Curriculum Vitae

Marta M. Lipinski, Ph.D.

Assistant Professor

Department of Anesthesiology

University of Maryland School of Medicine

July 28, 2016

Contact Information

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Research Interest

The long-term goal of research in my laboratory is to define novel target molecules and pathways for safe and effective modulation of autophagy as a treatment against neurodegeneration induced by both acute (trauma) and chronic (neurodegenerative diseases) causes.

Autophagy is a catabolic process mediating the turnover of bulk cytoplasmic constituents including organelles and protein aggregates in a lysosome-dependent manner. It is necessary for cellular homeostasis and protects organisms from a variety of diseases, including neurodegeneration and aging. Up-regulation of autophagy has been observed following traumatic brain injury (TBI) and spinal cord injury (SCI), but its mechanisms and unction in those contexts remain unknown. We use in vivo and in vitro models to examine the role of autophagy after TBI and SCI, and to delineate the molecular mechanisms involved. Our data demonstrate that although autophagosomes accumulate in the brain and spinal cord after TBI and SCI, respectively, autophagic degradation cannot proceed to completion. This block of autophagy is especially apparent in neurons and correlates with markers of neuronal cell death. Thus defective autophagy may contribute to neuronal cell death in TBI and SCI. We are currently investigating potential methods to re-activate autophagy flux as a treatment for TBI and SCI.

Additionally, we are using in vitro models, including human induced pluripotent stem (iPS) cells, to examine function and mechanisms of USP24, a novel gene associated with Parkinson’s disease (PD). Our data demonstrate that USP24 is a negative regulator of autophagy and its inactivation can be beneficial in cellular models of PD. We are investigating whether inactivation of USP24 may be a potential future target for treatment of PD and other neurodegenerative conditions, including TBI and SCI.

Education

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| 1991 - 1995 | B.A., Biology, Indiana University  Thesis Topic: Bacterial Cell Differentiation in C. Crescentus  Thesis Advisor: Yves Brun, Ph.D. |
| 1995 - 2001 | Ph.D., Biology, Massachusetts Institute of Technology  Area of Study: Cancer Biology  Thesis Topic: Function of the Retinoblastoma Tumor Suppressor in the Regulation of Cell Differentiation and Tumorigenesis in Vitro and in Vivo  Thesis Advisor: Tyler Jacks, Ph.D. |

Post-Graduate Education and Training

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| 2001 | Internship - Science Policy, Center for Strategic and International Studies  Washington, DC |
| 2002 - 2010 | Postdoctoral Fellowship - Project: Developed and used high-throughput approaches to study global regulation of mammalian autophagy. Advisor: Junying Yuan, PhD, Harvard Medical School, Department of Cell Biology, Boston, MA |

Employment History

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|  | Academic Appointments |

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|  | 2011 - Present | Assistant Professor (Secondary Appointment), Department of Anatomy and Neurobiology  University of Maryland School of Medicine  Baltimore, MD |
|  | 2011 - Present | Assistant Professor, Department of Anesthesiology  University of Maryland School of Medicine  Baltimore, MD |

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|  | Other Employment |

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|  | 2011 - Present | Member  Shock, Trauma and Anesthesiology Research (STAR) Center  University of Maryland School of Medicine, Baltimore, MD |
|  | 2011 - Present | Member & Neural Stem Cell Group Leader  Center for Stem Cell Biology and Regenerative Medicine  University of Maryland School of Medicine, Baltimore, MD |
|  | 2012 - Present | Member  Center for Biomolecular Therapeutics  University of Maryland School of Medicine, Baltimore, MD |

Professional Society Memberships

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| 2004 - Present | Member, Society for Neuroscience |
| 2015 - Present | Member, National Neurotrauma Society |

Honors and Awards

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| 1993 | Undergraduate Summer Research Fellowship  National Science Foundation  Carnegie-Mellon University, Pittsburgh, PA |
| 1994 | Undergraduate Summer Research Fellowship  Howard Hughes Medical Institute  University of Texas, Austin, TX |
| 1995 - 1998 | Graduate Research Fellowship  National Science Foundation  Massachusetts Institute of Technology, Cambridge, MA |
| 2001 | Bochnowski Graduate Fellowship  Massachusetts Institute of Technology, Cambridge, MA |
| 2002 - 2005 | Postdoctoral Fellowship  Harvard Center for Neurodegeneration and Repair  Harvard Medical School, Boston, MA |

