



South Carolina  
**SPINAL CORD INJURY RESEARCH FUND**

Annual Report ▪ June 30, 2002

# State of South Carolina Spinal Cord Injury Research Board

"Dum Spiro Spero - While I Breathe I Hope"

**Brian G. Cuddy, MD**  
Chairman

Judge Charles L. Allen  
David Griesemer, MD  
Terry Peacock  
Phanor L. Perot, MD, PhD  
David L. Shallcross, MD  
W. Daniel Westerkam, MD



**J. Walker Coleman, III**  
Fund Administrator

Medical University of South Carolina  
Administration Building  
171 Ashley Avenue, Suite 200A  
PO Box 250001  
Charleston, SC 29425

June 30, 2002

TO: Friends and Supporters of the Spinal Cord Injury Research Fund

FROM: Dr. Brian G. Cuddy, Chair of the Fund Board

SUBJ: Annual Report of Fund (FY 01—02)

On behalf of the S. C. Spinal Cord Injury Research Fund Board, it is my pleasure and privileged to present this initial Annual Report which actually covers the first eighteen (18) months of activity.

The following pages overview the initiatives and accomplishments of the Fund Board and staff, all made possible through the help and counsel of our many friends and supporters. We have fully organized and staffed the Fund, set initial priorities, and solicited and reviewed the very first round of research grant applications which will be awarded funding support as our second full Fiscal Year starts. These include a badly needed statewide conference targeting people with spinal cord injury and their families, with a strong associated educational component for care providers. I am particularly pleased to report that initial participants in Fund research include all of our State's research universities: Clemson, the Medical University of South Carolina, and the University of South Carolina. Recruitment initiatives are also underway to establish centers of treatment and research excellence in our state to better serve citizens in need. Exciting things will be happening over the near future in spinal cord research, and we look forward to South Carolina demonstrating national leadership capabilities.

Special thanks is due to the members of the South Carolina Legislature, particularly those members who sponsored the enabling legislation. Thanks is also due to the Governor and the President of the Medical University of South Carolina for their timely and enthusiastic nomination and appointment of our Board which enabled to Fund to get off to such a quick and successful start.

We look forward to the upcoming year of even greater achievement.

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Board at March 22, 2002 Meeting

(L to R) Dr. W. Daniel Westerkem, Dr. Phanor L. Perot, Judge Charles L. Allen,  
Dr. David Greisemer, Ms. Terry Peacock, and Dr, Brian G. Cuddy



Board at August 24, 2001 Meeting

(L to R) Ms. Terry Peacock, Dr. W. Daniel Westerkem, Judge Charles L. Allen,  
Dr. David L. Shallcross, and Dr, Brian G. Cuddy



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JUNE 30, 2002

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**FIRST ANNUAL REPORT OF THE S. C. SPINAL CORD INJURY RESEARCH FUND BOARD  
(01/01/2001 through 06/30/2002)**

Amendment (Bill S54 44-38-510) to Section 2, Chapter 38, Title 44 of the 1976 S.C. Code was ratified on July 20, 2000 and authorized the new South Carolina Spinal Cord Injury Research Fund provided from a \$ 100 surcharge on each Driving Under the Influence (DUI) conviction throughout the state. The Fund is administered by new Spinal Cord Injury Research Fund Board appointed by the Governor, and was attached to the Medical University of South Carolina (MUSC) for staff and administrative purposes. The law authorizes Fund use to cover basic operating and administrative costs, but directed that the balance be provided for spinal cord injury research projects.

This initial annual report actually covers the first 18 months that DUI surcharges were collected for spinal cord injury research. Henceforth, annual reports will be for 12-month periods covering the State Fiscal Year period of July 1 through June 30.

Following are brief highlights of major accomplishments of the Fund Board and Staff. Details are provided in the referenced appendices.

- Collection of a \$ 100 surcharge on each Driving Under the Influence (DUI) conviction started on January 1, 2000 and has continued since with amounts transferred monthly into the Spinal Cord Injury Research Fund being held at MUSC. Appendix 1 shows actual collections by month since Fund inception, with the grand total as of 06/30/02 being \$ 982,672.44.
- Initial Spinal Cord Injury Research Fund Board members were recommended by the President of the Medical University of South Carolina in February of 2001 as per enabling legislation, with the Governor appointing the following members on March 8, 2001. Appendix 2 contains additional information on the Board and their terms of service.

