

CURRICULUM VITAE

Name: **Anita K. Hopper**
Phone: 614-688-3306
E-mail: hopper.64@osu.edu
Address: Dept. Molecular Genetics
The Ohio State University
484 W. 12 Ave., Riffe 800
Columbus, OH 43235

Education:

B.S. in Biology 6/67 - University of Illinois, Chicago, Illinois
Ph.D. in Cell Biology 2/72 - University of Illinois, Urbana, Illinois
Postdoctoral Research 10/71-7/75 - Genetics Dept., University of Washington, Seattle, Washington

Honors:

NIH Predoctoral Scholar
NIH Postdoctoral Scholar
Editor: Molecular and Cellular Biology (1989-2000)
Fellow: American Academy of Microbiology (1994-present)
Chair: NIH CDF-1 study section (2001-2002)
President: RNA Society (2002-2003)
Secretary: Genetics Society of America (2003-2006)
Awardee: PSU Coll. Med. Graduate Student Association "Overall Best Instructor" (2004 & 2005)
Awardee: PSU Coll. Med. Distinguished Educator 2005 Award
Awardee: PSU Distinguished Professor (2006)
Distinguished NSF-Advance Lecturer – Case Western Reserve University (2007)
Fellow: American Association for the Advancement of Science (2008-present)
Life-time Achievement in Service Award from the RNA Society (2009)
Awardee: Ohio State University Distinguished Scholar Award (2012)
Honoree "Anitafest" scientific meeting – Organizers: Phizicky (U. Rochester Med. School); Fields (U. Washington Coll. Med.); Schoenberg (OSU College Med.) (2014)
Winge-Lindgren Address Award; YGM (2014)

Major Research Interests:

RNA Processing
Mechanisms of Subcellular Distribution of RNA and Proteins

Research and/or Professional Experience:

Ph.D. Thesis Research - An Investigation into The Replication of Satellite Tobacco Necrosis Virus and Tobacco Necrosis Virus RNA Genomes (9/68-9/71) - laboratory of M.E. Reichmann, Microbiology, University of Illinois, Urbana, Illinois

Postdoctoral Experience. - laboratory of Dr. B.D. Hall, Genetics, University of Washington, Seattle, WA (9/74-8/75) Control of yeast meiosis by the mating-type locus and Molecular characterization of tRNA genes of yeast

Faculty Positions:

08/75 - 07/78 **Assistant Professor**, Department of Microbiology, University of Massachusetts Medical Center, Worcester, MA
07/78 - 08/79 **Associate Professor**, Department of Microbiology, University of Massachusetts Medical Center, Worcester, MA
08/79 - 06/87 **Associate Professor**, Department of Biological Chemistry, The Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, PA
08/87 - 02/88 **Sabbatical Leave**, Department of Genetics, University of Washington, Seattle, WA

09/95 - 07/96 **Sabbatical Visiting Scientist**, Division of Basic Science, Fred Hutchinson Cancer Center, Seattle, WA

07/87 – 9/06 **Professor**, Department of Biochemistry and Molecular Biology, The Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, PA

01/06 – 9/06 **Distinguished Professor**, Department of Biochemistry and Molecular Biology, The Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, PA

9/06 – 9/14 **Professor and Chair** Department of Molecular Genetics, The Ohio State University, Columbus, OH

9/14-present **Professor** Department of Molecular Genetics, The Ohio State University, Columbus, OH

Professional Activities:

Meeting organization:

Chair-elect (1987) and Chair (1988) - Genetics and Molecular Biology Div. American Society Microbiol.

