

## Travis C. Jackson, Ph.D.

University of South Florida, Morsani College of Medicine, Tampa, Florida

### Address

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### Citizenship

USA

### Education

University of Florida, Ph.D., 2010	2005-2010
University of Pittsburgh, Neuroscience (Major), B.S., 2005.	2001-2005

### Postgraduate Training

University of Pittsburgh, Department of Critical Care Medicine, Safar Center for Resuscitation Research, Neurocritical Care	2010-2012
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### Awards, Honors, Honorary Society Memberships

University of Florida Grinter Fellowship	2005-2008
University of Florida, IDP Medical Guild Research Competition	2010
Annual Safar Symposium Research Day Poster Award Winner	2012
National Neurotrauma Meetings Poster Finalist	2012
Nominated to Participate in SOM Junior Faculty Mentoring Program	2014
Safar Center for Resuscitation Research, Honorary Scientist	2011-2014

### Appointments

Associate Director, Cell Signaling, Safar Center for Resuscitation Research, University of Pittsburgh	2014-2019
Research Assistant Professor, Department of Critical Care Medicine, College of Medicine, University of Pittsburgh	2016-2019
Research Assistant Professor, Clinical and Translational Science Institute, University of Pittsburgh (Secondary Appointment)	2016-2019

Associate Professor (tenure-track), Department of Molecular Pharmacology & Physiology, Morsani College of Medicine, University of South Florida

2019-Present

## Teaching, Supervisory

**Laboratory Techniques Training:** (Safar Center T32 Fellows) Dr. Eric Brockman (2013), Dr. Ruchira Jha (2014), Dr. Dennis Simon (2015), Dr. Jessica Wallisch (2016). Technicians/Staff: Dr. Shawn Kotermanski (2014-2015). Students: Justin Wrackley (2014), Shanaz Hossain (2016).

Faculty Mentor, Dean's Summer Research Project (DSRP), Shanaz Hossain, 2016

Faculty Mentor, University of Pittsburgh Medical Student Scholarly Research Project (SRP), Shanaz Hossain, 2016-2018

Faculty Leader for Special Themed Journal Club - "Cell Signaling Advances in Hypothermia" - as part of Safar Center's Neurointensive Critical Care and Resuscitation Research Journal Club, March 20, 2015

Faculty Leader for Special Themed Journal Club - "Soap-Box-Sessions: Antibodies Fact or Fiction" - as part of Safar Center's Neurointensive Critical Care and Resuscitation Research Journal Club, April 8, 2016

Faculty Leader for Safar Center's Neurointensive Critical Care and Resuscitation Research Journal Club, Nov 2, 2018

## Lectures by Invitation

PHLPP1 regulates neuronal AKT survival signaling. Interdisciplinary Medical Guild Research Competition. University of Florida. Gainesville, FL. 2010

PHLPP1 Mediated Inhibition of Neuronal Survival Signaling: A New Protein Target in Brain Injury. Safar Center for Resuscitation Research Experimental Brain Injury Meeting. University of Pittsburgh. Pittsburgh PA. 2011

Anthraquinone based drugs: An unlikely lead compound for neuroprotection. Safar Center for Resuscitation Research Experimental Brain Injury Meeting. University of Pittsburgh. Pittsburgh, PA. 2012

Anthraquinone-2-Sulfonic Acid is a Novel Therapeutic Agent: Caspase Inhibition and Beyond. Department of Critical Care Medicine Grand Rounds. University of Pittsburgh. Pittsburgh, PA. 2013