**Judge Charles L. Allen  
Terry Peacock**

**Brian G. Cuddy, M.D.  
Phanor L. Perot, Jr., M.D., PhD  
W. Daniel Westerkam, M.D.**

**David Griesemer, M.D.  
David L. Shallcross, M.D.**

- The Board has since held four meetings (06/08/01, 08/24/01, 03/22/02, and 06/31/02) where the Fund was organized and implemented according to the guidelines set by the S. C. Legislature. Appendix 3 contains the agendas of each Board meeting and copies of the minutes are available upon request to the Fund Administrator.
- Dr. Brian Cuddy was elected first Chairperson of the Board. Appendix 4 presents the duties of the Board Chair as approved by the Board.
- Initial Fund staff was appointed and an administrative office organized within the Office of the President of the Medical University of South Carolina. Appendix 5 contains the responsibilities of both staff positions as approved by the Board:

**J. Walker Coleman III, Fund Administrator**

**Peter W. Kalivas, PhD, Fund Scientific Director**

- Fund budgets were developed and approved by the Board for the first and second Fiscal Years of Fund activity (see Appendix 6).
- The Board developed and approved comprehensive By-laws for the Fund and its administration (see Appendix 7).
- A comprehensive informational slide presentation on the Fund was developed for Board use to inform various professional and public groups (see Appendix 8 for listing of slides available).
- Initial Fund mailing lists were solicited and finalized. Notices were sent to over 1,400 potentially interested individuals and organizations in the state and resulted in a general Fund state mailing list of 240 with a sub-list of 90 persons interested in receiving official Requests for Proposals as well as possibly serving as reviewers of project proposals requesting funding support. These lists are on file in the Office of the Fund Administrator.
- Initial Fund goals and priorities were set as basis for development and finalization of the first official Request for Proposals (RFP) which is presented in Appendix 9 and was mailed out on December 15, 2001 for a March 15, 2002 deadline.
- Twelve project applications were received in response to the RFP, and the Board approved a scientific review process (Appendix 10 presents additional review process information).
- Scientific review groups organized by the Fund Scientific Director conducted formal project reviews that resulted in findings and recommendations to the Board with respect to the scientific merit of each proposal. These were divided into Clinical Sciences Proposals and Preclinical Sciences Proposals with Primary, Secondary, and Tertiary Reviewers assigned to each application.
- At its 05/31/02 meeting, the Board gave full approval for funding to three (3) of these proposals; requested expedited further review on three (3); returned one (1) to the applicant for revision and resubmission in a future funding cycle; and disapproved five (5) for funding. The Board also tentatively approved, subject to further information and review, two (2) special one-time funding requests to help recruit spinal cord injury research expertise into South Carolina.
- The Fund Administrator and Scientific Director worked with MUSC research support administrators to set up proper procedures and processes to award funds to the approved projects while meeting all provisions of the Fund By-laws, applicable State laws and procedures, and auditing requirements.
- After additional information was supplied on several proposals, the following awards were scheduled for a First Round of funding in July 2002. Appendix 11 includes more detailed information about each one.

**Gene Expression Profiling of CNS Regions Implicated in a Mouse Model of Spinal Cord Injury Pain {\$ 85,466 for 18 months} — P.I. (Principal Investigation): Jacqueline F. McGinty, PhD, Professor, Physiology and Neuroscience, MUSC.**

**Statewide Outcome Assessment for Spinal Cord Injury (SOASCI): Assessing the Implementation and Effectiveness of Methylprednisolone Protocol and Other Outcomes of Spinal Cord Injury In South Carolina** {\$ 123,349 for 12 months} — P.I.: Stephen J. Haines, MD, Professor and Chair, Department of Neurological Surgery, MUSC.

**Assessment and Treatment of Musculoskeletal Pain in the Shoulder Girdle in SCI Through Surface-Recorded EMG and EMG Biofeedback** {\$ 91,990 for 18 months} — P.I.: Susan J. Middaugh, PhD, PT, Professor, Department of Anesthesia and Perioperative Medicine, MUSC.

**Spinal Modulation of the Nociceptive Pressor Reflex** {\$ 87,978 for 18 months} — P.I.: L. Britt Wilson, PhD, Associate Professor, Pharmacology and Physiology, University of South Carolina School of Medicine.

**An In Vitro Model of the Reflex Arc as Applied to Spinal Cord Injury** {\$ 100,252 for 18 months} — P.I.: James J. Hickman, PhD, Hunter Endowed Chair of Biomaterials, Department of Bioengineering, Clemson University.

**"Taking Charge of Your Life" — Statewide Conference for People With Spinal Core Injuries** {\$ 29,476 for 6 months} — P.I.: Kermit L. Short, Executive Director, South Carolina Spinal Cord Injury Association.

**Recruitment Assistance for James S. Krause, PhD., as Chair of the Department of Rehabilitative Sciences at MUSC and Scientific Director of the SCI Research Fund** {\$ 125,000 for 12 months} — P.I.: James S. Krause, PhD., Chair, Department of Rehabilitation Science, MUSC.

**Recruitment Assistance for Mark S. Kindy, PhD as The Admiral Pihl Endowed Chair of Neuroscience at MUSC and Associate Scientific Director of the SCI Research Fund** {\$ 75,000 for 12 months} — P. I.: Mark S. Kindy, PhD., Admiral Pihl Endowed Chair of Neuroscience, Department of Physiology and Neuroscience, MUSC.

- At its meeting of June 31, 2002, the Board set the following goals and objectives for Fiscal Year 2002-2003:
  - ~ Award first round of projects.
  - ~ Conduct a statewide media campaign in conjunction with the awards to publicize the Fund to both professional and public audiences.
  - ~ Visit State leaders to report on Fund accomplishments/progress and solicit input/recommendations.
  - ~ Participate in the scientific component of the first Fund sponsored South Carolina Spinal Cord Injury Conference.

