineering
2015 Apoorva Mohan, Department of Molecular Genetics and Microbiology
2014 Patrick Thiaville, Department of Microbiology and Cell Science
2013 Jaclyn Hayner, Department of Biochemistry and Molecular Biology
2013 Daniel Long, Department of Biomedical Engineering
2013 Matthew R. Maynard, Department of Nuclear and Radiological Engineering
2012 Debapriya Dutta, Department of Aging and Geriatric Research
2011 Daein Kim, Department of Anatomy and Cell Biology
2010 Santhi Pondugula, Department of Biochemistry and Molecular Biology
2010 Judy Hwang, Department of Aging and Geriatric Research (left program)
2009 John Domsic, Department of Biochemistry and Molecular Biology
2009 Deanna H. Pafundi, Department of Nuclear and Radiological Engineering
2009 Qian Liu, Department of Anatomy and Cell Biology
2008 Santiago Aleixo, Department of Anatomy and Cell Biology
2008 Shane Claggett, Department of Biochemistry and Molecular Biology
2007 Melissa Crisp, Department of Anatomy and Cell Biology
2007 Yuan Yuan, Department of Molecular Genetics and Microbiology
2007 Laura A. Schroder, Department of Anatomy and Cell Biology
2006 Cuong Nguyen, Department of Pathology, Immunology, and Laboratory Medicine

2005 Slim Sassi, Department of Chemistry
 2005 Lee Kaplan, Department of Molecular Genetics and Microbiology
 2001 Vivian Fincher, Department of Horticultural Sciences
 2001 Lisa M. Curtis, Department of Anatomy and Cell Biology
 2000 Kristin L. Moon, Department of Molecular Genetics and Microbiology
 1999 Pierre-Yves Musy, Department of Molecular Genetics and Microbiology
 1999 James L. Gardner, Department of Biochemistry and Molecular Biology
 1998 Weiping Yuan, Department of Anatomy and Cell Biology
 1998 Jill W. Miller, Department of Molecular Genetics and Microbiology
 1997 Mary C. Bowman, Department of Molecular Genetics and Microbiology
 1996 Carolyn M. Drazinic, Department of Molecular Genetics and Microbiology
 1996 Lucia F. Aleixo, Department of Pathology and Laboratory Medicine
 1995 James T. Anderson, Department of Molecular Genetics and Microbiology

MS Committees (listed by graduation date)

Member

2010 Nelia Sanchez-Monreal Long, Department of Nuclear and Radiological Engineering
 2009 Matthew R. Maynard, Department of Nuclear and Radiological Engineering
 2002 Tina Chang, Department of Anatomy and Cell Biology

Postdoctoral Research Supervision

1997-00 Ke Wu
 1993-97 J. Scott Brockenbrough
 1993-94 Shaoping Chen
 1992-93 Andrea Hofig

Technician Research Supervision

2005-08 Michael Wood
 1997-98 Julie Wan-Young

Undergraduate Research Supervision (with postgraduate education after UF)

2013	Michael Leonard	MS, UCLA
2013	Amanda Hanvivatpong, Honor Student	Healthcare Business, FL
2013	Veronica Swanberg, Honor Student	
2012	Kyle Losin, Honor Student	DDS student, UF
2010	Roy Ferraiuolo, Honor Student with Thesis	MD student, UF
2010	Bonnie Vu, Honor Student with Thesis	
2010	Michelle Maraffini, Honor Student with Thesis	PhD student, Cal State
2010	Laura Fishwick, Honor Student with Thesis	JD student, Harvard
2008	Doreen Hu	PA student, Arcadia Univ
2007	Amelia Kaywell, Honor Student with Thesis	MD student, UF
2007	Christine Kirlew, Honor Student	MD student, Vanderbilt
2007	Jennifer Westcott	DDS, UF
2004	Natalie Rios, University Scholar, Honor Student with Thesis	PhD, UNC Chapel Hill
2004	Diego Ayo, Honor Student	MD, NYU
2003	Joan M. González, NIH Short-term Research Training	
2002	Fernando Castro, University Scholar, Honor Student	MD, UF
2000	Catherine Avery-Jones, Honor Student with Thesis	
2000	Dana Sacco, Honor Student with Thesis	MD, Washington Univ
1999	Catherine Roberts, NIH Short-term Research Training	
1998	Jennifer Dawe, Exchange Student, University of Bath, UK	
1997	Angela Metcalfe, Exchange Student, University of Bath, UK	
1995	Joanne Dove, Honor Student with Thesis	PhD, Berkeley

