

Curriculum Vitae

Michal Hetman, M.D., Ph.D.
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EDUCATION

1987-1994 M.D. studies on the First Faculty of Medicine, Warsaw Medical University, Warsaw, Poland.
1994-M.D. degree with the second best result in the class.
1991-1997 Ph.D. studies at the University of Goettingen, Germany (Prof. Kurt von Figura laboratory/
advisor : Prof. Christoph Peters) and the Nencki Institute, Warsaw, Poland (Prof. Leszek
Kaczmarek laboratory/ advisor: Prof. Leszek Kaczmarek)
1997-Ph.D. in Center of Experimental and Clinical Medicine, Polish Academy of Sciences, Warsaw,
Poland with honors.

Professional Experience

09/1994-09/1995: Intern in CSK WAM University Hospital, Warsaw, Poland

10/1995-12/2000: Research Associate, Nencki Institute, Warsaw, Poland (Prof. Leszek Kaczmarek laboratory)

06/1997-11/2000: Postdoctoral fellow in Department of Pharmacology, University of Washington, Seattle, USA (advisors: Drs. Daniel Storm and Zhengui Xia)

11/2000-12/2003: Investigator and Head of the Laboratory of Molecular Neurology, International Institute of Molecular and Cellular Biology UNESCO/PAN, Warsaw, Poland

10/2002-12/2007: Assistant Professor in Department of Neurological Surgery, University of Louisville, Louisville, KY, USA

12/2002-present: Endowed Professor of Molecular Signaling, University of Louisville, Louisville, KY, USA

01/2003-present: Secondary appointment, Department of Pharmacology and Toxicology, University of Louisville, Louisville, KY, USA

01/2003-present: Member, Graduate Faculty, University of Louisville, Louisville, KY, USA

12/2003-present: Member, Brown Cancer Center, University of Louisville, Louisville, KY, USA

06/2006-present: Member, Center for Molecular Medicine and Genetics University of Louisville School of Medicine

01/2008-08/2014: Associate Professor (tenure October 2008) Department of Neurological Surgery, University of Louisville, Louisville, KY, USA

08/2014-present Professor (tenured) Department of Neurological Surgery, University of Louisville,
Louisville, KY, USA

Selected awards and fellowships

1991 fellowship of the TEMPUS program of the European Community Commission to support studies at the University of Goettingen.
1995 *Young Scientist Award* of the Foundation for Polish Science
1998 Two-year postdoctoral fellowship of American Heart Association
1998 Polish prime-minister prize for distinctive doctoral thesis
2000 One-year postdoctoral fellowship of American Heart Association
2002 Welcome Trust Senior Research Fellowship
2002 Endowed chair in Molecular Signaling, University of Louisville School of Medicine
2003 Young Investigator Award, European Society of Neurochemistry
2005 Young Scientist Colloquia Award, International Society of Neurochemistry

Professional Memberships

2002-present *Society for Neuroscience*
2006-present *International Society of Neurochemistry*

Reviewing Services and study Sections

Ad hoc reviewer for granting agencies: *Alzheimer's Association, Veterans Administration, NIH, US Department of Defense CDMRP Tuberous Sclerosis Research Program, Ministry of Science and Higher Education, Poland, National Science Center, Poland, The Israel Science Foundation, Israel, Wings for Life Foundation, Medical Research Council, UK.*

Ad hoc reviewer for *Science, Journal of Neuroscience, Journal of Neurochemistry, Proceedings of Natl. Academy of Sciences, Progress in Neurobiology, Journal of Biological Chemistry, Journal of Cytochemistry and Histochemistry, Journal of Neuroscience Research, Apoptosis, FEBS Journal, Experimental Cell Research, Cerebral Cortex, PlosOne, Neuroscience, Neurosignals, Trends in Neuroscience, Bioassays, Disease Models and Mechanisms.*

2009, 2010, 2017- Member of the Tuberous Sclerosis Research Program Review Panel, Department of Defense, CDMRP

2011 NIH ZRG1-MDCN-f02 special emphasis study section
2011, 2012 VA NURE special emphasis study section
2011, 2012 NSF IOS Panel
2014-present NIH ZRG1 F03A-N Panel