Administrative Services

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|  | Institutional Services |

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|  | 2013 - Present | Group Co-Leader  Neural Stem Cell Group  Department of Center for Stem Cell Biology and Regenerative Medicine  University of Maryland School of Medicine  Lead the Neural Stem Cell Group at the UMB Center for Stem Cell Biology and Regenerative Medicine. Organized Stem Cell Group meetings and discussions, participated in grant proposal evaluation, invited and hosted outside speakers. |
|  | 2013 - Present | Mentor  UM Scholars  Department of Student Summer Research and Community Outreach  University of Maryland School of Medicine  Mentored undergraduate students in the UM Scholars summer research program. |
|  | 2015 - Present | Student Interviewer  Program in Neuroscience (PIN)  Department of Graduate Program in Life Sciences (GPLS)  University of Maryland School of Medicine  Interviewed and evaluated candidates for the PhD program. |
|  | 2015 - Present | Mentor  Summer Bioscience Internship Program (BSIP)  Department of Student Summer Research and Community Outreach  University of Maryland School of Medicine  Mentored Baltimore City High School students during summer research program sponsored by MD legislature (Congressman Elijah Cummings). |
|  | 2016 | Host/Sponsor  Recruitment Social Hour  Department of Graduate Program in Life Sciences (GPILS)  University of Maryland School of Medicine  Sponsored, helped organize and hosted social hour to help recruit prospective GPILS PhD students. |
|  | 2016 - Present | Student Interviewer  Program in Toxicology  Department of Graduate Program in Life Sciences (GPLS)  University of Maryland School of Medicine  Interviewed and evaluated candidates for the PhD program. |
|  | 2016 - Present | Reviewer  UM Scholars  Department of Student Summer Research and Community Outreach  University of Maryland School of Medicine  Evaluated applicants for the UM Scholars Program Undergraduate Research Internships. |
|  | 2016 - Present | Member  Program in Neuroscience (PIN) Training Committee  Department of Graduate Program in Life Sciences (GPLS)  University of Maryland School of Medicine  Participated is determining curriculum, academic policies and performance standards for PhD students in the PIN program. |
|  | 2016 - Present | Member  Anesthesiology Research Committee  Department of Anesthesiology  University of Maryland School of Medicine  Helped coordinate and promote basic, translational, and clinical research activities within the Department of Anesthesiology. |

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|  | Local Services |

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|  | 2015 | Poster Judge  Society for Neuroscience  Maryland Chapter  Judged student and postdoc posters at the MD chapter SFN conference. |
|  | 2015 - Present | Organizing Committee Member  National Capital Area Traumatic Brain Injury Research Symposium  Participated in organizing the meeting, nominated and selected invited speakers, reviewed and selected poster and short talk abstracts. |

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|  | National Services |

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|  | 2004 - Present | Grant Reviewer  Alzheimer's Association |
|  | 2011 – Present  2016 | Journal Reviewer  Multiple journals including: Autophagy, Journal of Cell Biology, Cell Death and Differentiation, FEBS Journal, PlosONE, Scientific Reports, Journal of Neurochemistry, Antioxidants & Redox Signaling, Progress in Neuroscience, Nature Reviews Neuroscience, etc.  Ad-hoc Member  BINP Study Section, NIH, Bethesda MD |

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|  | International Services |

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|  | 2011 - Present | Grant Reviewer  Research Grant Council (RGC) of Hong Kong |
|  | 2015 - Present | Grant Reviewer  India Alliance Welcome Trust |
|  | 2016 - Present | Grant Reviewer  Wings for Life Foundation |

Community Service

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|  | Local Services |

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|  | 2016 | Tinker and Techsploration Fair Volunteer  The Bryn Mawr School, Baltimore MD  Helped girls in grades K-5 learn about and explore newest IT and computer technologies. |

Teaching Service

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|  | Undergraduate Student Teaching |

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|  | 1994 | Junior Teaching Assistant  Indiana University  Introductory Biology Laboratory  Supervised students in a teaching laboratory. |
|  | 1997 | Teaching Assistant  Massachusetts Institute of Technology  General Biochemistry  Led a problem set section and graded exams. |
|  | 1999 | Teaching Assistant  Massachusetts Institute of Technology  Experimental Molecular Biology Project Lab  Supervised and advised students working on independent research projects in a supervised laboratory setting. |

