

# INDIANA SPINAL CORD AND BRAIN INJURY RESEARCH FUND

## 2018 ANNUAL REPORT

*Submitted January 31, 2020*

This report is in compliance with IC 16-41-42.2-5. The report was compiled by the Indiana State Department of Health Division of Trauma and Injury Prevention.

# **INDIANA SPINAL CORD AND BRAIN INJURY RESEARCH FUND (ISCBIRF)**

## **Annual Report for 2018 (FY2019)**

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. 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 of Indiana, 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. Concerning spinal cord injuries, funding at least ten percent (10%) and not more than fifteen (15%) of money in the fund for:
  - a. Post-acute extended treatment and services for an individual with a spinal cord injury; or
  - b. Facilities that offer long term activity-based therapy services at affordable rates to an individual with a spinal cord injury that requires extended post-acute care.
5. Concerning brain injuries, funding at least ten percent (10%) and not more than fifteen (15%) of money in the fund for:
  - a. Post-acute extended treatment and services for an individual with a brain injury; or
  - b. Facilities that offer long term activity-based therapy services at affordable rates to an individual with a brain injury that requires extended post-acute care.
6. 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. Consider applications and make grants to healthcare clinics that:
  - a. Are exempt from federal income taxation under §501 of the Internal Revenue Code;

- b. Employ physical therapists licensed under IC 25-27; and
  - c. Provide in Indiana long term activity-based therapy services at affordable rates to individuals with spinal cord injuries or brain injuries that require extended post-acute care.
4. Consider the application's efficacy in providing significant and sustained improvement to individuals with spinal cord injuries or brain injuries.
  5. Formulate policies and procedures concerning the operations of the board.
  6. Review and authorize spinal cord and brain injury research projects and programs to be financed under IC 16-41-42.2.
  7. Review and approve progress reports and final research reports on projects.
  8. Review and make recommendations concerning the expenditure of money from the fund.

### **Executive Summary:**

The state appropriates to this fund revenue that is utilized for on-going operating costs for the Board to carry out its statutory duties. The table below summarizes actual fund expenditures for state Fiscal Year 2019:

Grant funding	\$ 2,048,120
Peer review contract (CTSI)	\$38,065
ISDH staff support	\$ 212,461
Operating costs (non-personnel)	\$143,938
<b>Total</b>	<b>\$ 2,442,584</b>

Revenues collected during the year amounted to \$1,774,739. The Fund ended the fiscal year with an available cash balance of \$1,869,724.

The board met on several occasions, including the 2018 - 2019 dates of Dec. 11, Feb. 19 and May 23, to conduct official business and plan for the disposition of the fund, review research and activity-based therapy project progress reports, address requests for project extensions, and elect new board leadership.

The Board issued the research-related request for proposals September 2018 with a deadline of Dec. 10, 2018. A total of 22 proposals were received and all were reviewed. After the peer review was conducted, proposals were ranked by score and six applications were recommended to the Board for funding, via a tiered approach which accommodated funding based on financial availability. This group of applications was reviewed by the Board, along with comments from the peer reviewers, and all six were selected for funding. The total commitment for proposals was valued at \$960,000. A list of research-related FY19 awards is included in Appendix I.

The Board issued the activity-based therapy request for proposals July 2018 with a deadline of October 29, 2018. Three proposals were received. After the peer review was conducted, the

proposals were ranked by score. One application was recommended to the Board for funding; it was recommended that the second proposal be revised according to the reviewers' comments and then reconsidered by the same reviewers to ensure consistency. The third application was not deemed appropriate for this mechanism. This group of applications was reviewed by the Board, along with comments from the peer reviewers. As recommended, one request for funding was accepted, one applicant was asked to revise and resubmit, and the third applicant was not funded. Following the second applicant's resubmission, the reviewers did not feel that the weaknesses were addressed sufficiently and recommended that the applicant revise and resubmit in the next round. The Board agreed with this recommendation. The total value for the single proposal funded was \$150,000. The FY19 activity-based therapy award is included in Appendix II. Applications for this particular request for proposals are low due to the few facilities that offer these services in the state. The Trauma and Injury Prevention program continues to use 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. Funding is also used to support trauma and injury prevention staff.