Editorial service

2011-present *PLoS One*, Academic editor
2014-present *Acta Neurobiologiae Experimentalis*, Editorial Board member
2013- *BBA Molecular Basis of Disease*, Editor of the special issue, *Role of the nucleolus in human diseases*

Institutional service

2008-2012 departmental representative at the UofL School of Medicine Faculty Forum
Jan 2008-present member of the Institutional Biosafety Committee

Community service

2007-2010 Treasurer of the Louisville Chapter of the Society for Neuroscience
2005, 2007, 2009, 2011, 2013, 2015, 2017-Member of the Organizing Committee of the Kentucky Spinal Cord and Head Injury Research Conferences
Organized classes for JCPS Wilder Elementary School and St. Leonard Parish School students on life sciences (cardiovascular system, neurobiology of head and spinal cord injury).
Classes with high school students at the Louisville Science Center on prevention of spinal cord injuries.
2012- Brain Awareness Week speaker at Morehead State University, Morehead, KY

Teaching experience

PhD thesis advisor for A. Gozdz (thesis defended in Jan. 2006)
PhD thesis advisor for A. Habas (thesis defended in August 2007)
PhD thesis advisor for S.C. Smith (thesis defended in December 2011)
PhD thesis advisor for J. Hallgren (thesis defended in August 2015)
Undergraduate honors thesis advisor for J. Jones (thesis defended in April 2012)
Undergraduate honors thesis advisor for N. Lynch (thesis defended in March 2015)
PhD thesis committee member for C. Wiegaand, P. Jayaraman, J. Brown, T. Dinckman, N. Kupeyrs, S. Arnold, L. Potts, D. Familtsev.
Postdoctoral advisor of Drs. K. Kalita, G. Kharebava, E. Szatmari, C. Gomes, M. Pietrzak, L. Slomnicki, A. Vashishta, E. Kilanczyk and Y. Zhao.
Hosting 1 middle school-, 2 high school-, 9 undergraduate- and 4 medical student summer research rotations at the UofL.
Lecturer in undergraduate courses: Biology Honors Seminar Series.
Lecturer in graduate courses: Molecular Biology of Cancer, Molecular Cell Biology, Developmental Neurobiology, Molecular and Cellular Neuroscience.
2016-present- Course Director, Molecular Cell Biology (Bioc-667), UofL Graduate School

Trainees achievements:

2005 - Research Louisville- 1st prize for best postdoctoral poster to Dr. Szatmari
2006 - Louisville Neuroscience Day- 1st prize for the best postdoctoral poster to Dr. Kalita, 2nd prize for best postdoctoral poster to Dr. Kharebava
2006 - Research Louisville- 1st prize for the best postdoctoral poster to Dr. Kalita
2006 - Society for Neuroscience Travel Award to Dr. Kalita
2007 - Louisville Neuroscience Day- 2nd prize for the best postdoctoral poster to Dr. Vashishta,
2009 - Louisville Neuroscience Day- 2nd prize for the best postdoctoral poster to Dr. Pietrzak, 3rd price for the best graduate student poster for Mr. Scott C. Smith
2009 - Research Louisville- 1st prize for the best postdoctoral poster to Dr. Gomes
2010 - Louisville Neuroscience Day- 1st prize for the best postdoctoral poster to Dr. Vashishta
2011- Louisville Neuroscience Day- 1st prize for the best postdoctoral poster to Dr. Vashishta, 2nd price for the best graduate student poster for Mr. Scott C. Smith
2012- best honors thesis award for J. Jones, College of Arts and Sciences, UofL, 2012
2013- Louisville Neuroscience Day- 2nd prize for the best postdoctoral poster to Dr. Vashishta
2016- Louisville Neuroscience Day- 3rd prize for the best postdoctoral poster to Dr. Slomnicki

2017 Louisville Neuroscience Day- 1st prize for the best postdoctoral poster to Dr.Slomnicki

Current positions of the former trainees:

E. Szatmari - research associate at the Max Plank Institute Florida

A. Habas – scientist, Neuropore Therapies Inc.

K. Kalita - adjunct investigator (corresponding to the assistant professor rank) at the Nencki Institute, Warsaw, Poland

G. Kharebava- research associate, NIH

C. Gomes- research associate, University of Louisville

S.C. Smith- assistant professor, University of Nebraska

J. Hallgren- postdoc, Thomas Jefferson University

A.Vashishta- research associate, University of Louisville

Current Research Support

NINDS 1R21NS103433-01A1 (funding period: 09/15/2017 - 08/31/2019) Glial-specific gene expression after contusive spinal cord injury; role: PI (co-PIs: M. Hetman and S.R. Whittemore); annual direct costs \$135,000