1994	Vishal Gupta, Honor Student with Thesis	MD, UF
1993	Ralph Doerner, Honor Student with Thesis	PA, UCF

Medical Student Research Advisement

2013	Tene Sablo, Medical Student Research Program (co-mentor)
2013	Ella Uwaibi, Medical Student Research Program (co-mentor)
2011	Michael Armbruster, Medical Student Research Program

Professional Societies

American Association for the Advancement of Science, American Society for Cell Biology, International Association of Medical Science Educators

Patents

1998	Monoclonal antibody to nucleolar protein, patent number 5811247
1994	Human fibrillar nucleic acid sequence, patent number 5310892

Invited Talks (selected)

2011	"Aging in post-mitotic cells - lessons from yeast," UF Genetics Institute, UF
2010	"Amino acid homeostasis and aging," Department of Physiological Sciences, UF
2007	"Aging and autophagy in yeast," Department of Microbiology and Cell Science, UF
2005	"How do cells age?" Aging and Rehabilitation Seminar Series, University of Florida
2000	"Nop12p is required for pre-25S rRNA processing during cold stress," Fifth International Conference on Ribosome Biogenesis and Nucleolar Function, Lake Tahoe, California.
2000	"Mechanisms of rRNA processing and modification," Department of Pathology and Laboratory Medicine, University of Cincinnati (host: David Askew)
1998	"Mechanisms of ribosomal RNA processing," Department of Biochemistry and Molecular Biology, University of Georgia (host: Michael Terns)
1998	"Ribosomal RNA synthesis and processing," Department of Biological Sciences, University of Maryland, Baltimore County (host: Lasse Lindahl)
1997	"A novel essential nucleolar protein required for 18S rRNA and 40S ribosomal subunit synthesis in <i>Saccharomyces cerevisiae</i> ," Third International Conference on Ribosome Biogenesis and Nucleolar Function, Noordwijkerhout, Netherlands

Publications (in chronological order, asterisk = corresponding author)

1. **Aris,* JP**, AD Eisemann, and L Moulton. 1982. The occurrence of *Pugettia richii* (Crustacea: Decapoda) on *Cystoseira osmundacea* follows a diel pattern. *Bulletin Marine Sci* 32:243-249.
2. **Aris, JP**, and RD Simoni.* 1983. Cross-linking and labeling of the *Escherichia coli* F₁F₀-ATP synthase reveal a compact hydrophilic portion of F₀ close to an F₁ catalytic subunit. *J Biol Chem* 258:14599-14609.
3. **Aris, JP**, DJ Klionsky, and RD Simoni.* 1985. The F₀ subunits of the *Escherichia coli* F₁F₀-ATP synthase are sufficient to form a functional proton pore. *J Biol Chem* 260:11207-11215.
4. **Aris, JP**, and RD Simoni.* 1985. The β subunit of the *Escherichia coli* ATP synthase exhibits a tight membrane binding property. *Biochem Biophys Res Commun* 128:155-162.
5. **Aris, JP**, and G Blobel.* 1988. Identification and characterization of a yeast nucleolar protein that is similar to a rat liver nucleolar protein. *J Cell Biol* 107:17-31.
6. **Aris, JP**, and G Blobel.* 1989. Yeast nuclear envelope proteins cross react with an antibody against mammalian pore complex proteins. *J Cell Biol* 108:2059-2067.
7. Henríquez, R, G Blobel, and **JP Aris.*** 1990. Isolation and sequencing of *NOP1*: a yeast gene encoding a nucleolar protein homologous to a human autoimmune antigen. *J Biol Chem* 265:2209-2215.
8. **Aris, JP**, and G Blobel.* 1991. The isolation of yeast nuclei. *Methods Enzymol* (Guthrie & Fink, eds) 194:735-749.

