

INDIANA SPINAL CORD AND BRAIN INJURY RESEARCH FUND

2014 ANNUAL REPORT

Submitted December 21, 2015

This report is in compliance with P.L. 234-2007. The report was compiled by the Indiana State Department of Health Division of Trauma and Injury Prevention and edited by Dr. Feuer, Board Chairman.

INDIANA SPINAL CORD AND BRAIN INJURY RESEARCH FUND (ISCBIRF)

Annual Report for 2014 (FY2015)

The Indiana Spinal Cord and Brain Injury Research Fund was created by the 2007 Indiana General Assembly under Indiana Code (IC) 16-41-42.2-4. Recommendations for grant funding are made by the Spinal Cord and Brain Injury Research Board (Board) to the Indiana State Department of Health (ISDH). Board members are appointed by the Governor, Indiana University, Purdue University, Brain Injury Association, National Spinal Cord Injury Association, and Rehabilitation Hospital of Indiana.

The fund is to be used for the following purposes:

1. Establish and maintain a state medical surveillance registry for traumatic spinal cord and brain injuries.
2. Fulfill duties of the Board.
3. Fund research related to the treatment and cure of spinal cord and brain injuries, including acute management, medical complications, rehabilitative techniques, and neuronal recovery. Research must be conducted in compliance with all state and federal laws.
4. Develop a statewide trauma system. However, no more than fifty percent (50%) of money in the fund may be used for purposes of developing a statewide trauma system.

The Board is charged with the following duties:

1. Consider policy matters relating to spinal cord and brain injury research projects and programs.
2. Consider research applications and make grants for approved projects.
3. Formulate policies and procedures concerning the operations of the board.
4. Review and authorize spinal cord and brain injury research projects and programs to be financed under this chapter.
5. Review and approve progress reports and final research reports on projects.
6. Review and make recommendations concerning the expenditure of money from the fund.

Executive Summary:

The state appropriations for the ISCBIRF for state Fiscal Year 2015 was \$1,555,389.

The table below summarizes the plan for expenditures during the state Fiscal Year 2015.

FY 2015 Budget / Commitments

Spinal Cord and Brain Injury Research Fund

Grant funding	\$ 1,560,000.00
Peer review contract (CTSI)	\$ 45,882.00
Board Expense	\$ 1,142.20
ISDH Staff Person to Administer SCBI Fund	\$ 63,900.00
Unallocated	\$ 350,802.42
Reserve	<u>\$ 69,993.00</u>
Total	\$ 1,555,389.00

The board met on several occasions—including the 2014 – 2015 dates of 10/22, 12/19, 3/19, 4/15, and 6/4 – to conduct official business and plan for the disposition of the fund, review research project progress reports, address requests for project extensions, and elect new board leadership.

The Board issued a request for proposals in late October 2014, with a deadline of January 2015. The Board voted during its October 22 meeting to increase the amount of funding from \$60,000/year for two years to \$80,000/year for two years. A total of 34 proposals were received. After the peer review was conducted, proposals were ranked by score and 18 applications were recommended to the board for funding. This group of applications was reviewed by the board, along with comments from the peer reviewers, and eventually 14 were selected for funding. The total commitment for proposals was valued at \$2,219,106. A list of FY15 awards is included in Appendix I. The trauma and injury prevention program are utilizing a portion of the fund to clinically analyze the trauma registry data to determine risk factors for patients transferred from one facility to another. This research is in partnership with Indiana University – Methodist Hospital.

The Board met for a final meeting for FY15 on June 4. Joey Fox, legislative affairs director at ISDH, reported on legislative changes to the Indiana Spinal Cord and Brain Injury Research fund that are effective July 1, 2015. Joseph Fistrovich, Chief Financial Officer at ISDH, provided a financial overview of the fund.

Board Membership:

The Board Membership and Leadership were stable in 2014-2015. Dr. Henry Feuer continues to serve as Board Chairman. The Governor-appointed position of Technical Life Sciences Industry

member was filled by Wade Lange on June 17, 2015. A complete list of Board members is provided as Appendix II to this report.