Co-organizer - Fifth Summer Symposium in Molecular Biology: "The Nucleus" at Pennsylvania State University (1986)

Co-organizer - Cold Spring Harbor Meetings on RNA Processing (1989, 1990)

Co-organizer - Penn State University Intercollege Program in Genetics Symposium (1989)

Co-organizer - Symposia to honor Dr. Ben Hall (1992 & 2007)

Co-organizer - Keystone Symposium on Posttranscriptional Processing (1996)

Member (1998), Co-Chair (2000), Chair (2002), Emeritus Member (2004) - Yeast Genetics & Molecular Biology Meeting Committee

Advisory board, 2009 Mechanisms of Nuclear Transport Meeting (2009)

Peer Review Committees:

Member (1998), Chair (1999-2001) - Eli Lilly Award Selection Committee (ASM)

Member: **NSF** panel **Genetic Biology** (1981-1985); **NSF** Presidential Faculty Fellows Program (1992); **NSF** IGERT Training grants - Chemical & Biological Sciences Division (1997)

Member: **NIH Genetics Study Section** (1985-1989); **NIH Molecular Biology / Cell Development and Function 1 Study Section** (1997-2002); Acting Chair (1999); Chair (2001-2002)

Member: **American Cancer Society Scientific Advisory Committee** (1994-1996); **American Cancer Society Genetic Mechanisms in Cancer** (1996-1998)

Editorial Boards: **Molecular & Cellular Biology** (1986-1990); **RNA** (1995-1997)

Editor: **Molecular & Cellular Biology** (1989-2000)

Faculty 1000 – member of the online review service (2001-2006)

Panel member – **HHMI** Investigator contest (2008)

Peer evaluator **NIH Pioneer** awards (2012)

Associate editor, **Yeastbook**, **Genetics Society of America** (2009-present)

ad hoc journal reviews activities - recent only:

Cell, Curr. Biol., EMBO J., FEBS J., Genes Dev., Genes to Cell, Genetics, J. Biol. Chem., J. Cell Biol., J. Cell Science, J. Mol. Biol., Mol. Biol. Cell, Mol. Cell. Biol., Molec. Microbiol., Nature, Nucl. Acids Res., PLoS Biology, PLoS Genetics, PLoS one, Proc. Natl. Acad. Sci., Science, Trends in Cell Biology, Traffic, RNA, Yeast.

Society Memberships: ASM; ASBMB; GSA (Secretary 2004-2007); AAAS; RNA Society - Board of Directors (1997-1999), President-elect/President/past-president (2002-2005).

Penn. State University Committee Activities - (partial list 1990-2006):

Biological Chemistry Faculty Search Committee, Chair (1992-1993); Member (1999-2001)

Promotion & Tenure - Biochem. & Mol. Biol. Member (1987-1997); Chair (1998-2000); Neurosci & Anat. member (1991-1995; 1997-1999); Promotion & Tenure Committee - member (College, 2000-2002)

Department Academic Standards - Past Member

Department Graduate Student Advisor (1990-1992)

Co-director, Hershey Medical Center, Macromolecular Core Facility, College (1989-1993)

Medical Student Research Committee - College, Member (1980-2004)
 Neuroscience and Anatomy Chairman Search Committee – College, Past Member
 Medical Student Awards Committee - College, Past Member
 Committee on Cultural and Ethnic Diversity - College, Past Member
 Cell & Molecular Biology Graduate Program Advisory Committee College, 1993-1995; 1998-2002)
 Co-director Molecular Genetics Core Sequence Course (College, 1993-1995; 1996-2001)
 Committee to Develop a Faculty Compensation Plan - College, Member (1998)
 Councilor, Faculty Organization (College, Elected Position, 2001-2002)
 Vice Dean for Research Search Committee - College, Member (2000-2001)
 Panel for the PSU Life and Health Sciences Faculty Scholar Medal (Member, University; 2003-2006)
 Course Director GEN 590 (College, 2001- 2006)
 Course Director IBIOS 590 (University, 2002-2003)
 Futures Committee for Interdisciplinary Graduate Education (Co-chair, University; 2004)
 Genetics Executive Committee – University, Member
 Co-chair Penn State University Intercollege Graduate Program in Genetics (University; 2000-2006)
 Co-Director: PSU Huck Institutes Life Science IBIOS Graduate Program (University; 2002-2006)