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|  | Graduate Student Teaching |

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|  | 2008 | Instructor  Harvard Medical School  Experimental Approaches to Developmental Biology  Designed and taught lecture and experimental section. |
|  | 2008 | Instructor  Harvard Medical School  Molecular Biology of the Cell  Led a paper discussion section, designed exam questions, and participated in student evaluation. |
|  | 2012 | Student Conference Mentor  University of Maryland School of Medicine  GPLS Core Course  Led a paper discussion section and participated in student evaluation. |
|  | 2013 – Present  2014 - Present | Lecturer  University of Maryland School of Medicine  Advanced Cancer Biology, GPLS 790  Designed and taught lecture, assigned papers, led a discussion section, and participated in student evaluation.  Instructor  University of Maryland School of Medicine  Reading and Special Topics, GPLS 618  Selected papers, lead discussions and evaluated students in small group and/or one-on-one weekly independent study sessions. |
|  | 2015 - Present | Course Co-Director  University of Maryland School of Medicine  Advanced Cancer Biology, GPLS 790  Helped organize and lead the course. |
|  | 2015 - Present | Lecturer  University of Maryland School of Medicine  Advanced Molecular Biology, GPLS 701  Designed and taught lecture, assigned papers and lead a discussion section, participated in student evaluation. |

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|  | Mentoring: Fellows & Graduate Students |

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|  | 2002 - 2005  2012 - Present  2012 - Present  2014 - 2015  2015 - 2016  2015 - Present  2015 - Present  **Mentoring:**  1999 - 2000 | Mentor / Thesis Advisor  Harvard University, Cambridge, MA  Edward Sohn, **Undergraduate / Graduate Student - MS**  Thesis title: The roles of caspase-12, caspase-4, and eIF2-alpha phosphorylation in apoptosis induced by IFN-gamma.  Current position: Vice President at Nautic Partners LLC, Providence, Rhode Island  Mentor  University of Maryland School of Medicine, Baltimore, MD  Chinmoy Sarkar, PhD, **Postdoctoral Fellow / Research Associate**  Current position: Research Associate, Department of Anesthesiology, University of Maryland School of Medicine, Baltimore MD  Mentor  University of Maryland School of Medicine, Baltimore, MD  Shuo Liu, MD/PhD, **Postdoctoral Fellow**  Co-mentor with Dr. Eugene Koh, Orthopaedics  Mentor  University of Maryland School of Medicine, Baltimore, MD  Prarthana Ravishankar, **Graduate Student - MS**  Cellular and Molecular Biomedical Science Masters Program  Current position: Associate Scientist-II, Thermo Fisher Scientific, Frederick MD  Mentor  University of Maryland School of Medicine, Baltimore, MD  Deepika Philkana, **Graduate Student - MS**  Cellular and Molecular Biomedical Science Masters Program  Current position: Research Associate-II Sera Care Life Sciences, Gaithesburg, MD  Thesis Advisor  University of Maryland School of Medicine, Baltimore MD  Julia Peter, **Graduate Student - PhD**  Program in Toxicology  Thesis Advisor  University of Maryland School of Medicine, Baltimore, MD  Nivedita Uday Hegdekar, **Graduate Student - MS/PhD**  Cellular and Molecular Biomedical Science Masters Program &  PhD Program in Biochemistry and Molecular Biology  **Undergraduate, Medical & High School Students**  Mentor  Massachusetts Institute of Technology, Cambridge, MA  Maura Costello, **Undergraduate Student**  Current position: Associate Director - Technology Development, Genomics Platform, The Broad Institute of MIT/Harvard, Cambridge, MA |
|  | 2000 - 2001 | Mentor  Massachusetts Institute of Technology, Cambridge, MA  Tara Mullaney, **Undergraduate Student**  Current position: Researcher & PhD Candidate, Umea Institute of Design, Umea, Sweden |
|  | 2005 | Mentor  Harvard Medical School, Boston, MA  Danielle Pier, **Medical Student** |
|  | 2013 & 2014 | Mentor  University of Maryland School of Medicine / UM Scholars Program  Julie Etheridge, **Undergraduate Student**  University of Maryland College Park  Current position: Recent graduate of University of Maryland College Park |
|  | 2014 | Mentor  University of Maryland School of Medicine  Steven Kurapaty, **Undergraduate Student**  University of Maryland, College Park, MD |
|  | 2015 | Mentor  University of Maryland School of Medicine / Summer BioScience Internship Program, Baltimore, MD  Malik Richberg, **High School Student** |
|  | 2016 | Mentor  University of Maryland School of Medicine / UM Scholars Program  Henok Tesfay, **Undergraduate Student**  University of Maryland College Park |
|  | 2016 | Mentor  University of Maryland College Park / UM Scholars Program  Cameran Burt, **Undergraduate Student**  University of Maryland, College Park, MD |
|  | 2016 | Mentor  University of Maryland School of Medicine  Annika Schaefer, **Undergraduate Student**  Vanderbilt University, Nashville, TN |
|  | 2016 | Mentor  University of Maryland School of Medicine  Harshal Shah, **High School Student**  Pooleville High School, Pooleville, MD |
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|  | Thesis/Qualifying Committee Service |