Targeting the Serine/Threonine Phosphatase PHLPP1 in Traumatic Brain Injury. Safar Center for Resuscitation Research Experimental Brain Injury Meeting. University of Pittsburgh, Pittsburgh, PA.	2014
Ultra-Mild Hypothermia: Biochemical Epiphenomenon or New Concept in Cerebral Resuscitation. 13 <sup>th</sup> Annual Safar Symposium at the University of Pittsburgh School of Medicine. Pittsburgh, PA.	2015
RNA Splicing in CNS Injury: Diagnosing the Injured Spliceosome. 33 <sup>rd</sup> Annual National Neurotrauma Society Symposium. Santa Fe, NM.	2015
Elucidating the Function of RBM5 in Primary Neurons: Implications for a Novel Signaling Axis in the CNS. Safar Center for Resuscitation Research Experimental Brain Injury Meeting. University of Pittsburgh. Pittsburgh, PA	2016
RBM3, Hypothermia and Cerebral Resuscitation – Why Age Might Matter. 15 <sup>th</sup> Annual Safar Symposium at the University of Pittsburgh School of Medicine. Pittsburgh, PA.	2017
Identifying Novel Targets for the Treatment of Brain Injury: RNA Binding Motif 5 in the Crosshairs. Children’s Hospital of Pittsburgh of UPMC Molecular Medicine Research Seminar. Pittsburgh, PA.	2017
Developmental control of cold shock proteins in the brain: Nonnegotiable or Manipulatable? Children’s Hospital of Pittsburgh of UPMC Collaborative Lectures Session. Pittsburgh, PA.	2018
Elucidating the Role of RNA Binding Motif 5 in the Injured Brain. University of South Florida, Morsani College of Medicine, Department of Molecular Physiology & Pharmacology. Tampa, FL.	Aug 7, 2018
Pre-Clinical and Clinical Evidence for Cold-Adaptive Neuroprotectant Proteins in the Brain. University of Miami, 9th Annual Therapeutic Hypothermia and Temperature Management Symposium. Miami, FL.	Mar 7, 2019
Futuristic Approaches to Maximizing Hypothermia as a Neuroprotectant in the Newborn and Beyond. 17 <sup>th</sup> Annual Safar Symposium at the University of Pittsburgh School of Medicine. Pittsburgh, PA.	April 22, 2019

### Scholarly Activity (grant history)

#### A) Current Grants

Agency: NIH/NINDS  
I.D.# R01 NS105721-01  
Title: “The Role of RNA Binding Motif 5 in TBI”  
P.I.: Travis Jackson, Ph.D.

Percent effort: 25%  
Direct costs per year: \$218,750  
Total costs for project period: \$1,711,720  
Project period: 07/01/2018 – 06/30/2023

B) Past Grants

Agency: NIH/NINDS  
I.D.# T32 AG000196-16A1  
Title: “Neurobiology of Aging Training Grant”  
P.I.: Philip Scarpace, Ph.D.  
Role on project: Fellowship Awardee  
Percent effort: 100%  
Total costs for project period: Graduate Stipend  
Project period: 2007 – 2009

Agency: NIH/NINDS  
I.D.# R21 NS07003  
Title: “Role of CNPase in TBI”  
P.I.: Patrick Kochanek, M.D.  
Percent effort: 100%  
Role on project: Postdoctoral Research Associate  
Total costs for project period: Salary Support  
Project period: 2010 – 2011

Agency: Laerdal Foundation for Acute Medicine  
I.D.# Project Support Grant  
Title: “PHLPP1 is a New Therapeutic Target for the Treatment of Brain Injury from Cardiac Arrest”  
P.I.: Travis Jackson, Ph.D.  
Percent effort: (non-salary/project expenses)  
Total costs for project period: \$18,704  
Project period: 2011 – 2012

Agency: American Heart Association (Great Rivers)  
I.D.# 11POST7320018  
Title: “PHLPP1, A Novel Drug Target to Limit Neuronal Death”  
P.I.: Travis Jackson, Ph.D.  
Percent effort: 90%  
Total costs for project period: \$88,000.00  
Project period: 2011 – 2012

Agency: US Army (MRMC)  
I.D.# W81XWH-14-2-0018  
Title: “Operation Brain Trauma Therapy Extended Studies”  
P.I.: Patrick Kochanek, M.D.  
Percent effort: 10%  
Role on project: Co-Investigator  
Total costs for project period: \$54,094  
Project period: 2014 – 2016

Agency: NIH/NINDS  
I.D.# R21 NS088145  
Title: “The mRNA Splicing Factor RBM5: A New Therapeutic Target for TBI”  
P.I.: Travis Jackson, Ph.D.  
Percent effort: 25%  
Total costs for project period: \$423,187.00  
Project period: 2014 –2016

Agency: American Heart Association (National Center)  
I.D.# 14SDG20210000  
Title: “Pharmacological Inhibitors of PHLPP1: Novel Therapies to Treat Brain Injury after Cardiac Arrest”  
P.I.: Travis Jackson, Ph.D.  
Percent effort: 30%  
Total costs for project period: \$308,000.00  
Project period: 2014 – 2018