Ohio State University Committee Activities - (2006-present):

Budget Review Committee – member (University, 2007-2008)
 Chair Search Committee Microbiology, member (College, 2008)
 Chair Faculty Search Committees Molecular Genetics (Dept., 2007, 2008, and 2012)
 Center for RNA Biology - Steering committee (University, 2009-present)
 CMBP NIH T32 training grant - Steering committee (University, 2011- present)
 OSU Distinguished Scholar – member selection committee (University, 2012-present)
 Microbiology Chair search – Chair of the committee (College, 2013)

Teaching Experience:

Member of Team Teaching Groups: Biological Chemistry, Molecular Genetics, Human Genetics, Molecular Biology, Immunology, Microbiology (U. Mass. Medical School). Member of the Organizing Committees & Lecturer in advanced graduate courses: Advanced Molecular Genetics; Cell & Molecular Biology; Genetic Analysis; Co-organizer & previous Co-director Graduate Student Core Molecular Genetics Course; Director GEN 590 (2001-2006); Co-Director IBIOS 590 (2002-2006), MG605, Genetics for MG majors, OSU, Columbus, OH; MG220H MG honors course; MG880.07 (team teacher)

Final Nominee for "Excellence in Teaching Award" by Medical Student Class (1991-92); Nominee for PSU Graduate Faculty Teaching Award by graduate students and faculty (1993); Teaching Award by the Medical School Class of 2004 (2001); PSU Distinguished Educator 2005, "Best Overall Instructor" 2004 and 2005, Graduate Student Association Award.

Graduate Students:

<u>Dates</u>	<u>Name</u>	<u>Current Position</u>
1980-1986	G. Fabian (Ph.D.)	Scientific Law, Palo Alto, CA
1981-1986	N. Atkinson (Ph.D.)	Professor, U. Texas, Austin, TX
1979-1988	S. (Nolan) Klesner (Ph.D.)	Patent Attorney Agent, Fort Collins, CO
1983-1989	S. Wang (M.S./Ph.D.)	Research Associate at Novartis, Austria
1984-1990	E. Gillman (Ph.D./M.D.)	Physician, Harrisburg, PA
1990-1991	L. Norbeck (M.S.)	Adjunct Assist. Prof. Millersville Coll., PA
1986-1993	S. Hess (Ph.D.)	No longer in science
1987-1993	K-S. Tung (Ph.D.)	Assist. Prof., National Taiwan Univ., China
1991-1995	W. Shen (Ph.D.)	Patent Attorney, DC
1990-1997	L. (Hunter) Tolerico (M.S./Ph.D.)	No longer in science
1994-1999	A. Benko (Ph.D.)	Postdoctoral Scholar PSU. Col. Med., PA
1995-2000	S. Sarkar (Ph.D.)	Assoc. Prof., Bose Institute, Kolkata, India
1997-2001	W. Feng (Ph.D.)	Sr. Scientist, Daiichi Sankyo, NJ
2001-2003	K. Butterfield-Gerson (M.S.)	Early Clinical Trial Specialist, Merck, PA
1999-2007	D. Eisaman (Ph.D./M.D.)	Physician, MA
2001-2005	H. Shaheen (Ph.D.)	Research Scientist, Merck, NH
2001-2006	R. Hurto (Ph.D.; AHA fellow)	Postdoctoral Scholar, Ohio State Univ.