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| 2013 | Thesis Committee Member  Peter MacCallum Cancer Center, VIC 3002- Australia  Katrina Falkenberg (PhD candidate), Advisor: Dr. Kaylene Simpson  Current position: Postdoctoral Researcher at Research Institute of Molecular Pathology |
| 2014 - Present | Thesis Committee Member  University of Maryland School of Medicine  Edward Cherok, PhD candidate, Program in Biochemistry  Advisor: Dr. Mariusz Karbowski |
|  | 2015 - Present | Thesis Committee Member  University of Maryland School of Medicine  Tierra Johnson, PhD candidate, Program in Molecular Medicine  Advisor: Dr. Toni Antalis |
|  | 2016  2016 - Present | Qualifying Exam Committee Member  University of Maryland School of Medicine  Quinton Banks, PhD candidate, Program in Neuroscience (PIN)  Thesis Committee Member  University of Maryland School of Medicine  Manasa Srikanth, PhD candidate, Program in Molecular Medicine  Advisor: Dr. Ricardo Feldman |

Grant Support

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|  | Active Grants |

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|  | 9/1/2014 - 8/31/2017 (NCE) | PI (15% effort)  **NIH, R03**  Grant Number: R03NS087338-01A1  "The PARK10 Gene USP24 Affects Parkinson's Disease Via Regulation of Autophagy"  Goals: The aim of this grant is to determine the mechanisms by which USP24 gene regulates autophagy and contributes to parkinson's disease.  Award Total: $153,500  Annual Indirect Cost: $26,750  Annual Direct Cost: $50,000  Total Indirect Cost: $53,500  Total Direct Cost: $100,000 |
|  | 3/1/2015 - 2/29/2020 | PI (40% effort)  **NIH, R01**  Grant Number: R01NS091218  "Function and Mechanisms of Autophagy-lysosomal Pathway in Traumatic Brain Injury"  Goals: The goal of this grant is to identify mechanisms leading to inhibition of autophagy flux after brain trauma in mouse models, and to determine whether enhancement of autophagy can enhance functional recovery.  Award Total: $1,678,905  Annual Indirect Cost: $117,031  Annual Direct Cost: $218,750  Total Indirect Cost: $585,155  Total Direct Cost: $1,093,750 |
|  | 6/1/2016 - 5/31/2021 | Co-I (20% effort, PI Junfang Wu)  **R01, NIH**  Grant Number: R01NS 094527  "The Function and Mechanisms of Autophagy in Spinal Cord Injury"  Goal: To identify the function and the cellular mechanisms of autophagy in spinal cord injury using mice as a model and to determine if modulation of autophagy can be used as SCI therapy.  Award Total: $1,678,905  Annual Indirect Cost: $117,031  Annual Direct Cost: $218,750  Total Indirect Cost: $585,155  Total Direct Cost: $1,093,750 |
|  | 7/1/2016 - 6/30/2018 | Co-I (10% effort, PI Chinmoy Sarkar)  **Maryland Stem Cell Research Fund, Exploratory Grant**  Grant Number: 2016-MSCRFE  "Neuronal differentiation of iPS cells by autophagy induction in oxidative environment to treat TBI"  Goal: To use modulation of autopahgy throught the FIP200 pathway to increase survival, nueornal differenciation and efficacy of thansplanted stem cells as a treatment for TBI.  Award Total: $230,000  Annual Indirect Cost: $15,000  Annual Direct Cost: $100,000  Total Indirect Cost: $30,000  Total Direct Cost: $200,000 |