Blackfan Diamond Anemia Foundation Pilot Grant (funding period: 06/01/2016-05/31/2019) Identifying small molecule compounds to disrupt ribosomal stress signaling; role: PI; annual direct costs: \$8,330 (total direct costs: \$ 25,000)

Leona and Harry Helmsley Charitable Trust, Center for Restorative Spinal Cord Medicine Pilot Grant (funding period: 02/01/2018-01/31/2019) Nociceptor-specific gene expression changes in response to experimental SCI; role: PI (MPI: Hetman and Rau); annual direct costs: \$50,000.

PENDING Research Support:

NINDS 1R01NS108529-01 (funding period: 04/01/2018-03/31/2023) The integrated stress response and oligodendrocyte survival after spinal cord injury, role: PI (co-PIs: S.R. Whittemore, M. Hetman); impact score: 26, percentile: 9; annual direct costs \$380,000

Previous Research Support (as a PI)

1998, 2000 2+1 year postdoctoral fellowship of American Heart Association (USD 90.000), Role: Principal Investigator

2001-2002 research grant of the State Committee for Scientific Research (Poland) # CD2000/1 (USD 60.000), Role: Principal Investigator

2001-2003 research grant of the State Committee for Scientific Research (Poland) # 6P04A00421 (USD 65.000), Role: Principal Investigator

2002 Wellcome Trust Senior Research Fellowship (USD 400.000)

2002-2005 NIH COBRE grant P20 RR15576, Program Director: S.R. Whittemore, Mechanisms of plasticity and repair in SCI. Project 5: Survival signaling in CNS neurons exposed to DNA damage, PI: M.Hetman (annual direct cost: \$100,000)

2004-2007 Kentucky Spinal Cord and Head Injury Research Trust KSCHIRT Grant# 3-5, PI: M. Hetman (annual direct cost: \$ 90,000)

2004-2006 NATO Life Science and Technology Program LST.CLG980495, PI: M. Hetman, Co-PIs: L.Kaczmarek, J.Albrecht (annual direct cost, \$ 7,500)

2004-2007 Alzheimer's Association IIRG-04-1139 Analysis of NMDAR-GSK interactions in AD, PI: M. Hetman (annual direct cost, \$ 70,000)

- 2004-2010 NIH/NINDS 1 R01 NS047341-01, Survival signaling in CNS neurons exposed to DNA damage, PI: M. Hetman (annual direct cost, \$ 185,000)
- 2005-2010 NIH COBRE P20 RR15576-06, Mechanisms of plasticity and repair in SCI, Program Director: S.R. Whittemore, Project 2: Neuroprotection by glutamate-regulated transcription factors, PI: M. Hetman (annual direct cost: \$175,000)
- 2008-2011 Kentucky Spinal Cord and Head Injury Research Trust (KSCHIRT) 08-15, The role of the ER stress response in SCI, Co-PIs: S.R. Whittemore, M. Hetman (annual direct costs: \$90,909)
- 2010-2013 NSF IOS1021860 Regulation of Neuronal Morphogenesis by the Nucleolar Transcription, PI: M.Hetman (annual direct costs \$110,000)
- 2011-2016 NINDS 1R01NS073584-01 ER stress and oligodendrocyte survival after spinal cord injury, Co-PIs: S.R. Whittemore, M. Hetman (annual direct costs 280,000/year)
- 2014-2016 American Epilepsy Society Seed Grant Role of ribosomal biogenesis in development of epilepsy, PI: M. Hetman (annual direct costs: \$ 20,000)

SELECTED PEER REVIEWed Publications

Journal publications:

1. **Hetman M.**, A. Perschl, P. Saftig, K.v.Figura, C.Peters. Mouse cathepsin D gene: molecular organization, characterization of the putative promoter and chromosomal localization. (1994) *DNA and Cell Biology*, 13: 419-427
2. Filipkowski R.K., **M. Hetman**, B. Kaminska, L. Kaczmarek. DNA fragmentation in rat brain after intraperitoneal administration of kainate. (1994) *Neuroreport*, 5:1538-1540
3. **Hetman M.**, R.K. Filipkowski, W. Domagala, L. Kaczmarek. Elevated cathepsin D expression in kainate-evoked rat brain neurodegeneration.(1995) *Exp. Neurol.* 136: 53-63.
4. Saftig P., **M. Hetman**, W. Schmahl, K. Weber, L. Heine, H. Mossmann, A. Koester, B. Hess, M. Evers, K.von Figura, C. Peters. Mice deficient for the lysosomal proteinase cathepsin D exhibit progressive atrophy of the intestinal mucosa and profound destruction of lymphoid cells.(1995) *EMBO J.*, 14: 3599-3608
5. Figiel I., R.K. Filipkowski, **M. Hetman**, B. Kaminska, L. Kaczmarek. Gene expression in neuronal apoptosis- looking for therapeutic window.(1996) *Biotechnologia* 35: 132-140
6. Kaminska B., R.K. Filipkowski , I.W. Biedermann, D. Konopka, D. Nowicka, **M. Hetman**, M. Dabrowski, D. Gorecki, K. Lukasiuk, A.W. Szklarczyk, L. Kaczmarek. Kainate-evoked modulation of gene expression in rat brain. (1997) *Acta Biochim. Polon.*, 44: 781-789
7. Saftig P., D. Hartmann, R. Lullmann-Rauch, J. Wolff, M. Evers, A. Koster, **M. Hetman**, K. von Figura, C. Peters. Mice deficient in lysosomal acid phosphatase develop lysosomal storage in the kidney and central nervous system. (1997) *J. Biol. Chem.* 272: 18628-18635
8. **Hetman M.**, W. Danysz, L. Kaczmarek. Increased Ctheptsin D expression in rat neurons degenerating in response to MK-801. (1997) *Exp. Neurol.* 147: 229-237
9. Konopka D., A.W. Szklarczyk, R.K. Filipkowski, A. Trauzold, D. Nowicka, **M. Hetman**, L. Kaczmarek. Plasticity- and neurodegeneration-linked CREM/ICER mRNA expression in the rat brain. (1998) *Neuroscience* 86: 499-510
10. **Hetman M.**, K. Kanning, J.E. Cavanaugh, Z. Xia. Neuroprotection by brain-derived neurotrophic factor is mediated by extracellular-signal-regulated kinase and phosphatidylinositol-3 kinase. (1999) *J. Biol. Chem.* 274: 22569-22580
11. Jaworski J., I.W. Biedermann, J. Lapinska, A. Szklarczyk, I. Figiel, D. Konopka, D. Nowicka, R. K. Filipkowski, **M. Hetman**, A. Kowalczyk, L. Kaczmarek. Neuronal Excitation-driven and AP-1-