2001-2006	A. Murthi (Ph.D.; AHA fellow)	Director, Indiabioscience; in transition (2013)
2001-2009	K. Stauffer (Ph.D.)	Medical writer, Wolters Kluwer Yardley, PA
2005-2006	T. Harchar (M.S.)	Medical writer, Axiom, Yardley, PA
2002-2007	M. Whitney (Ph.D.)	Assist. Prof. Milligan College, TN
2007-2012	N. Dhungel (Ph.D., Pelotonia fellow)	NIH Postdoctoral Scholar, Stanford U.
2007-2012	G. Diaz-Munoz (Ph.D. NIH fellowship)	NIH postdoctoral scholar, U. Nebraska
2007-2013	H-Y Chu (Ph.D. OSU RNA fellow)	Postdoctoral, Scripps Inst., CA
2007-2013	T.-P. Lai (Ph.D., AHA fellow)	Postdoctoral, Univ. Texas Southwest, TX
2008-current	H.-Y. Huang	Ph.D. candidate Ohio State U.
2010-current	J. Wu (Pelotonia fellow)	Ph.D. candidate Ohio State U.
2012-current	Y. Wan	Ph.D. candidate Ohio State U.

International PhD Training Program – Poland and USA

11/12-7/12, 9/13 – 12/13	Dominika Fortek	PhD student Polish Acad. Sci., studies in USA
7/12-9/13	Anna Domanska	PhD student Polish Acad. Sci., studies in USA

Postdoctoral Scholars:

<u>Dates</u>	<u>Name</u>	<u>Current Position</u>
1978-1981	L. Schultz	Scientist Merck, Sharp & Dohme
1982-1985	D. (Hurt) Fatula (NIH fellowship)	Scientist, Skelly & Loy Analytical Labs, PA
1982-1986	R. Dunst	Scientist, Amersham Pharmaceuticals, NJ
1983-1985	M. Dihanich	No longer in science
1986-1987	D. Selvakumar	Prof. Christian Medical College Vellore, India
1986-1990	L. Slusher (NIH fellowship)	Professor, West Chester Univ., PA
1988-1990	M. Boguta	Professor, Institute of Biochem. & Biophysics, Polish Academy Science, Warsaw, Poland
1991-1994	T. Zoladek	Prof. & Head, Genetics; Institute of Biochem. & Biophysics, Polish Academy Science, Warsaw
1994-1994	P. Artz	Assoc. Prof., Dept. Chemistry, Albright College, PA
1994-2000	G. Vaduva	Research Scientist, Monsanto Co.
1997-2000	A. Azad	Postdoctoral Fellow, Oxford, UK
1990-2005	D. Stanford	Senior Res. Support Assoc., Penn. State U. Med.
2005- 2007	H. Shaheen	Research Scientist, Merck Glycofi Department, NH
2006-2008	A. Murthi	In transition
2009-2103	E. Kramer (NIH T32 fellowship)	Assist. Prof. Shippensburg Univ., PA
2006-current	R. Hurto	NA
2014-current	K. Chatterjee	NA

Membership of OSU Ph.D. Thesis Committees:

Name	Committee	Status
Sunghun Son	Molecular Genetics	Completed 11/07
Hui-Lin Liu	Molecular Genetics	Completed 5/09
Vidhya Ramachandran	MCDB	Completed 3/11
Komudi Singh	Molecular Genetics	Completed 11/08
I-Ming Cho	Molecular Genetics	Completed 3/11
Sarine Markossian	Molecular Genetics	Completed 5/11
Ching-Hui (Julia) Yang	Molecular Genetics	Completed 10/10
Amit Sharma	Molecular Genetics	Completed 2/12
Kuo-Fang Shen	MCDB	Completed 4/13
Meera Govindaraghavan	MCDB	Completed 4/13
Yi Xiong	Molecular Genetics	Completed 5/11
William Swinehart	OSBP	(in progress)
Mansi Arora	MCDB	Completed 4/14
Mid Eum Lee	MCDB	(in progress)
Yicheng Long	OSBP	(in progress)
Nitya Subrahmanian	Molecular Genetics/PCMB	(in progress)

Catey Dominguez	MCDB	(in progress)
Daniel Comiskey	MCDB	(in progress)
Brittany Theobald	MCDB	(MS, 2012)
Anderson, Katie	OSBP	(in progress)
Kiel Kreuzer	MCDB	(in progress)