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|  | Completed Grants |

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|  | 10/1/2003 - 9/30/2005 | PI  **Alzheimer's Association, New Investigator Research Grant** Grant Number: NIGR-03-5171  "Role of the Caspase Family Proteases in Alzheimer's Disease"  Goal: To use mouse models to determine the function of the caspase family proteases in Alzheimer's Disease. |
|  | 5/18/2009 - 4/30/2014 | Co-I (PI Alan Faden)  **NIH, R01**  "Mechanism and Modulation of Cell Death in Traumatic Brain Injury"  Examined multiple mechanisms of neuronal cell death after TBI, including necrosis, caspase-dependent apoptosis & caspase-independent apoptosis; pharmacologic & genetic modulation of cell death pathways, particularly as related to AIF mediated cell death.  Grant Number: R01NS061839 |
|  | 7/18/2011 - 7/17/2014 | PI  **Departmental of Anesthesiology Start-Up Grant**  Research Initiation Funds, University of Maryland School of Medicine  Goal: To Fund PI's Laboratory and Preliminary Studies Needed to Be Competitive for Extramural Research Support |
|  | 5/1/2013 - 5/31/2014 | Co-I (PI Eugene Koh)  **AO North America Project**  Grant Number: 1300677  "Identification of Novel Drugs to Enhance Nerve Regeneration"  Goal: To develop a high-throughput screening system to identify small molecule drugs able to promote nerve regeneration |
|  | 7/1/2013 - 6/30/2015 | Co-I (PI Eugene Koh)  **Maryland Stem Cell Research Fund, Exploratory Grant**  Grant Number: 2013-MSCRFE-0148  "Identification of Small Molecules to Direct Mesenchymal Stems Cells Differentiation into Intervertebral Disc Chondrocytes"  Idea Development Grant. Goal: To develop a high-throughput screening system to identify small molecule drugs able to promote stem cell differentiation into chondrocytic lineags.  Award Total: $230,000  Annual Indirect Cost: $15,000  Annual Direct Cost: $100,000  Total Indirect Cost: $30,000  Total Direct Cost: $200,000 |
|  | 7/1/2014 - 6/30/2016 | PI  **Maryland Stem Cell Research Fund, Exploratory Grant**  Grant Number: 2013-MSCRFE-0587  "Modeling Parkinson's Disease Function of the PARK10 Gene USP24 in Human iPS Cells"  Goal: To use human iPS cells to demonstrate that USP24 contributes to Parkinson's disease via regulating autophagy and to determine whether its inhibition can be used as a treatment  Award Total: $230,000  Annual Indirect Cost: $15,000  Annual Direct Cost: $100,000  Total Indirect Cost: $30,000  Total Direct Cost: $200,000 |

Patents

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| 2010 - Pending | Methods for modulation of autophagy through the modulation of autophagy-enhancing gene products  Patent Number: US 20120301463 A1  Inventors: Yuan J, **Lipinski MM**  The present disclosure relates to methods for the modulation of autophagy and the treatment of autophagy-related diseases, including cancer, neurodegenerative diseases and pancreatitis. |
| 7/7/2016 | Methods for modulation of autophagy through the modulation of autophagy-inhibiting gene products  Patent Number: US Patent 20160194631  Inventors: Yuan J, **Lipinski MM**  The present disclosure relates to methods for the modulation of autophagy and the treatment of autophagy-related diseases, including cancer, neurodegenerative diseases and pancreatitis. |

Publications (2239 citations total, 1323 citations since 2011 – Google Scholar)

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|  | Peer-Reviewed Journal Articles |