Agency: American Heart Association (Great Rivers)  
I.D.# 14SDG20100043  
Title: “Pharmacological Inhibitors of PHLPP1: Novel Therapies to Treat Brain Injury after Cardiac Arrest”  
P.I.: Travis Jackson, Ph.D.  
Percent effort: 30%  
Total costs for project period: \$231,000.00  
Project period: *Declined to Accept Due to Project Overlap*

Agency: UPSOM: DSRP  
I.D.# Student Grants Program  
Title: “In Vitro Investigation of Phosphorylated NSMF in Healthy and Injured Primary Cortical Neurons”  
P.I.: Shanaz Hossain  
Percent effort: 100%  
Role on project: Faculty Mentor  
Total costs for project period: \$3,000.00  
Project period: 2016

Agency: NIH/NINDS  
I.D.# R21 NS098057  
Title: “FGF21 Activates RBM3 and is a Novel Drug to Revolutionize Temperature Management”  
P.I.: Travis Jackson, Ph.D.  
Percent effort: 20%  
Total costs for project period: \$427,417.00  
Project period: 2017 –2019

Agency: NIH/NINDS  
I.D.# R01 NS87978  
Title: “2',3'-cAMP in Traumatic Brain Injury”  
P.I.: Patrick Kochanek, M.D.

Percent effort: 20%  
Role on project: Co-Investigator  
Total costs for project period: \$118,759  
Project period: 2014 – 2019

## Published Bibliography

### Original Peer-reviewed

Earliest to most  
recent

**Jackson TC**, Mi Z, Jackson EK. Modulation of cyclic AMP production by signal transduction pathways in glomerular microvessels and microvascular smooth muscle cells. *J Pharmacol Exp Ther.* 2004, 310 (1):349-358.

**Jackson TC**, Mi Z, Bastacky SI et al. PPAR alpha agonists improve renal preservation in kidneys subjected to chronic in vitro perfusion: interaction with mannitol. *Transpl Int.* 2007, 20 (3):277-290.

Jackson EK, Gillespie DG, **Jackson TC**. Phospholipase C and Src modulate angiotensin II-induced cyclic AMP production in glomerular microvascular smooth-muscle cells from spontaneously hypertensive rats. *J Cardiovasc Pharmacol.* 2007, 49 (2):106-110.

Aenlle KK, Kumar A, Cui L, **Jackson TC**, Foster TC. Estrogen effects on cognition and hippocampal transcription in middle-aged mice. *Neurobiol Aging.* 2007, 30 (6):932-945.

**Jackson TC**, Rani A, Kumar A, Foster TC. Regional hippocampal differences in AKT survival signaling across the lifespan: implications for CA1 vulnerability with aging. *Cell Death Differ.* 2008, 16 (3):439-448.

**Jackson TC**, Verrier JD, Semple-Rowland S, Kumar A, and Foster TC. PHLPP1 splice variants differentially regulate AKT and PKC $\alpha$  signaling in hippocampal neurons: Characterization of PHLPP proteins in the adult hippocampus. *J Neurochem.* 2010, 115 (4):941-955.

Verrier JD, Exo JE, **Jackson TC**, Ren J, Gillespie DG, Dubey RK, Kochanek PM, and Jackson EK. Expression of the 2',3' -cAMP-Adenosine Pathway in Astrocytes and Microglia. *J Neurochem.* 2011, 118 (6): 979-987.

Verrier JD, **Jackson TC**, Bansal R, Kochanek, PM, Puccio AM, Okonkwo DO, Jackson EK. The brain in vivo expresses the 2',3'-cAMP-adenosine pathway. *J Neurochem.* 2012, 122 (1):115-125.

**Jackson TC**, Verrier JD, Kochanek, PM. Anthraquinone-2-sulfonic acid (AQ2S) is a novel neurotherapeutic agent. *Cell Death Dis.* 2013, 4:e451. doi: 10.1038/cddis.2012.187.

Jackson EK, Cheng D, **Jackson TC**, Verrier JD, Gillespie DG. Extracellular guanosine regulates extracellular adenosine levels. *Am J Physiol Cell Physiol.* 2013, 304 (5):C406-C421.

Verrier JD, **Jackson TC**, Gillespie DG, Janesko-Feldman K, Bansal R, Goebbels S, Nave KA, Kochanek PM, Jackson EK. Role of CNPase in the oligodendrocytic extracellular 2',3'-cAMP-adenosine pathway. *Glia.* 2013, 61(10): 1595-1606.

