## **CURRICULUM VITAE**

Name: Phone: E-mail: Address: Anita K. Hopper 614-688-3306 hopper.64@osu.edu 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-Lindegren Address Award - YGM (2014) Lifetime Achievement in Science Award – RNA society (2015) Honoree: Mentor recognition - OSU Undergraduate Mortar Board/Sphinx Honor Society (2015 & 2017) Fellow of American Academy Arts & Sciences (2020) Selected as one of the Research and Creative Expression Innovators in OSU's 150-year history (2020) Member, National Academy of Science (Elected, 2021)

## 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 (deceased), Microbiology, University of Illinois, Urbana, Illinois

Postdoctoral Experience. - laboratory of Dr. B.D. Hall (deceased), Genetics, University of Washington, Seattle, WA (9/71-8/75). Control of yeast meiosis by the mating-type locus; Molecular characterization of tRNA genes of yeast

### Faculty Positions:

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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, Hershey Medical
	Center, Pennsylvania State University, Hershey, PA
01/06 – 9/06	Distinguished Professor, Department of Biochemistry and Molecular Biology,
	The Milton S. Hershey Medical Center, Penn. State University, Hershey, PA
9/06 – 9/14	Professor and Chair Department of Molecular Genetics, Ohio State Univ.,
	Columbus, OH
1/19-6/19	Distinguished Visiting Professor, City of Hope, Duarte, CA
9/14-present	Professor Department of Molecular Genetics, Ohio State Univ., Columbus, OH

## **Professional Activities:**

Meeting organization:

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

Co-organizer – 5th Summer Symposium in Molecular Biology: "The Nucleus" at Penn. 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 (YGM) Committee** 

Advisory board - Mechanisms of Nuclear Transport Meeting (2009)

Co-organizer – Southern CA RNA Meeting (2019)

Theme Organizer – ASBMB Annual Meeting (2020/2021) Organizing committee member – tRNA 2022, Columbus, OH (2021-2022)

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; PLOS Genetics (2015)

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 (2009-2016)

Panel member – NIH F31/F32 grant applications (2015)

Associate Editor - PLOS Genetics (2016 - now)

Awards committee - Genetic Society America (2019; 2020)

Panel member - NSF (2021)

Site review - NIDDK (2021)

External advisory board - City of Hope Irell & Manella Graduate School (2022-now)

Advisory Committee member: Beckman Scholars Committee, OSU (2022-now)

ad hoc journal reviews activities - recent only:

Cell, Cell Reports, Curr. Biol., eLife, 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, Mol. Cell. Biol., Molec. Microbiol., Nature, Nature Struct. Biology, Nature Methods, Nature Comm., Nucl. Acids Res., Parasitology, PLoS Biology, PLOS Genetics, PLOS one, Proc. Natl. Acad. Sci., Science, Trends in Cell Biology, Traffic, RNA, Yeast.

Society Memberships: ASCB, 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, 2012) Center for RNA Biology - Steering committee (University, 2009-2017) CMBP NIH T32 training grant - Steering committee (University, 2011-2015) OSU Distinguished Scholar – member selection committee (University, 2012-2015) Microbiology Chair Search – Chair of the committee (College, 2013) Sullivant Award Committee – member selection committee (University, 2015) Honors Undergraduate Advisor - (Dept., 2015 - present) Molecular Genetics Undergraduate Club - co-advisor (Dept., 2021-present) OSU Provost Recruitment Committee - member of committee (University, 2016) OSU Presidential Fellowship Committee – member of committee (University 2017, 2018) OSU Interdisciplinary MCDB Graduate – member executive committee (University 2017- present) OSU Goldwater Fellowship Selection Committee – member (Unniversity, 2019 & 2022)

# **Teaching Experience:**

Member of Team-Teaching Groups: Biol. Chem., Mol. Genetics, Human Genetics, Mol. Biol., Immunology, Microbiology (UMMS). Member, 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); OSU, Columbus, OH: MG605, Genetics, MG majors (2007-2012); MG2220H honors course (2012-now); MG7807-grad course, RNA biology (team teacher, 2012-present); City of Hope faculty instructor, Cell Biology, Adv. RNA Biology, Fundamentals Sci. Res. (2019)

