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:

| 08/87 - 02/88 09/95 - 07/96 | Sabbatical Leave , Department of Genetics, University of Washington, Seattle, WA 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)

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)

ad hoc journal reviews activities - recent only:

Cell, Cell Reports, Curr. Biol., eLife, ÉMBO 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, Nucl. Acids Res., 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 (Arts & Sciences College, 2019)

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:

| Dates | Name |
|-----------|-----------------------------------|
| 1980-1986 | G. Fabian (Ph.D.) |
| 1981-1986 | N. Atkinson (Ph.D.) |
| 1979-1988 | S. (Nolan) Klesner (Ph.D.) |
| 1983-1989 | S. Wang (M.S./Ph.D.) |
| 1984-1990 | E. Gillman (Ph.D./M.D.) |
| 1990-1991 | L. Norbeck (M.S.) |
| 1986-1993 | S. Hess (Ph.D.) |
| 1987-1993 | K-S. Tung (Ph.D.) |
| 1991-1995 | W. Shen (Ph.D.) |
| 1990-1997 | L. (Hunter) Tolerico (M.S./Ph.D.) |

Current Position Scientific Law, Palo Alto, CA Professor, U. Texas, Austin, TX Patent Attorney Agent, Fort Collins, CO Research Associate at Novartis, Austria Physician, Harrisburg, PA Lab Supervisor, Franklin & Marshall Coll., PA Assist. Prof. Roswell Park Cancer, NY Assoc. Prof., National Taiwan Univ., China Patent Attorney, DC No longer in science

| 1994-1999 | A. Benko (Ph.D.) | Research Assoc., 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, CA |
| 1999-2007 | D. Eisaman (Ph.D./M.D.) | Physician, U. Pitt. Med. Sch., PA |
| 2001-2005 | H. Shaheen (Ph.D.) | Director, Pandion Therapeutics, MA |
| 2001-2006 | R. Hurto (Ph.D; AHA fellow) | Research Assoc. U. Michigan, MI |
| 2001-2006 | A. Murthi (Ph.D.; AHA fellow) | Clinical Assist. Prof. Yeshiva Coll., NY |
| 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.) | Prof. Milligan College, TN |
| 2007-2012 | N. Dhungel (Ph.D., Pelotonia fellow) | Bus. Dev. Manager, Thermo Fisher, CA |
| 2007-2012 | G. Diaz-Munoz (Ph.D. NIH fellowship) | Director, Science Ed. Ciencia Puerto Rico |
| 2007-2013 | H-Y Chu (Ph.D. OSU RNA fellow) | Scientist, Fate Therapeutics, CA |
| 2007-2013 | TP. Lai (Ph.D., AHA fellow) | Assistant Prof., Rutgers U., NJ |
| 2008-2014 | HY. Huang (Ph.D.) | NIH F32, HHMI, IN, now Senior Sci., Natera |
| 2010-2015 | J. Wu (Ph.D., Pelotonia fellow) | Postdoc., Stanford, CA; now maternity leave |
| 2012-2018 | Y. Wan (Pelotonia Fellow) | Postdoc, UC, Berkeley, CA; now Vancouver |
| 2021-now | M. McPherson (NIH T32 fellow) | NA |
| 2021-now | J. Hastings (OSU University Fellow) | NA |
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|---|--|---|--|
| International PhD Training Program – Poland and USA | | | |
| 11/12-7/12, 9/1 | 3 – 12/13 D. Fortek | PhD student Polish Acad. Sci., studies in USA | |
| 7/12-9/13 | A. Domanska | PhD student Polish Acad. Sci., studies in USA | |
| | | | |
| Postdoctoral \$ | | | |
| <u>Dates</u> | Name | Current Position | |
| 1978-1981 | L. Schultz | Scientist Merck, Sharp & Dohme, retired | |
| 1982-1985 | D. (Hurt) Fatula (NIH fellowship) | 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 (NIH fellowship) | 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 (NIH T32 fellowship) | 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 | (In progress) | |
| Shobhana Rajasenan | Molecular Genetics | (In progress) | |
| Isobel Bowles | OSBP | (In progress) | |
| Priscila M. Rodriguez Garcia | 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.

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 2007-2008) 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 (**NSF REU** student from Henderson, AR) Mariya Nudel (MG Major OSU 2010-2012); Pelotonia fellow Varun Rawal (Biology Major OSU Honors thesis; 2013 – 2014) Sara Metcalf (MG Major OSU Honors thesis: 2014 – 2016) Heather Osborn (Visiting Scholar, Undergrad.; summer 2014) Justin Weibel (Biology Major OSU; 2015-2016) William Hines (Biology Major OSU Scholars program; 2015 - 2017) Vijay Shah (Biology Major OSU Honors program; 2015 – 2017) Alicia Bao (2015-2019 BMS OSUHonors thesis) Pelotonia Fellow Matt Rode (MG major BS/MS OSU; 2016-202) Leon Wu (high school summer student; 2018) Lauren Peltier (MG OSU Honors thesis; 2018-2020) Pelotonia Fellow Katie Clark (MG Honors Undergraduate OSU; 2020-now) Alex Hand (Biol. OSU Undergrad.; 2020-now) Victor Gu (High school student: 2020-2020 Will Marshal (MG OSU Honors Undergrad.; 2021-now) Lindsay Drumm (MG OSU; 2021-now)

Present position Ph.D./M.D., Physician High School Teacher, PA Physician Graduate, U. Delaware High School Teacher, PA Assoc. Prof., Milligan College Postdoctoral Scholar, Stanford M.D., Emory U. B.S., Penn. St. Delaware **OSU** Optometry graduate PhD Cornell U. PhD Cornell U. M.S. Bowling Green St. M.S., Stanford; Genetic Counselor, U. Texas, Houston PhD OSU Biotech., MA. last known; OSU Med. Student M.S. Indiana U.: now OSU BS Liberty U.; now ? OSU B.S. Medical student, USC, CA Medical student, OSU, OH Medical student, OSU, OH Med. Student; Mayo Med. Undergrad, Columbia U., Med. Student, U. Dayton 8/21 NA NA NA NA NA

Publications:

Invited Review Articles/Chapters:

- 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)
- 2. **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.

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).

- 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).
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Patent:

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Ohio State University Pelotonia Postdoctoral Fellowship Identification and Characterization of Two Novel tRNA Nuclear Exporters in *Saccharomyces cerevisiae* Kunal Chatterjee, Trainee; PI; A.K. **Hopper**, Mentor; Project dates: 06/1/16-05/31/18

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