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|  | 1. | **Lipinski MM**, Jacks T. The Retinoblastoma Gene Family in Differentiation and Development. Oncogene. 2000;18(55):7873-82. PMID: 10630640. |
|  | 2. | **Lipinski MM**, Macleod KF, Williams BO, Mullaney TL, Crowley D, Jacks T. Cell-autonomous and Non-Cell-Autonomous Functions of the Rb Tumor Suppressor in Developing Central Nervous System. The EMBO Journal. 2001;20(13):3402-13. PMID: 11432828. |
|  | 3. | Yuan J, **Lipinski M**, Degterev A. Diversity in the Mechanisms of Neuronal Cell Death. Neuron. 2003;40(2):401-13. PMID: 14556717. |
|  | 4. | **Lipinski MM**, Yuan J. Mechanisms of Cell Death in Polyglutamine Expansion Diseases. Current Opinion in Pharmacology. 2004;4(1):85-90. PMID: 15018844. |
|  | 5. | **Lipinski MM**, Yuan J. A Cellular Response to an Internal Energy Crisis. Cell. 2005;123(1):3-5. PMID: 16213206. |
|  | 6. | Zhang Y, Zhou X, Degterev A, **Lipinski M**, Adjeroh D, Yuan J, Wong ST. A Novel Tracing Algorithm for High-throughput Imaging Screening of Neuron-based Assays. Journal of Neuroscience Methods. 2006;160(1):149-62. PMID: 16987551. |
|  | 7. | Zhang Y, Zhou X, Degterev A, **Lipinski M**, Adjeroh D, Yuan J, Wong ST. Automated Neurite Extraction Using Dynamic Programming for High-throughput Screening of Neuron-based Assays. NeuroImage. 2007;35(4):1502-15. PMID: 17363284. |
|  | 8. | Py BF\*, **Lipinski MM\***, Yuan J. Autophagy Limits Listeria Monocytogenes Intracellular Growth in the Early Phase of Primary Infection. Autophagy. 2007;3(2):117-25. PMID: 17204850. **\*first co-authors** |
|  | 9. | Huang Y, Zhou X, Miao B, **Lipinski M**, Zhang Y, Li F, Degterev A, Yuan J, Hu G, Wong ST. A Computational Framework for Studying Neuron Morphology From in Vitro High Content Neuron-based Screening. Journal of Neuroscience Methods. 2009;190(2):299-309. PMID: 20580743. |
|  | 10. | Furuya T, Kim M, **Lipinski M**, Li J, Kim D, Lu T, Shen Y, Rameh L, Yankner B, Tsai LH, Yuan J. Negative Regulation of Vps34 by Cdk Mediated Phosphorylation. Molecular Cell. 2009;38(4):500-11. PMID: 20513426. |
|  | 11. | **Lipinski MM**, Hoffman G, Ng A, Zhou W, Py BF, Hsu E, Liu X, Eisenberg J, Liu J, Blenis J, Xavier RJ, . A Genome-wide SiRNA Screen Reveals Multiple MTORC1 Independent Signaling Pathways Regulating Autophagy Under Normal Nutritional Conditions. Developmental Cell. 2010;18(6):1041-52. PMID: 20627085. |
|  | 12. | Huang Y, Zhou X, Miao B, **Lipinski M**, Xia Z, Hu G, Degterev A, Yuan J, Wong ST. An Image Based System Biology Approach for Alzheimer's Disease Pathway Analysis. IEEE/NIH Life Science Systems and Applications Workshop. IEEE/NIH Life Science Systems and Applications Workshop. 2009;2009:128-132. PMID: 20585413. |
|  | 13. | **Lipinski MM**, Zheng B, Lu T, Yan Z, Py BF, Ng A, Xavier RJ, Li C, Yankner BA, Scherzer CR, Yuan J. A Genome-wide Analysis Reveals Mechanisms Modulating Autophagy in Normal Brain Aging and in Alzheimer's Disease. Proceedings of the National Academy of Sciences of the United States of America. 2010;107(32):14164-9. PMID: 20660724. |
|  | 14. | **Lipinski MM**. Towards the Global Understanding of the Autophagy Regulatory Network. Autophagy. 2010;6(8):1218-20. PMID: 20953147. |
|  | 15. | Kepp O, Galluzzi L, **Lipinski M**, Yuan J, Kroemer G. Cell Death Assays for Drug Discovery. Nature Reviews Drug Discovery. 2011;10(3):221-37. PMID: 21358741. |
|  | 16. | Ofengeim D, Shi P, Miao B, Fan J, Xia X, Fan Y, **Lipinski MM**, Hashimoto T, Polydoro M, Yuan J, Wong S. Identification of Small Molecule Inhibitors of Neurite Loss Induced by ABeta Peptide Using High-content Screening. The Journal of Biological Chemistry. 2012;287(12):8714-23. PMID: 22277654. |