9. **Aris, JP**, and G Blobel.* 1991. cDNA cloning and sequencing of human fibrillarin, a conserved nucleolar protein recognized by autoimmune antisera. *Proc Natl Acad Sci USA* 88:931-935.
10. **Aris, JP**, PV Basta, WD Holmes, LM Ballas, C Moomaw, NB Rankl, G Blobel, CR Loomis, and D J. Burns.* 1993. Molecular and biochemical characterization of a recombinant human PKC-delta family member. *Biochim Biophys Acta* 1174:171-181.
11. Monestier,* M, MJ Losman, KE Novick, and **JP Aris**. 1994. Molecular analysis of mercury-induced anti-nucleolar antibodies in H-2^S mice. *J Immunol* 151:667-75.
12. deBeus, E, JS Brockenbrough, B Hong, and **JP Aris**.* 1994. Yeast *NOP2* encodes an essential nucleolar protein with homology to a human proliferation marker. *J Cell Biol* 127:1799-1813.
13. Hong, B., JS Brockenbrough, P Wu, and **JP Aris**.* 1997. Nop2p is required for pre-rRNA processing and 60S ribosome subunit synthesis in yeast. *Mol Cell Biol* 17:378-388.
14. Zimowska, G, **JP Aris**, and MR Paddy.* 1997. A *Drosophila* Tpr protein homolog is localized both in the extrachromosomal channel network and to nuclear pore complexes. *J Cell Sci* 110:927-944.
15. Chen, S, JE Dove, JS Brockenbrough, and **JP Aris**.* 1997. Homocitrate synthase is located in the nucleus in the yeast *Saccharomyces cerevisiae*. *J Biol Chem* 272:10839-10846.
16. Dove, JE, JS Brockenbrough, and **JP Aris**.* 1998. Isolation of nuclei and nucleoli from the yeast *Saccharomyces cerevisiae*. (M. Berrios, ed) *Methods Cell Biol* 53:33-46.
17. Wu, P, JS Brockenbrough, A Metcalfe, S Chen, and **JP Aris**.* 1998. Nop5p is a small nucleolar ribonucleoprotein component required for pre-18S rRNA processing in yeast. *J Biol Chem* 273:16453-63.
18. Wu, P, JS Brockenbrough, MR Paddy, and **JP Aris**.* 1998. *NCL1*, a novel gene for a non-essential nuclear protein in *Saccharomyces cerevisiae*. *Gene* 220:109-117.
19. Oakes, ML, **JP Aris**, JS Brockenbrough, H Wai, L Vu, and M Nomura.* 1998. Mutational analysis of the structure and localization of the nucleolus in the yeast *Saccharomyces cerevisiae*. *J Cell Biol* 143:23-34.
20. Tolerico, LH, AL Benko, **JP Aris**, DR Stanford, NC Martin, and AK Hopper.* 1999. *Saccharomyces cerevisiae* Mod5p-II contains sequences antagonistic for nuclear and cytosolic locations. *Genetics* 151:57-75.
21. Oakes, ML, I Siddiqi, L Vu, **JP Aris**, and M Nomura.* 1999. Transcription factor UAF, expansion and contraction of ribosomal DNA (rDNA) repeats, and RNA polymerase switch in transcription of yeast rDNA. *Mol Cell Biol* 19:8559-8569.
22. Wu, K, JH Dawe, **JP Aris**.* 2000. Expression and subcellular localization of a membrane protein related to Hsp30p in *Saccharomyces cerevisiae*. *Biochim Biophys Acta* 1463:477-482.
23. Nelson, SA, **JP Aris**, BKR Patel, and WJ LaRochelle.* 2000. Multiple growth factor transcriptional activation of *SAN5*, a murine early response gene that complements a lethal defect in yeast ribosome biogenesis. *J Biol Chem* 275:13835-13841.
24. Fahrenkrog, B, **JP Aris**, EC Hurt, N Pante, and U Aebi.* 2000. Comparative spatial localization of protein-A-tagged and authentic yeast nuclear pore complex proteins by immunogold electron microscopy. *J. Struct Biol* 129:295-305.
25. Hong, B, K Wu, JS Brockenbrough, P Wu, and **JP Aris**.* 2001. Temperature sensitive *nop2* alleles defective in synthesis of 25S rRNA and large ribosomal subunits in *Saccharomyces cerevisiae*. *Nucleic Acids Res* 29:2927-37.
26. Wu, K, P Wu, and **JP Aris**.* 2001. Nucleolar protein Nop12p participates in synthesis of 25S rRNA in *Saccharomyces cerevisiae*. *Nucleic Acids Res* 29:2938-49.
27. Lu, M, S Vergara, L Zhang, LS Holliday, **JP Aris**, and SL Gluck.* 2002. The amino-terminal domain of the E subunit of V-ATPase interacts with the H subunit and is required for V-ATPase function. *J Biol Chem* 277:38409-15.
28. Falcón, AA, and **JP Aris**.* 2003. Plasmid accumulation reduces life span in *Saccharomyces cerevisiae*. *J Biol Chem* 278:41607-41617.
29. Thomson, JM, EA Gaucher, MF Burgan, D DeKee, T. Li, **JP Aris**, and SA Benner.* 2005. Resurrecting ancestral alcohol dehydrogenases from yeast. *Nat Genet* 37:630-635.