#### Graduate Students:

<u>Dates</u>	Name	Current Position
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.)	Lab Supervisor, Franklin & Marshall Coll., PA
1986-1993	S. Hess (Ph.D.)	Assist. Prof. Roswell Park Cancer, NY
1987-1993	K-S. Tung (Ph.D.)	Assoc. Prof., National Taiwan Univ., China
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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.)	Research Assoc., PS
1995-2000	S. Sarkar (Ph.D.)	Prof., Bose Institute, H
1997-2001	W. Feng (Ph.D.)	Sr. Scientist, Daiichi S
2001-2003	K. Butterfield-Gerson (M.S.)	Early Clinical Trial Sp
1999-2007	D. Eisaman (Ph.D./M.D.)	Physician, U. Pitt. Me
2001-2005	H. Shaheen (Ph.D.)	Director, Pandion The
2001-2006	R. Hurto (Ph.D; AHA fellow)	Research Assoc. U. N
2001-2006	A. Murthi (Ph.D.; <b>AHA fellow</b> )	Clinical Assist. Prof. Y
2001-2009	K. Stauffer (Ph.D.)	Medical writer, Wolter
2005-2006	T. Harchar (M.S.)	Medical writer, Axiom
2002-2007	M. Whitney (Ph.D.)	Prof. Milligan College
2007-2012	N. Dhungel (Ph.D., Pelotonia fellow)	Bus. Dev. Manager, T
2007-2012	G. Diaz-Munoz (Ph.D. NIH fellowship)	Director, Science Ed.
2007-2013	H-Y Chu (Ph.D. <b>OSU RNA fellow</b> )	Senior Scientist, Fate
2007-2013	TP. Lai (Ph.D <b>., AHA fellow</b> )	Assistant Prof., Rutge
2008-2014	HY. Huang (Ph.D.)	NIH F32, HHMI, IN, n
2010-2015	J. Wu (Ph.D., <b>Pelotonia fellow</b> )	Postdoc., Stanford, C
2012-2018	Y. Wan <b>(Pelotonia fellow)</b>	Postdoc, UC, Berkele
2021-now	M. McPherson (NIH T32 fellow)	NA
2021-now	J. Hastings (OSU University fellow)	NA
2022-now	E. Roldan-Bonet (OSU University fellow	
	CMBP fellow)	NA

## h Assoc., PSU. Col. Med., PA ose Institute, Kolkata, India ntist, Daiichi Sankyo, NJ inical Trial Specialist, Merck, CA in, U. Pitt. Med. Sch., PA Pandion Therapeutics, MA h Assoc. U. Michigan, MI Assist. Prof. Yeshiva Coll., NY writer, Wolters Kluwer Yardley, PA writer, Axiom, Yardley, PA ligan College, TN v. Manager, Thermo Fisher, CA Science Ed. Ciencia Puerto Rico cientist, Fate Therapeutics, CA t Prof., Rutgers U., NJ , HHMI, IN, now Senior Sci., Natera ., Stanford, CA; now Res. Sci. Agilent , UC, Berkeley, CA; now Vancouver

### International PhD Training Program – Poland and USA

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

#### **Postdoctoral Scholars:**

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<u>Dates</u>	<u>Name</u>	Current Position
1978-1981	L. Schultz	Scientist Merck, Sharp & Dohme, retired
1982-1985	D. (Hurt) Fatula ( <b>NIH fellowship</b> )	Scientist, Skelly & Loy Labs, PA; retired
1982-1986	R. Dunst	Scientist, Gyros US; retired
1983-1985	M. Dihanich	No longer in science
1986-1987	D. Selvakumar	Prof. Christian Medical College Vellore, India
1986-1990	L. Slusher ( <b>NIH fellowship</b> )	Professor, West Chester Univ., PA, retired
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	Prof., Chemistry & Biochem., Albright College, PA
1994-2000	G. Vaduva	Research Scientist, Bayer Co., MO
1997-2000	A. Azad	last known: Postdoctoral Fellow, Oxford, UK
1990-2005	D. Stanford	Assoc. Prof. Research, U. Oklahoma Coll. Med., OK
2005- 2007	H. Shaheen	Director, Pandion Therapeutics, MA
2006-2008	A. Murthi	Clinical Assist. Prof. Yeshiva Coll., NY
2009-2013	E. Kramer ( <b>NIH T32 fellowship</b> )	Assoc. Prof. Shippensburg Univ., PA
2006-2015	R. Hurto	Research Assoc., U. Michigan, Ann Arbor, MI
2014-2021	K. Chatterjee (Pelotonia Fellow)	Assist. Prof. Wittenberg U. (8/21)
2015-2016	S. Majumder	Assist. Prof. Presidency U., Kolkata, India
2017-current	R. Nostramo	NA

Membership PSU Ph.D. Thesis Committees after 1995 prior to relocating to OSU		
Student	PhD program	Dates
Sara Cole	Microbiology/Immunology	94/95 (competed 2002)
Erin Gestl	Biochemistry/Mol. Biol.	94/95 (competed 2002)

