

INDIANA SPINAL CORD AND BRAIN INJURY RESEARCH FUND

2013 ANNUAL REPORT

Submitted June 5, 2014

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. Henry Feuer, Board Chairman.

INDIANA SPINAL CORD AND BRAIN INJURY RESEARCH FUND (ISCBIRF)

Annual Report for 2013 (FY2014)

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.

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 2013-2014 totaled \$1,555,389. This was \$29,982.75 more than last year. The State required a 4.5% reserve which equaled \$69,993, therefore the amount available for expenditure was \$1,485,396.

The table below summarizes the plan for expenditures during the 2013-2014 state fiscal year.

2013-2014 Budget / Commitments

Spinal Cord and Brain Injury Research Fund

Grant funding	\$ 1,053,975.38
Peer review contract (CTSI)	\$ 44,998.00
SVC Report	\$ 30,000.00
Board Expense	\$ 717.20
ISDH Staff Person to Administer SCBI Fund	\$ 4,903.67
Unallocated	\$ 350,802.42
Reserve	<u>\$ 69,993.00</u>
Total	\$ 1,555,389.00

The board met on several occasions—including the 2013 – 2014 dates of 09/12, 12/05, and 05/16—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 early 2013, with a deadline of May 6, 2013. A total of 22 proposals were received. After the peer review was conducted, proposals were ranked by score and seven 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 nine were selected for funding. Funding was available for two additional applications so the two applications with a slightly lower score that didn't make the initial recommendation list were also funded. The total commitment for proposals was valued at \$1,052,810.00. A list of 2013 awards is included in Appendix I.

The Board met for a final meeting in 2013 on Thursday, December 5. Katie Gatz reported on the history and current state of the Indiana trauma registry. Dr. Jacob Kean presented a proposal of the chronic care model for traumatic brain injury care. Dr. Walthall gave a presentation on Injury Prevention and Community-based Participatory Research. Brian Carnes presented a financial summary of the SCBI board. He recommended that the additional funds from FY2013 would be used to upgrade the Indiana trauma registry and fund one additional project. The board approved this recommendation. Kelly Greene, the consultant from SVR, presented a summary of her report.

SVC Report:

The ISDH hired a health policy firm in 2013 to execute an external review of the ISCBI fund to evaluate the impact of the fund and to obtain input regarding how the purposes of the fund can be achieved more effectively. The ISDH chose SVC, Inc. (SVC), to provide feedback and recommendations concerning the utilization of the ISCBI fund and the board activities.

In order to complete this project, SVC did the following: 1) reviewed historical ISCBI Board documents, research grant progress reports, the ISDH and the Clinical and Translational Sciences Institute (“CTSI”) contract and the contract between ISDH and the grant recipients; 2) identified grant outcomes; 3) identified all additional funds that have been leveraged and any significant advancements in the field of spinal cord and brain injury research as a result of the research grants funded by the ISCBI Fund; 4) compared the ISCBI Fund and Board with spinal cord and brain injury research activities in other states; and 5) interviewed current and past ISCBI Board members regarding the function of the ISCBI Board and the administration of the ISCBI Fund.

The overall review revealed that: 1) the ISCBI Fund is being appropriately utilized to promote spinal cord and brain injury research in Indiana and to maintain a spinal cord and brain injury registry; and 2) the ISCBI Board is fulfilling its duties related to the selection and oversight of grants for spinal cord and brain injury research in Indiana. However, there are many opportunities to create greater efficiency, transparency, and accountability regarding the ISCBI Fund and Board.

Board Membership:

The Board Membership and Leadership were stable in 2013-2014. Dr. Henry Feuer served as Board Chairman and Dr. Alan Rebar, Purdue University, served as Vice Chairman. The Governor-appointed position of Board Certified AMPR physiatrist was filled by Dr. Whitney Pratt on May 14, 2014. A complete list of Board members is provided as an Appendix II to this report.

Preparation and Plans for 2014-2015:

The 2014-2015 grant application has been posted; grant applications were due no later than February 24, 2014. It is anticipated the awards will be granted in July 2014. It is projected that approximately \$1.3 million will be available for the 2014 grants. The annual spinal cord and traumatic brain injury research symposium has not been scheduled for 2014.

Appendix I

2013-2014 ISCBI Grant Recipients

- Andy Hudmon, Ph.D., Indiana University, \$120,000
 - “Developing Novel CaMKII Activators to Reduce Neurodegeneration”
- Xiaoming Jin, Ph.D., Indiana University, \$120,000
 - “Longitudinal changes in microcirculation and synaptic plasticity after mild TBI”
- Michelle Keiski, Ph.D., Indiana University, \$120,000
 - “Memantine for Neuroprotection and Cognitive Enhancement in Traumatic Brain Injury”
- David Koceja, Ph.D., Indiana University, \$92,810
 - “A novel therapy to regain movement control in stroke survivors”
- Riyi Shi, Ph.D., Purdue University, \$120,000
 - “Toxic aldehyde as a key mediator of secondary injury in a traumatic brain injury”
- Katherine Stenson, MD, Indiana University, \$120,000
 - “Adaptation of a Group Diabetes Prevention Program for Individuals with Spinal Cord Injury: A pilot study for feasibility and efficacy”
- Zhiyong Tan, Ph.D., Indiana University, \$120,000
 - “Pain following ischemic spinal cord injury: role of voltage-gated”
- Wenhui Xiong, Ph.D., Indiana University, \$120,000
 - “Optogenetic evaluation and acute protection of corticospinal tract after spinal cord injury”
- Rajesh Khanna, P.D., Indiana University, \$120,000
 - “Preclinical evaluation of CRMP2-directed peptides for Neuroprotection”

Appendix II

Indiana Spinal Cord and Brain Injury Trust Fund Board Membership List

(** - Governor appointed position)

1. **Physician/Neurosurgeon****
Dr. Henry Feuer (Board Chair)
2. **Spinal Cord/Head Injury Person or Family Member****
Bob Setree
President, Southern Indiana Traumatic Brain Injury Foundation
3. **Physiatrist, Board Certified APMR****
Dr. Whitney Pratt
4. **Technical Life Sciences Industry****
Ronald D. Henriksen
President and Chief Executive Officer, EndGenitor Technologies
Partner and Chief Investment Officer, Twilight Venture Partners
Chairman of Cytori Therapeutics, Inc.
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