**Jackson TC**, Verrier JD, Drabek T, Janesko-Feldman K, Gillespie DG, Uray T, Dezfulian C, Clark RS, Bayir H, Jackson EK, Kochanek PM. Pharmacological Inhibition of Pleckstrin Homology Domain Leucine-Rich Repeat Protein Phosphatase (PHLPP) is Neuroprotective: Differential Effects on Astrocytes. *J Pharmacol Exp Ther.* 2013, 347(2):516-528.

Tyurina YY, Poloyac SM, Tyurin VA, Kapralov AA, Jiang J, Anthony-muthu TS, Kapralova VI, Vikulina AS, Jung MJ, Epperly MW, Mahammeydanyi D, Klein-Seetharaman J, **Jackson TC**, Kochanek PM, Pitt BR, Greenberger JS, Vladimirov YA, Bayir H, Kagan VE. A mitochondrial pathway for biosynthesis of lipid mediators. *Nature Chemistry.* 2014, 6(6):542-552.

Shein SL, Shellington DK, Exo JL, **Jackson TC**, Wisniewski SR, Jackson EK, Vagni VA, Bayir H, Clark RSB, Dixon CE, Janesko-Feldman KJ, Kochanek PM. Hemorrhagic shock shifts the serum cytokine profile from pro- to anti-inflammatory after experimental traumatic brain injury in mice. *J Neurotrauma.* 2014, 31(16): 1386-1395.

Newell EA, Exo JL, Verrier JD, **Jackson TC**, Gillespie DG, Janesko-Feldman J, Kochanek PM, Jackson EK. 2',3'-cAMP, 3'-AMP, 2'-AMP and adenosine inhibit TNF- $\alpha$  and CXCL10 production from activated primary murine microglia via A2A receptors. *Brain Research.* 2014, 1594:27-35.

**Jackson TC**, Lina D, Janesko-Feldman K, Vagni VA, Dezfulian C, Poloyac SM, Jackson EK, Clark RSB, Kochanek PM. The Nuclear Splicing Factor RNA Binding Motif 5 Promotes Caspase Activation in Human Neuronal Cells, and Increases after Traumatic Brain Injury in Mice. *J Cereb Blood Flow Metab.* 2015, 35(4):655-666.

**Jackson TC**, Bayir H, Ikonovic MD, Janesko-Feldman K, Gao T, Jackson EK, Kochanek PM. Detection of PHLPP1 $\alpha/\beta$  in Human and Mouse Brain by Different Anti-PHLPP1 Antibodies. *Sci Rep.* 2015, 5:9377. doi.1038/srep09377.

**Jackson TC**, Manole MD, Kotermanski SE, Jackson EK, Clark RSB, Kochanek PM. Cold Stress Protein RBM3 Responds to Temperature Change in an Ultra-Sensitive Manner in Young Neurons. *Neuroscience*. 2015, 305:268-278.

Jackson EK, Menshikova EV, Mi Z, Verrier JD, Bansal R, Janesko-Feldman K, **Jackson TC**, Kochanek PM. Renal 2',3'-Cyclic Nucleotide 3'-Phosphodiesterase Is an Important Determinant of AKT Severity after Ischemia Reperfusion. *J Am Soc Nephrol*. 2015, 27(7):2069-2081.

Kochanek PM, Bramlett HM, Shear DA, Dixon CE, Mondello S, Dietrich WD, Hayes RL, Wang KK, Poloyac SM, Empey PE, Povlishock JT, Mountney A, Browning M, Deng-Bryant Y, Yan HQ, **Jackson TC**, Catania M, Glushakova O, Richieri SP, Tortella FC. Synthesis of Findings, Current Investigations, and Future Directions: Operation Brain Trauma Therapy. *J Neurotrauma*. 2016, 33(6):606-614.

Dezfulian C, Kenny E, Lamade A, Misse A, Krehel N, St Croix C, Kelley EE, **Jackson TC**, Uray T, Rackley J, Kochanek PM, Clark RS, Bayir H. Mechanistic characterization of nitrite-mediated neuroprotection after experimental cardiac arrest. *J Neurochem*. 2016, 139(3):419-431.