- dependent activation of tissue inhibitor of metalloproteinases-1 gene expression in rodent hippocampus. (1999) *J. Biol. Chem.* 274: 28106-28112
12. **Hetman M.**, W. Zajackowski, E. Nikolaev, G. Quack, W. Danysz, L. Kaczmarek Behavioural evaluation of long-term neurotoxic effects of NMDA receptor antagonists. (2000) *Neurotoxicity Res.*, 1: 299-310.
 13. **Hetman M.**, J.E. Cavanaugh, D.Kimelman and Z.Xia. Role of Glycogen Synthase Kinase 3 beta in neuronal apoptosis induced by trophic withdrawal.(2000) *J.Neurosci.* 20: 2567-2574.
 14. **Hetman M.**, Z. Xia. Signaling pathways mediating anti-apoptotic action of neurotrophins. (2000) *Acta Neurobiol. Exp.* 60:531-545.
 15. Ghatan S., S. Larner, Y. Kinoshita, **M. Hetman**, L. Patel, Z. Xia, R.J. Youle, R.S. Morrison. p38 MAP kinase mediates bax translocation in nitric oxide-induced apoptosis in neurons. (2000) *J. Cell. Biol.* 150:335-47.
 16. Cavanaugh J.E., J. Ham, **M. Hetman**, S. Poser, Y. Chen, Z. Xia. Differential regulation of mitogen-activated protein kinases ERK1/2 and ERK5 by neurotrophins, neuronal activity, and cAMP in neurons (2001) *J. Neurosci.* 21: 434-443.
 17. Figueroa-Masot X.A., **M. Hetman**, M. Higgins, N. Kokot, Z. Xia. Taxol induces apoptosis in cortical neurons by a mechanism independent of Bcl-2 phosphorylation (2001) *J. Neurosci.* 21:4657-67.
 18. Wong S.T., L.P. Baker, K. Trinh, **M. Hetman**, L.A. Suzuki, D.R. Storm, K.E. Bornfeld. Adenylyl cyclase 3 mediates prostaglandin E2-induced growth inhibition in arterial smooth muscle cells. (2001) *J.Biol.Chem.* 276: 32046-53.
 19. Filipek A., B. Jastrzebska, M. Nowotny, K. Kwiatkowska, **M. Hetman**, L. Surmacz, E. Wyroba, J. Kuźnicki. Ca²⁺- dependent translocation of the calcyclin-giding protein in neurons and neuroblastoma NB-2a cells. (2002) *J. Biol. Chem.* 277:21103-21109.
 20. **Hetman M.**, S.L. Hsuan, A. Habas, M.J. Higgins, Z. Xia. ERK 1/2 antagonizes glycogen synthase kinase 3 β –induced apoptosis in cortical neurons. (2002) *J. Biol. Chem.* 277:49577-49584.
 21. Jaworski J., B. Mioduszevska, A. Sanchez-Capelo, I. Figiel, A. Habas, A. Góźdz, T. Proszynski, **M. Hetman**, J. Mallet, L. Kaczmarek. Inducible cAMP early repressor, an endogenous antagonist of cAMP responsive element-binding protein, evokes neuronal apoptosis in vitro. *J. Neurosci.* (2003) 23:4519-26.
 22. Góźdz A., A. Habas, J. Jaworski, M. Zielinska, J. Albrecht, M. Chlystun, A. Jalili, **M. Hetman**. Role of N-methyl-D-aspartate receptors in the neuroprotective activation of extracellular signal regulated kinase1/2 by cisplatin. (2003) *J. Biol. Chem.* 278:43663-43671
 23. **Hetman M.**, A. Góźdz. Role of extracellular signal regulated kinases 1 and 2 in neuronal survival. (2004) *Eur. J. Biochem.* 271:2050-2055. Invited Review
 24. Klejman A., M. Wegrzynowicz, E. Szatmari, B. Mioduszevska, **M. Hetman**, J. Albrecht. Mechanisms of ammonia-induced cell death in rat cortical neurons: roles of NMDA receptors and glutathione. (2005) *Neurochem. Int.* 47:51-57.
 25. Szatmari E., A. Habas, P. Yang, J.J. Zheng, T. Hagg, **M. Hetman**. A positive feedback loop between glycogen synthase kinase 3 β and protein phosphatase 1 after stimulation of NR2B NMDA receptors in forebrain neurons. (2005) *J. Biol. Chem.* 280:37526-37535.
 26. Benton R.L., J.P. Woock, E. Gozal, **M. Hetman**, S.R. Whittemore. Intraspinal application of endothelin results in focal ischemic injury of spinal gray matter and restricts the differentiation of engrafted neural stem cells. (2005) *Neurochem. Res.* 30:809-823.