Non-PSU/OSU Thesis Committees:

- 2001 - Joanna Kaminska, Polish Academy of Sciences, Institute of Biochemistry and Biophysics, Poland. "Role of Rsp5p and its interactions with other proteins in yeast *Saccharomyces cerevisiae*"
- 2001 - Suniti Naqvi, Institute of Molecular Agrobiology, Singapore. "The role of Vrp1p, an actin cytoskeleton-associated protein in endocytosis and cytokinesis in *Saccharomyces cerevisiae*."
- 2002 - Beata Gajewska, Polish Academy of Sciences, Institute of Biochemistry and Biophysics, Poland. "Role of WW domains in functioning of ubiquitin ligases: yeast Rsp5p and human hNedd4".
- 2003 - Marcus Johansson, Dept. of Molecular Biology Umea University, Sweden. "Transfer RNA biogenesis in *Saccharomyces cerevisiae*".
- 2004 - Jennifer Gallagher, Dept. Genetics, Yale University. "Structure and Function of the SSU Processome in Ribosome Biogenesis".
- 2007 - Mirta Boban, Ludwig Institute for Cancer Research, Stockholm, Sweden
- 2011 – Johannes Popow, Institute of Molec. Biotech., Vienna, Austria

Undergraduates/high school students (1997- now):

Student

- John Raser (high school student)
- Sieta Bonner (High school student; **NSF REU fellowship**)
- Bernadatte Gray (1998, **HHMI**, High school student)
- Katie McCoy (1997-2002; high school student)
- Kim Coons (1977-1999, high school student)
- Michael Whitney (undergraduate; Messiah College Internship, 2000)
- Matt Angle (high school student; 2002-2004; **Semifinalist Intel**)
- Adam Schell (high school student; 2003-2004)
- Amy Brant (high school student 2004-2006)
- David Luther (MG major OSU 2007- 2008)
- Jessica Wagoner (MG major/**honors thesis** OSU 2007-2008)
- Jared Hale (MG major/honors thesis OSU 2007-2009)
- Caitlin Knowlton (Summer Intern – Taylor Univ. (2009)
- Jessica Profato (MG major OSU/**honors thesis** 2009-2010)
- Brittany Suggs (REU student from Henderson, AR)
- Mariya Nudel (MG Major OSU 2010-2012); **Pelotonia fellow**
- Varun Rawal (Biology Major OSU Honors program 2013 – now)
- Alicia Bao (High school student; 2013-now)
- Sara Metcalf (MG Major OSU Honors program 5/14-now)
- Heather Osborn (Visiting Scholar, Biol. Undergrad. Liberty 6/14-now)

Present position

- Ph.D./M.D., Physician
- High School Teacher, PA
- Physician
- Graduate, U. Delaware
- High School Teacher, PA
- Assist. Prof., Milligan College
- Postdoctoral Scholar, Stanford
- Medical Student, Emory U.
- Graduate, Penn. St. Delaware
- OSU Optometry graduate
- Graduate student, Cornell U.
- Graduate student, Cornell U.
- M.S. Bowling Green St.
- M.S., Stanford; Genetic
- Counselor, U. Texas, Houston
- PhD candidate OSU
- Graduate student, Brandeis U.
- OSU Undergraduate
- High Sch. Student, Dublin, OH
- OSU Undergraduate
- Undergraduate student

Publications:

Invited Review Articles/Chapters:

Hopper, A.K. Genetic and biochemical studies of RNA processing in yeast, p 91-132. *In* RNA Processing. ed. David Apirion, CRC Press, Boca Raton, Florida (1984)

Hopper, A.K. Genetic methods for study of trans-acting genes involved in processing of precursors to yeast cytoplasmic transfer RNAs. *In* **Methods in Enzymology** **181**:400-421, ed. J.E. Dahlberg and J.N. Abelson (1990).