Brockman EC, **Jackson TC**, Dixon CE, Bayir H, Clark RSB, Vagni V, Feldman K, Byrd C, Ma L, Hsia C, Kochanek PM: Polynitroxylated pegylated hemoglobin: A novel, small volume therapeutic for traumatic brain injury resuscitation: Comparison to whole blood and dose response evaluation. *J Neurotrauma*. 2017, 34(7):1337-1350.

Jackson EK, Kotermanski SE, Menshikova EV, Dubey RK, **Jackson TC**, Kochanek PM. Adenosine production by brain cells. *J Neurochem*. 2017, 141(5):676-693.

**Jackson TC**, Kotermanski SE, Kochanek PM. Whole-Transcriptome Microarray Analysis Reveals Regulation of Rab4 by RBM5 in Neurons. *Neuroscience*. 2017, 361:93-107.

Jackson EK, Zhang Y, Gillespie DD, Zhu X, Cheng D, **Jackson TC**. SDF-1 $\alpha$  (Stromal Cell-Derived Factor 1 $\alpha$ ) Induces Cardiac Fibroblasts, Renal Microvascular Smooth Muscle Cells, and Glomerular Mesangial Cells to Proliferate, Cause Hypertrophy, and Produce Collagen. *J Am Heart Assoc*. 2017, 6(11). pii: e007253. doi: 10.1161/JAHA.117.007253.

**Jackson TC**, Kotermanski SE, Jackson EK, Kochanek PM. BrainPhys® Increases Neurofilament Levels in CNS Cultures, and Facilitates Investigation of Axonal Damage after a Mechanical Stretch-Injury In Vitro. *Exp Neurol*. 2018, 300:232-246.

Jha R, Molyneaux BJ, **Jackson TC**, Wallisch J, Park SY, Poloyac SM, Vagni VA, Janesko-Feldman KL, Hoshitsuki K, Minnigh MB, Kochanek PM. Glibenclamide produces region-dependent effects on cerebral edema



in a combined injury model of traumatic brain injury and hemorrhagic shock in mice. *J Neurotrauma*. 2018, 35(17):2125-2135.

**Jackson TC**, Dixon CE, Janesko-Feldman K, Vagni V, Kotermanski SE, Jackson EK, Kochanek PM. Acute Physiology and Neurologic Outcomes after Brain Injury in SCOP/PHLPP1 KO Mice. *Sci Rep*. 2018, 8(1):7158.

Wallisch JS, Janesko-Feldman K, Alexander H, Jha RM, Farr GW, McGuirk PR, Kline AE, **Jackson TC**, Pelletier MF, Clark RSB, Kochanek PM, Manole MD. The aquaporin-4 inhibitor AER-271 blocks acute cerebral edema and improves early outcome in a pediatric model of asphyxial cardiac arrest. *Pediatr Res*. 2018, doi: 10.1038/s41390-018-0215-5.

**Jackson TC**, Kotermanski SE, Kochanek PM, Jackson EK. Oxidative Stress Induces Release of 2'-AMP from Microglia. *Brain Res*. 2018, 1706:101-109.

**Jackson TC**, Kotermanski SE, Kochanek PM. Infants Uniquely Express High Levels of RBM3 and Other Cold-Adaptive Neuroprotectant Proteins in the Human Brain. *Dev Neurosci*. 2018, 40(4):325-336.

Uray T, Empey PE, Drabek T, Stezoski JP, Janesko-Feldman K, **Jackson T**, Garman RH, Kim F, Kochanek PM, Dezfulian C. Nitrite pharmacokinetics, safety and efficacy after experimental ventricular fibrillation cardiac arrest. *Nitric Oxide*. 2019, 93: 71-77.

**Jackson TC**, Janesko-Feldman K, Carlson SW, Kotermanski SE, Kochanek PM. Robust RBM3 and beta-klotho expression in developing neurons in the human brain. *J Cereb Blood Flow Metab*, 2019, doi:10.1177/0271678X19878889 (*Ahead of Print*).

#### Review Articles

Kochanek PM, **Jackson TC**, Miller Ferguson N, Carlson S, Simon D, Brockman E, Bayır H, Poloyac S, Wagner AK, Kline AE, Empey P, Kagan V, Jackson EK, Clark RSB, Dixon CE. Emerging Therapies in TBI. *Seminars in Neurology*. 2014, 35(1):83-100.