Heidi Devlin	CMB	95/96 (completed 2004)
Akash Patnaik	PhD/MD	95/96 (competed 2003)
Jai-Hai Lee	Biochemistry/Mol. Biol.	96/97 (competed 2003)
Bethanee Schlosser	PhD/MD	96/97 (competed 2003)
Laura Palmer	Biochemistry/Mol. Biol.	96/97 (competed 2003)
Abraham Fong	PhD/MD	97/98 (completed 2002)
Gang Peng	Biochemistry/Mol. Biol.	97/98 (competed 2002)
Beverly Batista	CMB	98/99 (completed 2006)
Rachael Garbitt	Microbiology/Immunology	98/99 (completed 2004)
Li Fang	CMB	98/99 (completed 2003)
Li Shen	Genetics	99/00 (completed)
Dongying Ciu	Cellular/Molecular Physiology	99/00 (completed 2005)
John Richardson	Biochemistry/Mol. Biol.	00/01 (completed 2004)
Brett Phillips	Physiology	01/02 (completed in 2006)
Pei-Chung Yeh	Genetics	01/02 (off committee; moved to OSU)
Melissa Zimmerman	Genetics	02/03 (completed in 2005)
Neggy Rismanchi	PhD/MD-Neuroscience	03/04 (off committee; moved to OSU)
Andy Beyer	Microbiology/Immunology	04/05 (off committee; moved to OSU)
Katie Prothero	Biochemistry/Mol. Biol.	04/05 (off committee; moved to OSU)

Membership of OSU Ph.D. Thesis Committees (2006-current):			
Sunghun Son	Molecular Genetics	Completed11/07	
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	
Brittany Theobald	MCDB	Completed MS, 2012	
Meera Govindaraghavan	MCDB	Completed 4/13	
Yi Xiong	Molecular Genetics	Completed 5/11	
William Swinehart	OSBP	Completed 5/15	
Mansi Arora	MCDB	Completed 4/14	
Mid Eum Lee	MCDB	Completed 12/14	
Yicheng Long	OSBP	Completed 7/15	
Nitya Subrahmanian	Molecular Genetics/PCMB	Completed 8/15	
Anna Belyawvskaya Sherwood	Microbiology	Completed 7/14	
Catey Dominguez	MCDB	Completed 1/17	
Daniel Comiskey	MCDB	Completed 2/17	
Katie Anderson	OSBP	Completed 3/18	
Kiel Kreuzer	MCDB	Completed 2/18	
Ånna Grffiths	MCDB	Completed 11/18	
Annie Kalinoski Witzky	Molecular Genetics	Completed 4/19	
Matias Montes	MCDB	Completed 7/21	
Gabriel Silveir d'Almeida	Microbiology	(In progress)	
Zhonyxia Yi	Molecular Genetics	Completed 11/21	
Shobhana Rajasenan	Molecular Genetics	Completed 8/21	
Isobel Bowles	OSBP	(In progress)	
Priscila M. Rodriguez Garcia	Molecular Genetics	(In progress)	
Rabab Abu Ahasan	Molecular Genetics	(In progress)	

Yi hui Wang	OSBP	(In progress)
Lauren Levesque	Molecular Genetics	(In progress)
Dale Lingo	MCDB	(In progress)
Jason Li	Molecular Genetics	(in progress)

## Non-PSU/OSU Thesis Committees:

1992 – A. Atkin, Genetics, University of Alberta, Canada

2001 – J. Kaminska, Polish Academy of Sciences, Institute of Biochemistry and Biophysics, Poland.

2001 – S. Naqvi, Institute of Molecular Agrobiology, Singapore.

2002 – B. Gajewska, Polish Academy of Sciences, Institute of Biochemistry and Biophysics, Poland.

Present position

M.D., Emory U.

PhD Cornell U.

PhD Cornell U.

Physician

Ph.D./M.D., Physician

Graduate, U. Delaware

High School Teacher, PA

High School Teacher, PA

B.S., Penn. St. Delaware

**OSU** Optometry graduate

M.S. Bowling Green St.

Assoc. Prof., Milligan College

Postdoctoral Scholar, Stanford

2003 – M. Johansson, Dept. of Molecular Biology Umea University, Sweden.

2004 – J. Gallagher, Dept. Genetics, Yale University.