Hopper, A.K., N.C. Martin. Processing of yeast cytoplasmic and mitochondrial precursor tRNAs, Vol. II, pp. 99-141. *In* The Molecular Biology of the Yeast *Saccharomyces*: Gene Expression, ed. E.W. Jones, J.R. Pringle and J.R. Broach, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY (1992).

Martin, N.C., A.K. **Hopper**, How single genes provide tRNA processing enzymes to mitochondria, nuclei and the cytosol. **Biochimie** **76**:1161-1167 (1994).

Hopper, A.K. Nuclear functions charge ahead. **Science** **282**:2003-2004 (1998).

Hopper, A.K. Nucleus/cytosol exchange: inside out regulation. **Current Biol.** **9**: R803-806 (1999).

Hopper, A.K. Role of RanGTPase in RNA processing and export of RNA from the nucleus to the cytosol: insights from budding yeast. pp. 33-54. *In* The Small GTPase Ran, ed. M. Rush, Kluwer Academic Publishers, Norwell, MA (2001).

Engelke, D.R., A.K. **Hopper**. Modified view of tRNA: stability amid sequence diversity. **Mol. Cell** **21**:141-142 (2006).

Weinert, T, A.K. **Hopper**. tRNA traffic meets a cell-cycle checkpoint. **Cell** **131**: 838-839 (2007).

Smaldino, P., D.A. Read, M. Pratt-Hyatt, A.K. **Hopper**, D.R. Engelke. The cytoplasmic and nuclear populations of the eukaryote tRNA-isopentenyl transferase have distinct functions with implications in human cancer. **Gene**, invited (2014, in process).

Peer Evaluated Publications:

1. **Klein, A.C., M.E. Reichmann.** Isolation and characterization of two species of double-stranded RNA from tobacco leaves double infected with tobacco necrosis virus and satellite tobacco necrosis virus. **Virology** **42**:269-272 (1970).
2. **Hopper, A.K., P.T. Magee, S.K. Welch, M. Friedman, B.D. Hall.** Macromolecule synthesis and breakdown in relation to sporulation and meiosis in yeast. **J. Bacteriol.** **119**:619-628 (1974).
3. Magee, P.T., A.K. **Hopper**. Protein synthesis in relation to sporulation and meiosis in yeast. **J. Bacteriol.** **119**:952-960 (1974).
4. **Hopper, A.K., B.D. Hall.** Mating-type control over sporulation. I. Mutations which alter mating-type control over sporulation. **Genetics** **84**:41-59 (1975).
5. **Hopper, A.K., B.D. Hall.** Mutation of a heterothallic strain to homothallism. **Genetics** **84**:77-85 (1975).
6. **Hopper, A.K., J. Kirsch, B.D. Hall.** Mating-type and sporulation in yeast. II. Meiosis, recombination, and radiation-sensitivity in an *aa* diploid with altered sporulation control. **Genetics** **84**:61-76 (1975).
7. Andrew, C., A.K. **Hopper**, B.D. Hall. A yeast conditional mutant defective in the maturation of 27S rRNA. **Mol. Gen. Genetics** **144**:29-37 (1976).
8. Olson, M.V., D.L. Montgomery, A.K. **Hopper**, G.S. Page, F. Horodyski, B.D. Hall. Molecular characterization of the tyrosine tRNA genes of yeast. **Nature** **267**:639-641 (1977).