Preparation and Plans for 2015-2016:

The 2015-2016 grant application has been posted; grant applications are due no later than December 31, 2015. It is anticipated the awards will be granted in July 2015. It is projected that approximately \$1.1 million will be available for the 2015 grants. The board has also created a Request for Proposal (RFP) to fund the activity-based therapy that was added to the law during the 2015 legislative session. The RFP release date and award date are to be determined. The annual spinal cord and traumatic brain injury research symposium is tentatively scheduled for April 15, 2016.

Appendix I

2014-2015 ISCBI Grant Recipients

- Michael Bulton, Ph.D., Indiana University, \$160,000
 - “Pathogenesis and prevention of traumatic brain injury-induced visual defects”
- Jinhui Chen, Ph.D., Indiana University, \$160,000
 - “Pharmacological manipulation of adult-born hippocampal neurons to rescue memory in a mouse model of traumatic brain injury”
- Stephanie Combs-Miller, PT, Ph.D., NCS, \$143,653
 - “Physiological complexity of gait over the first six months post stroke”
- Theodore Cummins, Ph.D., \$160,000
 - “Sodium channel function and pharmacology in posttraumatic injury epileptogenesis”
- Johanne Eliacin, Ph.D., \$160,000
 - “Health disparities in traumatic brain injury: Assessing racial and geographical differences in utilization of health care services for TBI in Indiana from 2004-2013”
- Xiaoming Jin, Ph.D., \$160,000
 - “Reorganization of motor cortex following traumatic brain injury and its mechanisms”
- Debomoy K Lahiri, Ph.D., \$160,000
 - “Neuroprotective role of SOAP (Soluble β -myloid Precursor Protein) in brain injury and TBI”
- Samy Meroueh, Ph.D., \$160,000
 - “Small molecules to restore breathing following spinal cord injury”
- Dawn M. Neumann, Ph.D., \$159,644
 - “Behavioral mechanisms underlying facial affect recognition deficits after brain injury”
- Victoria A. Ploplis, Ph.D., \$158,925
 - “Coagulopathy and platelet dysfunction following traumatic brain injury”
- Richard B. Rodgers, Ph.D., \$160,000
 - “Investigation of novel hemoabsorption system in rats with traumatic brain injury”
- Zhiyong Tan, Ph.D., \$160,000
 - “Role of high-mobility group box 1 protein regulating voltage-gated sodium channels in a spinal cord injury model of neuropathic pain”
- Fletcher White, Ph.D., \$156,884
 - “Novel therapeutic strategies against traumatic brain injury-induced neuroinflammation and chronic pain”

- Xiangbing Wu, Ph.D., \$160,000
 - “RhoA/Rho kinase inhibition-mediated neuroprotection after spinal cord injury”

Appendix II

Indiana Spinal Cord and Brain Injury Fund Board Membership List

(** - Governor appointed position)

1. **Physician/Neurosurgeon****
Dr. Henry Feuer (Board Chair)
2. **Spinal Cord/Head Injury Person or Family Member****
Kira Hudson, MBA
Clinical Data Analyst, St. Vincent Indianapolis Hospital
3. **Physiatrist, Board Certified APMR****
Dr. Whitney Pratt
4. **Technical Life Sciences Industry****
Wade Lange, MS
Vice President, Lange Advisors
5. **Indiana University**
Gerry Oxford, PhD
6. **Purdue University**
Alan H. Rebar, DVM, PhD
Senior Associate Vice President for Research and Executive Director of Discovery Park
Hovde Hall
7. **National Spinal Cord Injury Association**
Janeen Earwood, Director of Rehabilitation, American Senior Communities
8. **Rehabilitation Hospital of Indiana**
James Malec, PhD
9. **American Brain Injury Association/Brain Injury Assoc. of Indiana**
Tom Doehrman