The Board met for a final meeting for FY19 on May 23, 2019. The Board approved progress reports, approved the ability for the ISDH to approve no cost extensions with an FYI to the Board, approved the change in PI for the RHI ABT project, reviewed the proposed changes in the bylaws, and began planning the 2020 conference.

Throughout FY19, ISDH Chief Financial Officer Rebecca Chauhan provided financial overviews of the fund to the Board.

### **Board Membership:**

The Board membership and leadership experienced some changes July 1, 2018 through June 30, 2019. Dr. Henry Feuer continues to serve as Board chairman. Annette Seabrook filled the physical therapist position on the board and Dr. Sachin Mehta filled the Brain Injury Association of Indiana member position. The board is still working to identify someone to fill the owner/operator of a facility to fulfill the long-term activity-based therapy services position. A complete list of Board members is provided as Appendix III.

### **Preparation and Plans for 2019-2020:**

The 2019-2020 research grant application was posted in September 12, 2019; grant applications were due no later than December 2, 2019. The 2019-2020 activity-based therapy grant application was posted September 12, 2019; grant applications were due no later than December 2, 2019. It is anticipated the awards will be granted in July 2020. It is projected that approximately \$1.4 million will be available for the FY2020 grants.

## Appendix I

### 2019-2020 Indiana Spinal Cord & Brain Injury Grant Recipients

- Lauren Christopher, Indiana University, \$160,000
  - “Machine Learning Classification of Facial Affect Recognition Deficits after Traumatic Brain Injury for Informing Rehabilitation Needs and Progress”
- Xiang Gao, Indiana University, \$160,000
  - “Improving the functional outcomes by preventing progressive spine loss after repetitive mild traumatic brain injury”
- Xiaoming Jin, Indiana University, \$160,000
  - “Longitudinal imaging of cortical activity and neuroinflammation after mild traumatic brain injury”
- Cristian Lasagna-Reeves, Indiana University, \$160,000
  - “Astrocyte-derived tau oligomers in neurodegeneration associated to Traumatic Brain Injury”
- Paula Monje, Indiana University, \$160,000
  - “Lithium Therapy: a novel combinational strategy to boost Schwann cell-mediated spinal cord repair”
- Cody Smith, University of Notre Dame, \$160,000
  - “Identification of cell-intrinsic mechanisms that drive regeneration in spinal cord root injuries”

## Appendix II

### 2019-2020 Activity-Based Therapy Grant Recipient

- Nora Foster, NeuroHope, \$150,000
  - “NeuroRecovery Network Spinal Cord Injury Enrollment Program”

## Appendix III

### Indiana Spinal Cord and Brain Injury Fund Board Members

1. **Physician/Neurosurgeon\***  
Dr. Hank Feuer (Board chairman)
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, MD PhD  
Assistant Clinical Professor, Department of Physical Medicine and Rehabilitation  
Indiana University School of Medicine
4. **Technical Life Sciences Industry\***  
Wade Lange, MS  
Vice President, Lange Advisors
5. **Owner or operator of a facility that provides long term activity based therapy services\***  
*Vacant*
6. **Physical Therapist\***  
Annette Seabrook  
Chief Executive Officer (CEO), Community Rehabilitation Hospital North
7. **Indiana University**  
Bruce Lamb, PhD  
Executive Director, Stark Neuroscience Research Institute  
Indiana University School of Medicine
8. **Purdue University**  
Howard Zelaznik, PhD  
Associate Vice President for Research
9. **National Spinal Cord Injury Association**  
Janeen Earwood  
Director of Rehabilitation, American Senior Communities
10. **Rehabilitation Hospital of Indiana**  
Florence Hammond, PhD  
Professor and Chairwoman, Department of Physical Medicine and Rehabilitation at  
Indiana University School of Medicine, Rehabilitation Hospital of Indiana
11. **American Brain Injury Association/Brain Injury Assoc. of Indiana**  
Sachin Mehta, MD

\* Designates governor-appointed position