|  | 17. | Zhao Z, Faden AI, Loane DJ, **Lipinski MM**, Sabirzhanov B, Stoica BA. Neuroprotective Effects of Geranylgeranylacetone in Experimental Traumatic Brain Injury. Journal of Cerebral Blood Flow and Metabolism. 2013;33(12):1897-908. PMID: 23942364. |
|  | 18. | Xu Y, Yuan J, **Lipinski MM**. Live Imaging and Single-cell Analysis Reveal Differential Dynamics of Autophagy and Apoptosis. Autophagy. 2013;9(9):1418-30. PMID: 23748697. |
|  | 19. | Py BF, Jin M, Desai BN, Penumaka A, Zhu H, Kober M, Dietrich A, **Lipinski MM**, Henry T, Clapham DE, Yu. Caspase-11 Controls Interleukin-1Beta Release Through Degradation of TRPC1. Cell Reports. 2013;6(6):1122-8. PMID: 24630989. |
|  | 20. | Srakar C, Zhao Z, Aungst S, Sabirzhanov B, Faden AI, and **Lipinski MM**. Impaired Autophagy Flux is Associated With Neuronal Cell Death After TBI. Autophagy. 2014;10(12):1418-30. PMID: 25484084. |
|  | 21. | Liu S, Sarkar C, Dinizo M, Faden AI, Koh EY, **Lipinski MM#**, Wu J**#**. Disrupted Autophagy After Spinal Cord Injury is Associated With ER Stress and Neuronal Cell Death. Cell Death & Disease. 2014;6:e1582. PMID: 25569099. **#co-senior authors** |
|  | 22. | **Lipinski M**, Wu J. Modification of Autophagy-lysosomal Pathway as a Treatment After Spinal Cord Injury. Neural Regeneration Research. 2015;10(6):892-3. PMID: 26199601. |
|  | 23. | Awad O, Sarkar C, Panicker LM, Miller D, Zeng X, Sgambato JA, **Lipinski MM**, Feldman RA. Altered TFEB-mediated Lysosomal Biogenesis in Gaucher Disease iPSC-derived Neuronal Cells. Human Molecular Genetics. 2015;24(20):5775-88. PMID: 26220978. |
|  | 24. | Wu J, Sabirzhanov B, Stoica BA, **Lipinski MM**, Zhao Z, Zhao S, Ward N, Yang D, Faden AI. Ablation of the Transcription Factors E2F1-2 Limits Neuroinflammation and Associated Neurological Deficits After Contusive Spinal Cord Injury. Cell Cycle. 2015;14(23):3698-712. PMID: 26505089. |
|  | 25. | Zhang T, Dong K, Liang W, Xu D, Xia H, Geng J, Najafov A, Liu M, Li Y, Han X, Xiao J, Jin Z, Peng T, Gao Y, Cai Y, Qi C, Zhang Q, Sun A, **Lipinski M**, Zhu H, Xiong Y, Pandolfi PP, Li H, Yu Q, Yuan J. G-protein Coupled Receptors Regulate Autophagy by ZBTB16-Mediated Ubiquitination and Proteasomal Degradation of Atg14L. eLife. 2015;4:06734. PMID: 25821988. |
|  | 26. | **Lipinski MM**, Wu J, Faden AI, Sarkar C. Function and Mechanisms of Autophagy in Brain and Spinal Cord Trauma. Antioxidants & Redox Signaling. 2015;23(6):565-77. PMID: 25808205. |
|  | 27. | Barekat A, Gonzalez A, Mauntz R, Kotzebue R, Molina B, El-Mecharrafie N, Conner C, Garza S, Melkani G, Joiner W, **Lipinski M**, Finley K and Ratliff E. Using Drosophila as an integrated model to study mild repetitive traumatic brain injury. Scientific Reports. 2016;6:25252. PMID: 27143646. |
|  | 28. | Wu J, Zhao Z, Kumar A, **Lipinski MM**, Loane DJ, Stoica BA, Faden AI. ER stress and disrupted neurogenesis in the brain are associated with cognitive impairment and depressive-like behavior after spinal cord injury. Journal of Neurotrauma. 2016;33:1-17. PMID: 27050417. |
|  | 29. | Ratliff E, Barekat A, **Lipinski M**, Finley K. Brain trauma and autophagy: What flies and mice can teach us about conserved responses. Autopahgy. 2016; accepted. |
|  | 30. | Klionsky DJ, Abdelmohsen K, Abe A, Abedin MJ, Abeliovich H, Acevedo Arozena A, Adachi H, Adams CM, Adams PD, Adeli K, Adhihetty PJ, Adler SG, Agam G, Agarwal R, Aghi MK, Agnello M, Agostinis P, Aguilar PV, Aguirre-Ghiso J, Airoldi EM, Ait-Si-Ali S, Akemat. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). Autophagy. 2016;12(1):1-222. PMID: 26799652. |