9. **Hopper**, A.K., F. Banks, V. Evangelides. A mutant of yeast which accumulates tRNA precursors. **Cell** **14**:211-219 (1978).
10. **Hopper**, A.K., L.D. Schultz, R.A. Shapiro. Processing of intervening sequences: A new yeast mutant which fails to excise intervening sequences from precursor tRNAs. **Cell** **19**:741-751 (1980).
11. **Hopper**, A.K., V. MacKay. Control of sporulation in yeast: *SAD1* - a mating-type specific unstable alteration that uncouples sporulation from mating-type control. **Mol. Gen. Genetics** **180**:301-314 (1980).
12. **Hopper**, A.K., J. Kurjan. tRNA synthesis: analysis of *in vivo* precursor tRNAs from wild-type and mutant yeast strains. **Nucl. Acids Res.** **9**:1019-1029 (1981).
13. **Hopper**, A.K., A. Furukawa, H.D. Pham, N.C. Martin. Defects in modification of cytoplasmic and mitochondrial transfer RNAs are caused by single nuclear mutations. **Cell** **28**:543-550 (1982).
14. Martin, N.C., A.K. **Hopper**. Isopentenylolation of both cytoplasmic and mitochondrial tRNA is affected by a single nuclear mutation. **J. Biol. Chem.** **257**:10562-10565 (1982).
15. Atkinson, N.S., R.W. Dunst, A.K. **Hopper**. Characterization of an essential *Saccharomyces cerevisiae* gene related to RNA processing: cloning of *RNA1* and generation of a new allele with a novel phenotype. **Mol. Cell. Biol.** **5**:907-915 (1985).
16. Ellis, S., M. Morales, A.K. **Hopper**, N.C. Martin. Isolation and characterization of *TRM1*: a gene involved in modification of both cytoplasmic and mitochondrial tRNA. **J. Biol. Chem.** **261**:9703-9709 (1986).
17. Dihanich, M.E., D. Najarian, R. Clark, E.C. Gillman, N.C. Martin, A.K. **Hopper**. Isolation and characterization of *MOD5*: a gene required for isopentenylolation of cytoplasmic and mitochondrial tRNAs of *Saccharomyces cerevisiae*. **Mol. Cell. Biol.** **7**:177-184 (1987).
18. Najarian, D., M.E. Dihanich, N.C. Martin, A.K. **Hopper**. DNA sequence and transcript mapping of *MOD5*: features of the 5' region which suggest two translational starts. **Mol. Cell. Biol.** **7**:185-191 (1987).
19. Hurt, D.J., S.S. Wang, Y-H. Lin, A.K. **Hopper**. Cloning and characterization of *LOS1*: a *Saccharomyces cerevisiae* gene involved in tRNA splicing. **Mol. Cell. Biol.** **7**:1208-1216 (1987).
20. Fabian, G.R. and A.K. **Hopper**. *RRP1*: a gene of *Saccharomyces cerevisiae* affecting ribosomal RNA processing and the production of mature ribosomal subunits. **J. Bacteriol.** **169**:1571-1578 (1987).
21. Atkinson, N.S., A.K. **Hopper**. Amplification of chromosome XIII in *RNA1* disruption strains is chromosome-specific. **Genetics** **116**:371-375 (1987).
22. Ellis, S., A.K. **Hopper**, N.C. Martin. Amino-terminal extension generated from upstream AUG codon is not required for mitochondrial import of yeast tRNA methyltransferase. **Proc. Natl. Acad. Sci.** **84**:5172-5176 (1987).
23. Wang, S.S., A.K. **Hopper**. Isolation of a yeast gene involved in species-specific pre-tRNA processing. **Mol. Cell. Biol.** **8**:5140-5149 (1988).
24. Ellis, S.R., A.K. **Hopper**, N.C. Martin. Amino terminal extension generated from an upstream AUG codon increases the efficiency of mitochondrial import of yeast N²N²-dimethylguanosine-specific tRNA methyltransferases. **Mol. Cell. Biol.** **9**:1611-1620 (1989).
25. Traglia, H.M., N.S. Atkinson, A.K. **Hopper**. Structural and functional analyses of *Saccharomyces cerevisiae* wild-type and mutant *RNA1* genes. **Mol. Cell. Biol.** **9**:2989-2999 (1989).