27. Habas A., G. Kharebava, E. Szatmari, **M. Hetman**. NMDA neuroprotection against a phosphatidylinositol-3 kinase inhibitor, LY294002 by NR2B-mediated suppression of glycogen synthase kinase-3 β -induced apoptosis. (2006) *J. Neurochem.* 96:335-348.
28. **Hetman M.**, G. Kharebava. Survival signaling pathways activated by NMDA receptors. (2006) *Current Top. Med. Chem.* 6:787-799. **Invited Review.**
29. Kalita K., G. Kharebava, J. Zheng, **M. Hetman**. Role of MKL1 in ERK1/2-dependent stimulation of SRF-driven transcription in response to BDNF or increased synaptic activity. (2006) *J. Neurosci.* 26:10020-10032
30. Szatmari E., K. Kalita, G. Kharebava, **M. Hetman**. Role of kinase suppressor of Ras-1 in neuronal survival signaling by extracellular signal-regulated kinase 1/2. (2007) *J. Neurosci.* 27:11389-11400.
31. Yang P., S. Arnold, A. Habas, **M. Hetman**, T. Hagg. Ciliary neurotrophic factor mediates dopamine D2 receptor-induced CNS neurogenesis in adult mice. (2008) *J. Neurosci.* 28:2231-2241.
32. Kalita K., D. Makonchuk, C. Gomes, J.J. Zheng, **M. Hetman**. Inhibition of nucleolar transcription as a trigger for neuronal apoptosis. (2008) *J. Neurochem.* 105:2286-2299.
33. Whitaker C.M., E. Beaumont, M.J. Wells, D.S. Magnuson, **M. Hetman**, S.M. Onifer. Rolipram attenuates acute oligodendrocyte death in the adult rat ventrolateral funiculus following contusive cervical spinal cord injury. (2008) *Neurosci. Lett.* 438:200-204
34. Gozdz A., A. Vashishta, K. Kalita, E. Szatmari, J.J. Zheng, S. Tamiya, N. Delamere, **M. Hetman**. Cisplatin-mediated activation of extracellular signal-regulated kinases 1/2 (ERK1/2) by inhibition of ERK1/2 phosphatases. (2008) *J. Neurochem.* 106:2056-2067
35. Kharebava G, D. Makonchuk, K. Kalita, J.J. Zheng, **M. Hetman** (2008) Requirement of 3-phosphoinositide-dependent protein kinase-1 (PDK1) for BDNF-mediated neuronal survival. *J. Neurosci.* 28(44):11409-11420.
36. Vashishta A., A. Habas, P. Prunsiild, J.J. Zheng, T. Timmusk, **M. Hetman** (2009) Nuclear Factor of Activated T cells isoform c4 (NFATc4/NFAT3) as a mediator of anti-apoptotic transcription in NMDAR-stimulated cortical neurons. *J. Neurosci.* 29:15331-15340. PMID: 19955386
37. **Hetman M.**, A. Vashishta, G. Rempala (2010) Neurotoxic mechanisms of DNA damage: focus on transcriptional inhibition. *J. Neurochem.* 114:1537-1549, PMCID: PMC2945429 **Invited Review.**
38. Gomes C., S.C. Smith, M. Yousef, J.J. Zheng, **M. Hetman** (2011) RNA-Polymerase-1-driven transcription as a mediator of Brain-Derived Neurotrophic Factor (BDNF)-induced neurite outgrowth. *J. Biol. Chem.* 286:4357-63
39. Pietrzak M., S.C. Smith, J.T. Geraldts, T. Hagg, C. Gomes, **M. Hetman** (2011) Nucleolar disruption and apoptosis are distinct neuronal responses to etoposide-induced DNA damage. *J. Neurochem.* 117:1033-1046, PMID: 21517844.
40. Ohri S.S., M.A. Maddie, Y. Zhao, M.S. Qiu, **M. Hetman**, S.R. Whittemore (2011) Attenuating the endoplasmic reticulum stress response improves functional recovery after spinal cord injury. *Glia.* 59:1489-502, PMID: 21638341.
41. Pietrzak M., G. Rempala, P.T. Nelson, J.J. Zheng, **M. Hetman** (2011) Epigenetic silencing of nucleolar rRNA genes in Alzheimer's disease. *PLoS ONE* 6(7): e22585. doi:10.1371/journal.pone.0022585
42. Ohri S.S., M.A. Maddie, Y. Zhang, C.B. Shields, **M. Hetman**, S.R. Whittemore (2011) Deletion of the Pro-Apoptotic Endoplasmic Reticulum Stress Response Effector CHOP Does Not Result in Improved Locomotor Function after Severe Contusive Spinal Cord Injury. *J Neurotrauma.* 29(3):579-588, PMID: 21933012.
43. Potts L.F., F.A. Luzzio, S.C. Smith, **M. Hetman**, P. Champy, I. Litvan (2012) Annonacin in Asimina triloba fruit: Implication for neurotoxicity. *Neurotoxicology.* 33(1):53-58, PMID: 22130466.