2007 – M. Boban, Ludwig Institute for Cancer Research, Stockholm, Sweden

2011 – J. 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 2007-2009) Caitlin Knowlton (Summer Intern – Taylor Univ. (2009) Jessica Profato (MG major OSU/honors thesis 2009-2010)

M.S., Stanford: Genetic Counselor, U. Texas, Houston Brittany Suggs (**NSF REU** student from Henderson, AR) PhD OSU Mariya Nudel (MG Major OSU 2010-2012); Pelotonia fellow Biotech., MA. Varun Rawal (Biology Major OSU Honors thesis; 2013 – 2014) M.D. Resident OSU Sara Metcalf (MG Major OSU Honors thesis; 2014 – 2016) M.S. Indiana U.; now OSU Heather Osborn (Visiting Scholar, Undergrad.; summer 2014) B.S. Liberty U. Justin Weibel (Biology Major OSU; 2015-2016) OSU B.S. William Hines (Biology Major OSU Scholars program; 2015 - 2017) M.D. Resident U. Penn Vijay Shah (Biology Major OSU Honors program; 2015 – 2017) Medical student, OSU, OH Alicia Bao (2015-2019 BMS OSU Honors thesis) Pelotonia Fellow Medical student, OSU, OH Matt Rode (MG major BS/MS OSU; 2016-202) Medical Student; Mayo Med. Leon Wu (high school summer student; 2018) Undergrad., Columbia U., Lauren Peltier (MG OSU Honors thesis; 2018-2020) Pelotonia Fellow Med. Student, U. Dayton 8/21 Katie Clark (MG Scholars OSU Undergrad.; Honors thesis; 2020-2022) NA Alex Hand (Biol. OSU Undergraduate; 2020-2022) Unknown Victor Gu (High school student; 2020-2020 Undergrad. U. Rochester Will Marshal (MG OSU Honors Undergrad.; 2021-2022) Pelotonia Fellow NA Lindsay Drumm (MG OSU undergrad; 2021-now) NA Paolo Sinopoli (MG OSU Honors undergraduate; 2022-now) Katelyn Burns (Biol. Columbus State Univ.; 2022-now) NA

## **Publications:**

#### Invited Review Articles/Methods Chapters/Commentaries:

1. **Hopper**, A.K. Genetic and biochemical studies of RNA processing in yeast, p 91-132. *In* **RNA Processing**. ed. D. 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 & 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).
- 4. Martin, N.C., A.K. **Hopper**, How single genes provide tRNA processing enzymes to mitochondria, nuclei and the cytosol. **Biochimie 76**:1161-1167 (1994).
- 5. Hopper, A.K. Nuclear functions charge ahead. Science 282:2003-2004 (1998).
- 6. Hopper, A.K. Nucleus/cytosol exchange: inside out regulation. Current Biol. 9: R803-806 (1999).
- 7. 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).
- 8. Engelke, D.R., A.K. Hopper. Modified view of tRNA: stability amid sequence diversity. Mol. Cell 21:141-142 (2006).
- 9. 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 556:13-18 (2015).
- 11. Phizicky, E.M., A.K. **Hopper.** tRNA processing, modification, and subcellular dynamics: past, present, and future **RNA 21**:483-485 (2015); Invited.
- 12. Wan, Y., A.K. **Hopper**. Size matters: conserved proteins function in length-dependent nuclear export of circular RNAs. **Genes Dev. 32**:600-601 (2018); Invited Commentary.
- 13. Nostramo, R.T., A.K. **Hopper**. Beyond rRNA and snRNA: tRNA as a 2'-O-methylation target for nucleolar and Cajal body box C/D RNPs. **Genes Dev**. **33**: 739-740 (2019); Invited Commentary.
- 14. Nostramo, R.T., A.K. **Hopper.** A simple method for the detection of wybutosine-modified tRNA<sup>Phe</sup><sub>GAA</sub> as a readout of retrograde tRNA nuclear import and re-export. In: **Methods Mol. Biology** (invited; in press, 2022).
- 15. Chatterjee, K., A.K. **Hopper**. *In vivo* cross-linking and co-immunoprecipitation procedure to analyze nuclear tRNA export complexes in yeast cells. In: **Methods Mol. Biology** (invited; in press, 2022).

# 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**. Isopentenylation 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 isopentenylation of cytoplasmic and mitochondrial tRNAs of *Saccharomyces cerevisiae*. **Mol. Cell. Biol. 7**:177-184 (1987).
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## Patent:

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Ohio State University Pelotonia Undergraduate Fellowship Stress-induced tRNA intron accumulation as a potential mechanism of gene regulation Lauren Peltier, Undergraduate Trainee, PI; A.K. **Hopper**, Mentor; Project dates 6/1/19-5/30/20

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Ohio State University Pelotonia Graduate Fellowship Studies of Novel Proteins Required for Efficient Splicing of Intron-containing tRNAs in Yeast *Saccharomyces cerevisiae* Yao Wan, Ph.D. Trainee; PI; A.K. **Hopper**, Mentor; Project dates: 08/15/16-08/14/18

Ohio State University Pelotonia Undergraduate Fellowship The Mechanism of tRNA Intron Turnover and the Consequences of Its Dysfunction Alicia Bao, Undergraduate Trainee, PI; A.K. **Hopper**, Mentor; Project dates: 06/1/16-05/31/17