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|  | Book Chapters |

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|  | 1. | Boyce M, **Lipinski MM**, Py B.F., and Yuan J. Endoplasmic Reticulum Stress Response in Cell Death and Cell Survival. Reed JC, Green DR, eds. Apoptosis: Physiology and Pathology. Cambridge University Press, 2011. |

Invited Speeches

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|  | Local |

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| 1. | "Autophagy in Health and Disease". Department of Gastroenterology and Hepatology, University of Maryland School of Medicine. Baltimore, MD. 2012. |
| 2. | "The Function and Mechanisms of Autophagy in Brain and Spinal Cord Trauma". Department of Pharmacology, Uniformed Services University of the Health Sciences. Bethesda, MD. 2015. |
| 3. | Moderator for the "Molecular Mechanisms of TBI" session. National Capital Area Traumatic Brain Injury Research Symposium. National Institutes of Health, Bethesda, MD. 2016. |

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| 4. | "Caspases and Autophagy in ER Stress Response". FASEB Summer Research Conference: From Unfolded Proteins in the Endoplasmic Reticulum to Disease. Indian Wells, CA. 2007. |
| 5. | "Genome-Wide Screen for Regulators of Autophagy". MGH Center for Study of Inflammatory Bowel Disease 18th Annual Workshop: Autophagy in Immunity. Boston, MA. 2008. |
| 6. | "A Genome-Wide Image-Based Screen Identifies Global Molecular Mechanisms Regulating Mammalian Autophagy". Keystone Symposia on Molecular and Cellular Biology: Omics Meets Cell Biology. Breckenridge, CO. 2009. |
| 7. | "Disruption of Autophagy Flux Following Spinal Cord Injury in GFP-LC3 Reporter Mice". National Neurotrauma Symposium. San Francisco, CA. 2014. |
| 8.  9. | "The PARK10 gene USP24 is a Negative Regulator of Autophagy". Society for Neuroscience National Symposium. Chicago, IL. 2015.  “Lysosomla Damage and Inhibition of Autophagy in Neurotrauma”. KY Spinal Cord Injury Research Center, University of Louisville. Louisville, KY. 2016 |

Proffered Communications (Invited Oral Presentations from the Lipinski Lab)

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| 1. | Sarkar C, Zhao Z, Sabirzhanov B, Akintola T, Cardiff C, Stoica B, Faden AI and **Lipinski MM**. “Disruption of autophagy after TBI may lead to neuronal death.” Society for Neuroscience National Symposium, San Diego, CA, United States, 2013. |
| 2. | Sarkar C, Zhao Z, Sabirzhanov B, Akintola T, Cardiff C, Stoica B, Faden AI and **Lipinski MM**. “Impaired autophagy is associated with neuronal cell death after TBI.” National Capital Area Traumatic Brain Injury Research Symposium, Bethesda, MD, United States, 2014. |
| 3. | Liu S, Sarkar C, Denizo M, Faden AI, Koh EY, Wu J and **Lipinski MM**. “Disrupted Autophagy after Spinal Cord Injury Is Associated with Neuronal Cell Death.” National Neurotrauma Symposium, San Francisco, CA, United States, 2014. |
| 4. | Sarkar C, Zhao Z, Liu S, Faden AI and **Lipinski MM**. “Impaired autophagy due to lysosomal dysfunction is associated with neuronal cell death after TBI.” Society for Neuroscience National Symposium, Washington, DC, United States, 2014. |
| 5. | Sarkar C, Zhao Z, Liu S, Faden AI and **Lipinski MM.** “Lysosomal dysfunction leads to autophagy impairment after TBI.” National Capital Area Traumatic Brain Injury Research Symposium, Bethesda, MD, United States, 2015. |
| 6. | Sarkar C, Liu S, Faden AI and **Lipinski MM**. “cPLA2 mediated lysosomal damage leads to autophagy impairment after TBI.” Society for Neuroscience National Symposium, Chicago, IL, United States, 2015. |
| 7. | Sarkar C, Liu C, Faden AI and **Lipinski MM**. “cPLA2 mediated lysosomal damage leads to autophagy impairment after TBI.” National Capital Area Traumatic Brain Injury Research Symposium, Bethesda, MD, United States, 2016. |