Curriculum Vitae

Marta M. Lipinski, Ph.D.

Assistant Professor

Department of Anesthesiology

 University of Maryland School of Medicine

July 28, 2016

Contact Information

University of Maryland

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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 UniversityThesis Topic: Bacterial Cell Differentiation in C. CrescentusThesis Advisor: Yves Brun, Ph.D.  |
| 1995 - 2001 | Ph.D., Biology, Massachusetts Institute of TechnologyArea of Study: Cancer BiologyThesis Topic: Function of the Retinoblastoma Tumor Suppressor in the Regulation of Cell Differentiation and Tumorigenesis in Vitro and in VivoThesis 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 NeurobiologyUniversity of Maryland School of MedicineBaltimore, MD |
|  | 2011 - Present | Assistant Professor, Department of AnesthesiologyUniversity of Maryland School of MedicineBaltimore, MD |

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|  | Other Employment |

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|  | 2011 - Present | MemberShock, Trauma and Anesthesiology Research (STAR) CenterUniversity of Maryland School of Medicine, Baltimore, MD |
|  | 2011 - Present | Member & Neural Stem Cell Group LeaderCenter for Stem Cell Biology and Regenerative MedicineUniversity of Maryland School of Medicine, Baltimore, MD |
|  | 2012 - Present | MemberCenter for Biomolecular TherapeuticsUniversity 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 FellowshipNational Science FoundationCarnegie-Mellon University, Pittsburgh, PA |
| 1994 | Undergraduate Summer Research FellowshipHoward Hughes Medical InstituteUniversity of Texas, Austin, TX |
| 1995 - 1998 | Graduate Research FellowshipNational Science FoundationMassachusetts Institute of Technology, Cambridge, MA  |
| 2001 | Bochnowski Graduate FellowshipMassachusetts Institute of Technology, Cambridge, MA |
| 2002 - 2005 | Postdoctoral FellowshipHarvard Center for Neurodegeneration and RepairHarvard Medical School, Boston, MA |

Administrative Services

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|  | Institutional Services |

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|  | 2013 - Present | Group Co-LeaderNeural Stem Cell GroupDepartment of Center for Stem Cell Biology and Regenerative MedicineUniversity of Maryland School of MedicineLead 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 | MentorUM ScholarsDepartment of Student Summer Research and Community OutreachUniversity of Maryland School of MedicineMentored undergraduate students in the UM Scholars summer research program. |
|  | 2015 - Present | Student InterviewerProgram in Neuroscience (PIN)Department of Graduate Program in Life Sciences (GPLS)University of Maryland School of MedicineInterviewed and evaluated candidates for the PhD program. |
|  | 2015 - Present | MentorSummer Bioscience Internship Program (BSIP)Department of Student Summer Research and Community OutreachUniversity of Maryland School of MedicineMentored Baltimore City High School students during summer research program sponsored by MD legislature (Congressman Elijah Cummings). |
|  | 2016 | Host/SponsorRecruitment Social HourDepartment of Graduate Program in Life Sciences (GPILS)University of Maryland School of MedicineSponsored, helped organize and hosted social hour to help recruit prospective GPILS PhD students. |
|  | 2016 - Present | Student InterviewerProgram in ToxicologyDepartment of Graduate Program in Life Sciences (GPLS)University of Maryland School of MedicineInterviewed and evaluated candidates for the PhD program. |
|  | 2016 - Present | ReviewerUM ScholarsDepartment of Student Summer Research and Community OutreachUniversity of Maryland School of MedicineEvaluated applicants for the UM Scholars Program Undergraduate Research Internships. |
|  | 2016 - Present | MemberProgram in Neuroscience (PIN) Training CommitteeDepartment of Graduate Program in Life Sciences (GPLS)University of Maryland School of MedicineParticipated is determining curriculum, academic policies and performance standards for PhD students in the PIN program. |
|  | 2016 - Present | MemberAnesthesiology Research CommitteeDepartment of AnesthesiologyUniversity of Maryland School of MedicineHelped 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 JudgeSociety for NeuroscienceMaryland ChapterJudged student and postdoc posters at the MD chapter SFN conference. |
|  | 2015 - Present | Organizing Committee MemberNational Capital Area Traumatic Brain Injury Research SymposiumParticipated 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 ReviewerAlzheimer's Association  |
|  | 2011 – Present2016 | Journal ReviewerMultiple 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 MemberBINP Study Section, NIH, Bethesda MD |