26. Li, J-M., A.K. **Hopper**, N.C. Martin. N²N²-dimethylguanosine-specific tRNA methyltransferase contains both nuclear and mitochondrial targeting signals in *Saccharomyces cerevisiae*. **J. Cell. Biol.** **109**:1411-1419 (1989).
27. Fabian, G.R., S.M. Hess, A.K. **Hopper**. *srd1*, a *S. cerevisiae* suppressor of the temperature-sensitive pre-rRNA processing defect of *rrp1-1*. **Genetics** **124**:497-504 (1990).
28. **Hopper**, A.K., H.M. Traglia, R.W. Dunst. The yeast *RNA1* gene product necessary for RNA processing is located in the cytosol and apparently excluded from the nucleus. **J. Cell Biol.** **111**:309-322 (1990).
29. Gillman, E.C., L.B. Slusher, N.C. Martin, A.K. **Hopper**. *MOD5* translation initiation sites determine N⁶-isopentenyladenosine modification of mitochondrial and cytoplasmic tRNA. **Mol. Cell. Biol.** **11**:2382-2390 (1991).
30. Slusher, L.B., E.C. Gillman, N.C. Martin, A.K. **Hopper**. mRNA leader length and initiation codon context determine alternative AUG selection yeast gene *MOD5*. **Proc. Natl. Acad. Sci.** **88**:9789-9793 (1991).
31. Wang, S.S., D.R. Stanford, C.D. Silvers, A.K. **Hopper**. *STP1*, a gene involved in pre-tRNA processing, encodes a nuclear protein containing zinc finger motifs. **Mol. Cell. Biol.** **12**:2633-2643 (1992).
32. Tung, K-S., L.L. Norbeck, S.L. Nolan, N.S. Atkinson, A.K. **Hopper**. *SRN1*, a yeast gene involved in RNA processing, is identical to *HEX2/REG1*, a negative regulator in glucose repression. **Mol. Cell. Biol.** **12**:2673-2680 (1992).
33. Rose, A.M., P.B.M. Joyce, A.K. **Hopper**, N.C. Martin. Separate information required for nuclear and subnuclear localization: additional complexity in localizing an enzyme shared by mitochondria and nuclei. **Mol. Cell. Biol.** **12**:5652-5658 (1992).
34. Shen, W.-C., D. Selvakumar, D.R. Stanford, A.K. **Hopper**. The *Saccharomyces cerevisiae* *LOS1* gene involved in pre-tRNA splicing encodes a nuclear protein that behaves as a component of the nuclear matrix. **J. Biol. Chem.** **268**:19436-19444 (1993).
35. Boguta, M., L.A. Hunter, W-C. Shen, E.C. Gillman, N.C. Martin, A.K. **Hopper**. Subcellular locations of *MOD5* proteins: mapping of sequences sufficient for targeting to mitochondria and demonstration that mitochondrial and nuclear isoforms comingle in the cytosol. **Mol. Cell. Biol.** **14**:2298-2306 (1994).
36. Hess, S.M., D.R. Stanford, A.K. **Hopper**. *SRD1*, a *S. cerevisiae* gene affecting pre-rRNA processing contains a C₂/C₂ zinc finger motif. **Nucl. Acids Res.** **22**:1265-1271 (1994).
37. Wolfe, C.L., Y-C. Lou, A.K. **Hopper**, N.C. Martin. Interplay of heterogenous transcription start sites and translational selection of AUGs dictate the production of mitochondrial and cytosolic/nuclear tRNA nucleotidyltransferase from the same gene in yeast. **J. Biol. Chem.** **269**:13361-13366 (1994).
38. Murawski, M., B. Szczesniak, T. Zoladek, A.K. **Hopper**, N.C. Martin and M. Boguta. *maf1* mutation alters the subcellular localization of the Mod5 protein in yeast. **Acta Bichim. Pol.** **41**:441-448 (1994).
39. Rose, A.M., H. Belford, W.-C. Shen, C. Greer, A.K. **Hopper**, N.C. Martin. Location of N²,N²-dimethylguanosine-specific tRNA methyltransferase. **Biochimie** **77**:45-53 (1995).
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