30. Falcon, AA, N Rios, and **JP Aris**.* 2005. 2-micron circle plasmids do not reduce yeast life span. *FEMS Microbiol Let* 250:245–251.
31. Oakes, ML, I Siddiqi, SL French, L Vu, M Sato, **JP Aris**, AL Beyer, and M Nomura*. 2006. Role of histone deacetylase Rpd3 in regulating rDNA transcription and nucleolar structure in yeast. *Mol Cell Biol* 26:3889–3901.
32. Urbinati, CR, GB Gonsalvez, **JP Aris** and RM Long.* 2006. Loc1p is required for efficient assembly and nuclear export of the 60S ribosomal subunit. *Mol Genet Genomics* 276:369-377.
33. Swanson*, MS, and **JP Aris**. 2008. Post-transcriptional control: nuclear RNA processing. In *Inborn Errors of Development*, 2nd Edition, C. J. Epstein, R. P. Erickson, and A. Wynshaw-Boris, Eds. Oxford University Press. Oxford, UK, pp 1108-1125.
34. Bhabhra, R, DL Richie, HS Kim, WC Nierman, J Fortwendel, **JP Aris**, JC Rhodes, and DS Askew.* 2008. Impaired ribosome biogenesis disrupts integration between morphogenesis and nuclear duplication during the germination of *Aspergillus fumigatus*. *Eukaryotic Cell* 7:575-583.
35. Pafundi, D, C Lee, . Watchman, V Bourke, **J Aris**, N Shagina, J Harrison, T Fell, and W Bolch.* An image-based skeletal tissue model for the ICRP reference newborn. 2009. *Phys Med Biol* 54:4497-531.
36. Alvers, AL, LK Fishwick, MS Wood, D Hu, HS Chung, WA Dunn Jr, and **JP Aris**.* 2009. Autophagy and amino acid homeostasis are required for chronological longevity in *Saccharomyces cerevisiae*. *Aging Cell* 8:353-369.
37. Alvers, AL, MS Wood, D Hu, AC Kaywell, WA Dunn Jr, and **JP Aris**.* 2009. Autophagy is required for extension of yeast chronological life span by rapamycin. *Autophagy* 5:847-9.
38. Falcon, AA, S Chen, MS Wood, and **JP Aris**.* 2010. Acetyl-coenzyme A synthetase 2 is a nuclear protein required for replicative longevity in *Saccharomyces cerevisiae*. *Mol Cell Biochem* 333:99-108.
39. **Aris**,* **JP**, MC Elios, E Bimstein, SM Wallet, S Cha, KN Lakshmyya, and J Katz.* 2010. Gingival RAGE expression in calorie restricted versus ad libitum fed rats. *J Periodontology* 81:1481-7.
40. Seo, AY, A-M Joseph, D Dutta, JCY Hwang, **JP Aris***, C Leeuwenburgh. 2010. New insights into the role of mitochondria in aging: mitochondrial dynamics and more. *J Cell Sci* 123:2533-42.
41. Maynard, MR, JW Geyer, **JP Aris**, RY Shifrin, W Bolch.* 2011. The UF family of hybrid phantoms of the developing human fetus for computational radiation dosimetry. *Phys Med Biol* 56:4839-4879.
42. **Aris**,* **JP**, LK Fishwick, ML Marraffini, AY Seo, C Leeuwenburgh, and WA Dunn Jr. 2012. Amino acid homeostasis and chronological longevity in *Saccharomyces cerevisiae*. In *Aging Research in Yeast*. M Brietenbach, P Laun, SM Jazwinski, Eds. Springer, NY. *Subcell Biochem*. 57:161-86.
43. **Aris**,* **JP**, AL Alvers, RA Ferraiuolo, LK Fishwick, A Hanvivatpong, D Hu, C Kirlew, MT Leonard, KJ Losin, M Marraffini, AY Seo, V Swanberg, JL Westcott, MS Wood, C Leeuwenburgh, and WA Dunn Jr. 2013. Autophagy and leucine promote chronological longevity and respiration proficiency during calorie restriction in yeast. *Experimental Gerontology* 48:1107-1119.
44. Dunn Jr,* WA, LA Schroder, **JP Aris**. 2013. Historical overview of autophagy. *Autophagy and Cancer*, Current Cancer Research (vol 8), H-G Wang, Ed, Springer, NY.
45. Torres-Machorro AL, **JP Aris**, L Pillus.* 2015. A moonlighting metabolic protein influences repair at DNA double-stranded breaks. *Nucleic Acids Res*. 43:1646-58

Abstracts and Meetings

Complete list available on request. Selected meetings attended: American Aging Association Annual Meeting, American Society for Biochemistry and Molecular Biology Annual Meetings, American Society for Cell Biology Annual Meetings, Fifth International Conference on Ribosome Biogenesis and Nucleolar Function. Gordon Research Conference on Energy Coupling Mechanisms, Molecular Genetics of Aging Meetings (at Cold Spring Harbor Laboratory), NIA Summer Training Course in Experimental Aging Research, Third International Conference on Ribosome Biogenesis and Nucleolar Function