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|  | International Services |

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|  | 2011 - Present | Grant ReviewerResearch Grant Council (RGC) of Hong Kong |
|  | 2015 - Present | Grant ReviewerIndia Alliance Welcome Trust |
|  | 2016 - Present | Grant ReviewerWings for Life Foundation |

Community Service

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|  | Local Services |

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|  | 2016 | Tinker and Techsploration Fair VolunteerThe Bryn Mawr School, Baltimore MDHelped 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 AssistantIndiana UniversityIntroductory Biology LaboratorySupervised students in a teaching laboratory. |
|  | 1997 | Teaching AssistantMassachusetts Institute of TechnologyGeneral BiochemistryLed a problem set section and graded exams. |
|  | 1999 | Teaching AssistantMassachusetts Institute of TechnologyExperimental Molecular Biology Project LabSupervised 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 | InstructorHarvard Medical SchoolExperimental Approaches to Developmental BiologyDesigned and taught lecture and experimental section. |
|  | 2008 | InstructorHarvard Medical SchoolMolecular Biology of the CellLed a paper discussion section, designed exam questions, and participated in student evaluation. |
|  | 2012 | Student Conference MentorUniversity of Maryland School of MedicineGPLS Core CourseLed a paper discussion section and participated in student evaluation. |
|  | 2013 – Present2014 - Present | LecturerUniversity of Maryland School of MedicineAdvanced Cancer Biology, GPLS 790Designed and taught lecture, assigned papers, led a discussion section, and participated in student evaluation.InstructorUniversity of Maryland School of MedicineReading and Special Topics, GPLS 618Selected papers, lead discussions and evaluated students in small group and/or one-on-one weekly independent study sessions. |
|  | 2015 - Present | Course Co-DirectorUniversity of Maryland School of MedicineAdvanced Cancer Biology, GPLS 790Helped organize and lead the course. |
|  | 2015 - Present | LecturerUniversity of Maryland School of MedicineAdvanced Molecular Biology, GPLS 701Designed 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 - 20052012 - Present2012 - Present2014 - 20152015 - 20162015 - Present2015 - Present**Mentoring:**1999 - 2000 | Mentor / Thesis AdvisorHarvard University, Cambridge, MAEdward 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 IslandMentorUniversity of Maryland School of Medicine, Baltimore, MDChinmoy Sarkar, PhD, **Postdoctoral Fellow / Research Associate**Current position: Research Associate, Department of Anesthesiology, University of Maryland School of Medicine, Baltimore MDMentorUniversity of Maryland School of Medicine, Baltimore, MDShuo Liu, MD/PhD, **Postdoctoral Fellow**Co-mentor with Dr. Eugene Koh, OrthopaedicsMentorUniversity of Maryland School of Medicine, Baltimore, MDPrarthana Ravishankar, **Graduate Student - MS**Cellular and Molecular Biomedical Science Masters ProgramCurrent position: Associate Scientist-II, Thermo Fisher Scientific, Frederick MDMentorUniversity of Maryland School of Medicine, Baltimore, MDDeepika Philkana, **Graduate Student - MS**Cellular and Molecular Biomedical Science Masters ProgramCurrent position: Research Associate-II Sera Care Life Sciences, Gaithesburg, MDThesis AdvisorUniversity of Maryland School of Medicine, Baltimore MDJulia Peter, **Graduate Student - PhD**Program in ToxicologyThesis AdvisorUniversity of Maryland School of Medicine, Baltimore, MDNivedita 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**MentorMassachusetts Institute of Technology, Cambridge, MAMaura Costello, **Undergraduate Student**Current position: Associate Director - Technology Development, Genomics Platform, The Broad Institute of MIT/Harvard, Cambridge, MA |
|  | 2000 - 2001 | MentorMassachusetts Institute of Technology, Cambridge, MATara Mullaney, **Undergraduate Student**Current position: Researcher & PhD Candidate, Umea Institute of Design, Umea, Sweden |
|  | 2005 | MentorHarvard Medical School, Boston, MADanielle Pier, **Medical Student** |
|  | 2013 & 2014 | MentorUniversity of Maryland School of Medicine / UM Scholars ProgramJulie Etheridge, **Undergraduate Student**University of Maryland College Park Current position: Recent graduate of University of Maryland College Park |
|  | 2014 | MentorUniversity of Maryland School of MedicineSteven Kurapaty, **Undergraduate Student**University of Maryland, College Park, MD |
|  | 2015 | MentorUniversity of Maryland School of Medicine / Summer BioScience Internship Program, Baltimore, MDMalik Richberg, **High School Student** |
|  | 2016 | MentorUniversity of Maryland School of Medicine / UM Scholars ProgramHenok Tesfay, **Undergraduate Student**University of Maryland College Park |
|  | 2016 | MentorUniversity of Maryland College Park / UM Scholars ProgramCameran Burt, **Undergraduate Student**University of Maryland, College Park, MD |
|  | 2016 | MentorUniversity of Maryland School of MedicineAnnika Schaefer, **Undergraduate Student**Vanderbilt University, Nashville, TN |
|  | 2016 | MentorUniversity of Maryland School of MedicineHarshal Shah, **High School Student**Pooleville High School, Pooleville, MD |
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|  | Thesis/Qualifying Committee Service |