44. Smith S.C., A.R. Robinson, L.J. Niedernhofer, **M. Hetman** (2012) Downregulation of cholesterol biosynthesis genes in the forebrain of ERCC1-deficient mice. *Neurobiol Dis.* 45(3):1136-44. PubMed PMID: 22245387.
45. **Hetman M**, M. Pietrzak (2012) Emerging roles of the neuronal nucleolus. *Trends Neurosci.* 35(5):305-314, PMID: 22305768. Invited Review.
46. Saraswat Ohri S, **M. Hetman**, S.R. Whittemore (2013) Restoring endoplasmic reticulum homeostasis improves functional recovery after spinal cord injury. *Neurobiol Dis.* 58:29-37, PubMed PMID: 23659896.
47. Hallgren J, M. Pietrzak, G. Rempala, P.T. Nelson, **M. Hetman** (2014) Neurodegeneration-associated instability of ribosomal DNA. *Biochim Biophys Acta.* 1842(6):860-868, PMID: 24389328.
48. Vashishta A, **M. Hetman** (2014) Inhibitors of Histone Deacetylases Enhance Neurotoxicity of DNA Damage. *Neuromolecular Med.* 16(4):727-741, PMID: 25063076.
49. M.M.Tajrishi, J.Shin, **M. Hetman**, A.Kumar (2014) DNA Methyltransferase 3a and Mitogen-activated Protein Kinase Signaling Regulate the Expression of Fibroblast Growth Factor-inducible 14 (Fn14) during Denervation-induced Skeletal Muscle Atrophy. *J Biol Chem.* 289(29):19985-99. PubMed PMID: 24895120.
50. Kilanczyk M, A.Filipek, **M. Hetman** (2014) Calcyclin-binding protein/Siah-1-interacting protein as a regulator of transcriptional responses in brain cells. *J Neurosci Res.* 93(1):75-81, PubMed PMID: 25163685.
51. Ohri Saraswat S, A.Mullins, **M. Hetman**, S.R.Whittemore (2014) Inhibition of GADD34, the stress-inducible regulatory subunit of the endoplasmic reticulum stress response, does not enhance functional recovery after spinal cord injury. *PLoS One.* 9(11):e109703. PMID: 25386686.
52. Slomnicki LP, Pietrzak M, Vashishta A, Jones J, Lynch N, Elliot S, Poulos E, Malicote D, Morris BE, Hallgren J, **M. Hetman.** (2016) Requirement of Neuronal Ribosome Synthesis for Growth and Maintenance of the Dendritic Tree. *J Biol Chem.* 2016 Mar 11;291(11):5721-5739. PubMed PMID: 26757818; PubMed Central PMCID: PMC4786710.
53. Pietrzak M, Rempala GA, Nelson PT, **M. Hetman.** (2016) Non-random distribution of methyl-CpG sites and non-CpG methylation in the human rDNA promoter identified by next generation bisulfite sequencing. *Gene.* 2016 Jul 1;585(1):35-43. PubMed PMID: 27008990.
54. Slomnicki L, Malinowska A, Kistowski M, Palusinski A, Zheng JJ, Sepp M, Timmusk T, Dadlez M, **M. Hetman.** (2016) Nucleolar enrichment of brain proteins with critical roles in human neurodevelopment. *Mol Cell Proteomics.* 2016 Apr 6; 15(6):2055-2075. PubMed PMID: 27053602.
55. Saraswat Ohri S, **M. Hetman**, S.R. Whittemore. (2016) ATF6 α deletion modulates the ER stress response after spinal cord injury but does not affect locomotor recovery. *J Neurotrauma.* 2016 Feb 4;PubMed PMID: 26842780.
56. Kilanczyk E, S Saraswat Ohri, SR Whittemore, **M. Hetman.** (2016) Anti-oxidant protection of NADPH-depleted oligodendrocyte precursor cells is dependent on supply of reduced glutathione. *ASN Neuro*, 8(4). pii: 1759091416660404. doi:10.1177/1759091416660404. PubMed PMID: 27449129.
57. Dincman TA, JE Beare, S Saraswat Ohri, V Gallo, **M. Hetman**, SR Whittemore. (2016) Histone deacetylase inhibition is cytotoxic to oligodendrocyte precursor cells in vitro and in vivo. *Int J Dev Neurosci*, 54:53-61. doi:10.1016/j.ijdevneu.2016.08.006. PubMed PMID: 27587342.
58. Slomnicki LP, J Hallgren, A Vashishta, SC Smith, SR Ellis, **M. Hetman.** (2016 ahead of print, 2018 in print) Proapoptotic Requirement of Ribosomal Protein L11 in Ribosomal Stress-Challenged Cortical Neurons. *Mol Neurobiol*, 55(1): 538-553. PubMed PMID: 27975169.