Kochanek PM, Dixon CE, Mondello S, Wang KK., Lafrenaye A, Bramlett HM, Dietrich WD, Hayes RL, Shear DA, Gilsdorf JS, Catania M, Poloyac SM, Empey PE, **Jackson TC**, Povlishock JT. Multi-Center Pre-clinical Consortia to Enhance Translation of Therapies and Biomarkers for Traumatic Brain Injury: Operation Brain Trauma Therapy and Beyond. *Frontiers in Neurology*. 2018, (9): 640. doi.org/10.3389/fneur.2018.00640.

Kochanek PM, **Jackson TC**, Jha RM, Clark RSB, Okonkwo DO, Bayir H, Poloyac SM, Wagner AK, Empey PE, Conley YP, Bell MJ, Kline AE, Bondi CO, Simon DW, Carlson SW, Puccio AM, Horvat CM, Au AK, Elmer J, Treble-Barna A, Ikonovic MM, Shutter LA, Taylor L,

Graham SH, Kagan V, Jackson EK, Wisniewski SR, Dixon CE. Paths to successful translation of new therapies for severe TBI in the golden age of traumatic brain injury research: A Pittsburgh vision. *J Neurotrauma*. 2018, doi: 10.1089/neu.2018.6203.

**Jackson TC** and Kochanek PM. A New Vision for Therapeutic Hypothermia in the Era of Targeted Temperature Management: A Speculative Synthesis. *Ther Hypothermia Temp Manag*. 2019, Mar;9(1):13-47.

#### Books, Textbooks, Chapters

Kochanek PM, Bell MJ, Bayir H, **Jackson TC**, Wallisch JS, Forbes MJ, Ruppel R, Adelson PD, Clark RSB. Severe Traumatic Brain Injury in Infants and Children. In: Fuhrman and Zimmerman's Pediatric Critical Care, 5th Edition, Philadelphia, PA: Elsevier; (2017):1613-1637.

#### Editorials, Comments, Letters, Hypothesis-Papers

**Jackson TC** and Foster TC. Regional health and function in the hippocampus: Evolutionary compromises for a critical brain region. *Bioscience Hypotheses*. 2009, 2 (4):245-251.

Kochanek PM and **Jackson TC**. Will the next breakthrough for neuroprotection after cardiac arrest come out of thin air? *Shock*. 2014, 41(1):85-86.

Kochanek PM and **Jackson TC**. It might be time to let cooler heads prevail after mild traumatic brain injury or concussion. *Experimental Neurology*. 2015, 267:13-17.

Kochanek PM and **Jackson TC**. The brain and hypothermia—from Aristotle to targeted temperature management, the good stuff keeps coming back. *Critical Care Medicine*. 2017, 45(2):305-310.

Kochanek PM, **Jackson TC**. Therapeutic Hypothermia and Targeted Temperature Management With or Without the "Cold Stress" Response. *Ther Hypothermia Temp Manag*. 2017, 7(3):134-136.

Kochanek PM, **Jackson TC**, Fink EL. Duration of therapeutic hypothermia or targeted temperature management in pediatric cardiac arrest: Seeing through the ice. *Resuscitation*. 2018, pii: S0300-9572(18)30942-0. doi: 10.1016/j.resuscitation.2018.09.025.

## Other Research and Creative Achievements

### Patents

**Jackson TC**, Mi Z, and Jackson EK: Peroxisome-proliferator activated receptor-alpha agonists for organ preservation (2006). Patent application filed with U.S. Patent and Trademark office, U.S. Department of Commerce by Arent Fox Attorneys at Law (assignee: University of Pittsburgh). Issued Patent (2011): Number 7897326.

**Jackson TC**, Verrier JD, Kochanek PM. Small Molecule Inhibitors of RNA Binding Motif (RBM) Proteins for the Treatment of Acute Cellular Injury (2013). Patent application filed with U.S. Patent and Trademark office, U.S. Department of Commerce by Klarquist Sparkman, LLP (assignee: University of Pittsburgh). Issued Patent (2017): Number 9610266.

**Jackson TC** and Kochanek, PM. Method to Improve Neurologic Outcomes in Temperature Managed Patients (2017). Patent application filed with U.S. Patent and Trademark office, U.S. Department of Commerce by The WEBB Law Firm, (assignee: University of Pittsburgh). Patent Application Number 15/573006.

**Jackson TC** and Kochanek PM. Compounds for the treatment of acute organ injury (2018). Provisional Patent application filed with U.S. Patent and Trademark office, U.S. Department of Commerce by Meunier Carlin & Curfman LLC (assignee: University of Pittsburgh). Patent Application Number 62/736,554.