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| 2013 | Thesis Committee MemberPeter MacCallum Cancer Center, VIC 3002- AustraliaKatrina Falkenberg (PhD candidate), Advisor: Dr. Kaylene SimpsonCurrent position: Postdoctoral Researcher at Research Institute of Molecular Pathology |
| 2014 - Present | Thesis Committee MemberUniversity of Maryland School of MedicineEdward Cherok, PhD candidate, Program in BiochemistryAdvisor: Dr. Mariusz Karbowski |
|  | 2015 - Present | Thesis Committee MemberUniversity of Maryland School of MedicineTierra Johnson, PhD candidate, Program in Molecular MedicineAdvisor: Dr. Toni Antalis |
|  | 20162016 - Present | Qualifying Exam Committee MemberUniversity of Maryland School of MedicineQuinton Banks, PhD candidate, Program in Neuroscience (PIN)Thesis Committee MemberUniversity of Maryland School of MedicineManasa Srikanth, PhD candidate, Program in Molecular MedicineAdvisor: 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: $153,500Annual Indirect Cost: $26,750Annual Direct Cost: $50,000Total Indirect Cost: $53,500Total 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: $1,678,905Annual Indirect Cost: $117,031Annual Direct Cost: $218,750Total Indirect Cost: $585,155Total 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: $1,678,905Annual Indirect Cost: $117,031Annual Direct Cost: $218,750Total Indirect Cost: $585,155Total 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: $230,000Annual Indirect Cost: $15,000Annual Direct Cost: $100,000Total Indirect Cost: $30,000Total 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 MedicineGoal: 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: $230,000Annual Indirect Cost: $15,000Annual Direct Cost: $100,000Total Indirect Cost: $30,000Total 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 treatmentAward Total: $230,000Annual Indirect Cost: $15,000Annual Direct Cost: $100,000Total Indirect Cost: $30,000Total Direct Cost: $200,000 |

Patents

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| 2010 - Pending | Methods for modulation of autophagy through the modulation of autophagy-enhancing gene productsPatent Number: US 20120301463 A1Inventors: 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 productsPatent Number: US Patent 20160194631Inventors: 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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|  | National |

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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. |