59. Kilanczyk E, KR Andres, J Hallgren, SS Ohri, M Laiho, **M. Hetman**. (2017) Pharmacological inhibition of spinal cord injury-stimulated ribosomal biogenesis does not affect locomotor outcome. *Neurosci Lett*. 642:153-157. PubMed PMID: 28188847.
60. Slomnicki LP, DH Chung, A Parker, T Hermann, NL Boyd, **M. Hetman**. (2017) Ribosomal stress and Tp53-mediated neuronal apoptosis in response to capsid protein of the Zika virus. *Sci Rep*. 7(1):16652. PubMed PMID: 29192272.
61. Saraswat Ohri S, A Mullins, **M Hetman**, SR Whittemore. (2018) Activating Transcription Factor-6 α Deletion Modulates the Endoplasmic Reticulum Stress Response after Spinal Cord Injury but Does Not Affect Locomotor Recovery. *J Neurotrauma*. 35(3):486-491. PubMed PMID: 26842780.
62. Vashishta A, LP Slomnicki, M Pietrzak, SC Smith, M Kolikonda, SP Naik, R Parlato, **M. Hetman**. (2018) RNA-Polymerase-1 is transiently regulated by seizures and plays a role in a pharmacological kindling model of epilepsy. *Mol Neurobiol*. In press.

Book chapters:

Hetman M. Nucleolar Contributions to DNA-Damage Response and Genomic (In)Stability in the Nervous System. In *Genome Stability: From Virus to Human Application* (ed.: Kovalchuk I, Kovalchuk O). Chapter 30, 527-539. 2016 Academic Press, ISBN: 978-0-12-803309-8.

Selected Meeting Presentations (Invited lectures)

- 2003 International Conference *Mechanisms of Neurodegeneration*, Warszawa, Poland. GSK3 β as a target for protective ERK1/2 signaling. **Invited Lecture.**
- 2003 Annual Meeting of the European Society of Neurochemistry, Warszawa, Poland, NMDA receptors mediate protective activation of Extracellular Signal Regulated Kinase1/2. **Invited Lecture.**
- 2004 FEBS Conference, Warsaw, Poland. Interactions between NMDA receptors and Glycogen Synthase Kinase 3 β (GSK3 β) result in GSK3 β activation, reduction of NMDA-activated CRE-driven transcription and suppression of GSK3 β -induced apoptosis. **Invited Lecture.**
- 2005 International Society of Neurochemistry, Innsbruck, Austria. A positive feedback loop between glycogen synthase kinase 3 β and protein phosphatase 1 after stimulation of NR2B NMDA receptors in forebrain neurons. **Invited lecture.**
- 2008 14th Annual Kentucky Spinal Cord and Head Injury Research Trust Meeting, Lexington, Ky, The bright side of the N-Methyl-D-Aspartate Receptors: Survival Signaling. **Invited lecture.**
- 2008 EMBO Workshop *Nucleolus in Disease*, Morley, UK, Kalita K, Makonchuk D, Gomes C, Zheng JJ, Hetman M Inhibition of nucleolar transcription as a trigger for neuronal apoptosis. **Invited lecture.**
- 2011 Polish Neuroscience Society Meeting, Lodz, Poland, M.Hetman Multitasking by the neuronal nucleolus: stress sensing and neurotrophic responses, **Invited lecture.**

Invited Seminars at other Institutions

- 2004 Department of Pharmacology, University of Pittsburgh
- 2004 Department of Physiology, University of Kentucky
- 2005 Sanders Aging Center, University of Kentucky
- 2006 Department of Anatomy and Neurobiology, Medical College of Ohio
- 2008 Department of Pharmacology, University of Iowa
- 2009 Department of Physiology, Michigan State University
- 2010 Department of Cellular Molecular Medicine, University of Ottawa
- 2011 Division of Pharmaceutical Sciences, Duquesne University

2013 Department of Molecular and Cellular Neurobiology, Nencki Institute
2016 Department of Biology, University of Memphis
2016 Department of Molecular and Cellular Neurobiology, Nencki Institute
2018 Burke Rehabilitation Institute, Cornell University