### Presented Abstracts

**Jackson TC** and Foster TC. Effects of ageing and diet on nuclear localization of FOXO3a within CA1/CA3 hippocampal regions [abstract]. In: Society For Neuroscience Meetings 2007; Nov 2-7; San Diego, CA. [Abstract] 694.9/O6.

Kumar A., **Jackson TC**, Rani A., Bodhinathan K., Foster TC. 17 $\beta$ -estradiol induces rapid increase in hippocampal synaptic transmission in estrogen receptor beta WT and KO mice [abstract]. In: Society For Neuroscience Meetings 2008; Nov 15-19; Washington, DC. Abstract 37.15/H12.

**Jackson TC** and Foster TC. Role of PHLPP1 in hippocampal neurons [abstract]. In: Society for Neuroscience Meetings 2009; Oct 17-21; Chicago, IL. Abstract 153.16 / M14.

**Jackson TC**, Verrier JD, Janesko-Feldman K, Kochanek PM. PHLPP1 plays a neuroprotective role in brain injury. [abstract]. In: National Neurotrauma Society 2012; July 22-25; Phoenix, AZ. Abstract T1.

Verrier JD, **Jackson TC**, Bansal R., Kochanek PM., Jackson EK. Oligodendrocyte 2',3'-cyclic nucleotide 3'-phosphodiesterase participates in localized adenosine production: Possible role in traumatic brain injury. [abstract]. In: National Neurotrauma Society 2012; July 22-25; Phoenix, AZ. Abstract C78.

**Jackson TC**, Verrier JD, Janesko-Feldman K, Brough E, Dixon EC, Kochanek PM. Differential effects of PHLPP1 inhibition in neurons and astrocytes: Impact on cognitive outcome after TBI in mice. [abstract]. In: National Neurotrauma Society 2013; August 3-7; Nashville, TN. Abstract D152.

Uray T, Empey P, Drabek T, **Jackson TC**, Stezoski JP, Tisherman S, Kochanek PM, Dezfulian C. Pharmacokinetics and brain bioavailability of nitrite therapy after ventricular fibrillation cardiac arrest in rats. [abstract]. In: Resuscitation Science Symposium – American Heart Association 2013, November 16-17; Dallas, TX. Abstract 221 Session IX.

Brockman EC, **Jackson TC**, Dixon CE, Bayir H, Clark RS, Vagni C, Feldman K., Kochanek PM. The effects of minocycline in a combined model of traumatic brain injury plus hemorrhagic shock in mice. [abstract]. In: 43rd Critical Care Congress 2014, January 9-13, San Francisco, CA. Basic Science Neurology 1 Poster Session. Abstract 189.

Browning M., Yan HQ, Poloyac S, Dixon CE, Empey P, **Jackson TC**, Brockman E, Ma M, Janesko-Feldman K, Henchir J, Vagni V, Kochanek PM. Benefits of early posttraumatic administration of levetiracetam after controlled cortical impact in rats: studies from the operation brain trauma therapy consortium. [abstract]. In National Neurotrauma Society 2014; June 29 – July 2; San Francisco.

**Jackson TC**, Alexander H, Lewis J, Manole MD, Clark RSB, Kochanek PM. Effect of TBI on RNA binding Motif 5 (RBM5) and 3 (RBM3) Protein Expression in the Developing Rat Brain. [abstract]. In National Neurotrauma Society 2014; June 29 – July 2; San Francisco, CA.

Du L, Poloyac SM, **Jackson TC**, Bayir H, Kochanek PM, Clark RSB, Manole M.D. Inhibition of 20-HETE synthesis decreases apoptotic and necrotic neurodegeneration produced by oxygen glucose deprivation. [abstract]. In Society for Neuroscience 2014; Nov 9-13; San Diego, CA.

Jha RM, Yan HQ, Dixon CE, Poloyac SM, **Jackson TC**, Hoshitsuki K, Ma X, Henchir J, Feldman K, Kochanek PM. Evaluation of Glibenclamide in the Pittsburgh Controlled Cortical Impact Model of Traumatic Brain Injury: An OBTT Consortium Study. [abstract]. In National Neurotrauma Society 2015; June 28 – July 1; Santa Fe, NM.

**Jackson TC**, Kotermanski S, Kochanek PM An Exploratory Microarray Study on the Role of RBM5 in Primary Cortical Neurons. [abstract]. In National Neurotrauma Society 2016; June 26 – June 29; Lexington, KY.

Wallisch JS, Jha RM, Farr GW, **Jackson TC**, Kochanek PM, Manole MD. Aquaporin-4 inhibitor AER-271 blocks early cerebral edema in pediatric rat asphyxial cardiac arrest. [abstract]. In University of Pittsburgh Brain Day 2016; Nov 4; Pittsburgh, PA.

Drabek T, Snajdar E, Stezoski JP, Simqu KS, Kochanek PM, **Jackson TC**. Deep hypothermic circulatory arrest does not induce RNA-binding motif protein 3 (RBM3) in hippocampus in adult rats. [abstract]. In International Anesthesia Research Society 2017; May 6 – May 9; Washington, DC. NR 36 (1584). [POSTER AWARD WINNER].

**Jackson T.**, Kotermanski S, Kochanek PM. RBM5 Increases Neuronal Damage in a Model of Mechanical Stretch-Injury. [abstract]. In National Neurotrauma Society 2017; July 7 – July 12; Snowbird, UT.

Wallisch JS, Jha RM, Farr GW, McGuirk PR, Pelletier MF, **Jackson TC**, Clark RSB, Kochanek PM, Manole MD. Aquaporin-4 inhibitor AER-271 blocks edema and improves outcome in pediatric rat cardiac arrest [abstract]. In: 47th Critical Care Congress 2018, February 25-28, San Antonio, TX. CPR and Resuscitation. Abstract 49.

Hossain MS, Stezoski J, Drabek T, **Jackson TC**. Translational Elongation Factor 2 Decreases After Deep Hypothermic Circulatory Arrest. [abstract]. In 16th Annual Safar Symposium 2018, May 31 - June 1, Pittsburgh, PA. [POSTER AWARD WINNER].

## Service

### Committees & Events

Society for Neuroscience, Member.	2007-2010
Committee Member to Dr. Megan Browning (Scholarly oversight committee (SOC)).	2014-2015
Committee Member to Dr. Ruchira Jha (KL2 Clinical Research Scholars Program).	2015-2016
Faculty Judge at the Annual Safar Symposium Multi-Departmental Trainee's Day.	2015
Faculty Moderator (Oral Presentations), Annual Safar Symposium Multi-Departmental Trainee's Day.	2015

Committee Member to Dr. Shawn Carlson (Safar Center T32 Fellow)	2015-2016
Faculty Judge at the Annual Safar Symposium Multi-Departmental Trainee's Day.	2016
Committee Member to Dr. Jessica Wallisch (Scholarly oversight committee, SOC).	2016-2018
Faculty Judge at the Annual Safar Symposium Multi-Departmental Trainee's Day.	2017
Faculty Judge at the Annual Safar Symposium Multi-Departmental Trainee's Day.	2018
35 <sup>th</sup> Annual National Neurotrauma Symposium, Topics Selection Organizing Committee Member for Session on "Neuroscience Tools for Neurotrauma".	2019
Faculty Judge at the Annual Safar Symposium Multi-Departmental Trainee's Day.	2019
American Heart Association, Member	2014-2019
Faculty Moderator (Oral Presentations), Annual Safar Symposium Multi-Departmental Trainee's Day.	2019
Editorial Board Member: Therapeutic Hypothermia & Temperature Management.	June 3, 2019
National Neurotrauma Society, Member	2012-Present

#### Grant Reviewer

UK Medical Research Council (Ad Hoc Reviewer).	2017
UK Medical Research Council: Neurosciences & Mental Health Board (Ad Hoc Reviewer).	2018
UK Medical Research Council/UKRI (Ad Hoc Reviewer).	2019

#### Ad Hoc Journal Reviewer

Nature Reviews Neuroscience  
Journal of Cerebral Blood Flow and Metabolism  
Journal of Neurotrauma  
Therapeutic Hypothermia & Temperature Management  
Resuscitation  
Journal of Neuroinflammation  
BMC Neuroscience  
Journal of Neuroscience Methods

ACS Chemical Neuroscience  
Neurotoxicity Research  
Brain Research  
Molecular Medicine  
SpringerPlus  
Molecular Carcinogenesis  
Medicinal Research Reviews  
Cellular and Molecular Life Sciences  
Scientific Reports.