- ~ Update Fund Research Priorities and Goals for a second round of project applications.
- ~ Solicit, review, and fund a second round of Fund research projects.
- ~ Organize and initiate a private fundraising capability for the Board.
- ~ Strongly support the establishment of a spinal cord injury center of excellence as a resource for all patients in South Carolina.
- ~ Explore potential collaborations with other organizations, institutions, and programs working in spinal cord injury both regionally and nationally.
- ~ Establish a Fund Web page.
- ~ Closely monitor ongoing projects.
- At year's end, conduct the first independent financial audit of the Fund.
- At this meeting, the Board also appointed Dr. James S. Krause as Fund Scientific Director and Dr. Mark Kindy as Associate Scientific Director.





**APPENDIX 1**

**FY 01-02 ANNUAL REPORT**

**S.C. Spinal Cord Injury Research Fund**

Cumulative DUI Collections

**DUI FINE COLLECTIONS FOR THE SCIR FUND SINCE INCEPTION OF FUND**  
**{running total last updated 06/30/02}**

**2001** -----

|           |              |                                  |
|-----------|--------------|----------------------------------|
| January   | \$ 4,285.00  |                                  |
| February  | \$ 10,774.90 |                                  |
| March     | \$ 26,570.32 |                                  |
| April     | \$ 41,513.91 |                                  |
| May       | \$ 42,606.41 |                                  |
| June      | \$ 50,170.12 |                                  |
| July      | \$ 54,159.28 |                                  |
| August    | \$ 62,635.31 |                                  |
| September | \$ 53,845.08 |                                  |
| October   | \$ 61,642.97 |                                  |
| November  | \$ 60,039.88 |                                  |
| December  | \$ 63,716.54 | \$ 531,929.72 {total first year} |

**2002** -----

|          |               |                                 |
|----------|---------------|---------------------------------|
| January  | \$ 43,035.45  |                                 |
| February | \$ 67,213.13  |                                 |
| March    | \$ 110,797.84 |                                 |
| April    | \$ 68,851.75  |                                 |
| May      | \$ 73,028.36  |                                 |
| June     | \$ 82,816.19  | \$ 982,672.44 {total 18 months} |



## **APPENDIX 2**

### **FY 01-02 ANNUAL REPORT**

### **S.C. Spinal Cord Injury Research Fund**

Detailed Board Member Information

**SPINAL CORD INJURY RESEARCH FUND BOARD**  
**(Individuals and Terms as initially appointed by Governor 03/08/01)**

**2 MEDICAL DOCTORS FROM THE STAFF OR FACULTY OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA** (both initially appointed for 2 year terms, subsequently 4 year terms).

- \* **Phanor L. Perot, Jr, M.D., Ph.D., Charleston, SC** — Board Certified in Neurological Surgery and Professor Emeritus of Neurosurgery at the Medical University of South Carolina and past Department Chairman. (Term: March 08, 2001 — 2003)
- \* **David Griesemer, M.D., Charleston, SC** — Board Certified in Neurology and serves as Chairman of the MUSC Department of Neurology and Associate Professor of Neurology and Pediatrics. (Term: March 08, 2001 — 2003)

**2 MEDICAL DOCTOR SPECIALIZING OR SIGNIFICANTLY ENGAGED IN THE TREATMENT OF SPINAL CORD INJURIES IN SOUTH CAROLINA** (both appointed for 4 year terms).

- \* **David L. Shallcross, M.D., Greenville, SC** — Board Certified in Physical Medicine and Rehabilitation and conducts a private practice, Upstate Medical Rehabilitation, as well as serves as Medical Director of the inpatient rehabilitation unit at BonSecours St. Francis Health System in Greenville. (Term: March 08, 2001 — 2005)
- \* **W. Daniel Westerkam, M. D., Columbia, SC** — Specialist in Physical Medicine and Rehabilitation who is Director of Rehabilitative Services at Palmetto Richland Memorial Hospital as well as Associate Medical Director at HealthSouth Rehabilitation Hospital in Columbia. (Term: March 08, 2001 — 2005)

**2 MEMBERS WHO HAVE A SPINAL CORD INJURY OR WHO HAVE A FAMILY MEMBER WITH A SPINAL CORD INJURY** (4 year terms, one will serve only 2 years for the first term).

- \* **Charles L. Allen, Mt. Pleasant, SC** — Spinal cord injury survivor, Charleston Municipal Court Judge and teaches at Trident Technical College. (Term: March 08, 2001 — 2003)
- \* **Terry Peacock, Columbia, SC** — Mother of a family member with spinal cord injury who works for the Office of Minority Affairs of the SC Department of Health and Environmental Control. (Term: March 08, 2001 — 2005)

**1 AT LARGE MEMBER WHO IS A MEDICAL DOCTOR AND A MEMBER OF THE SOUTH CAROLINA MEDICAL ASSOCIATION** (initial term of 3 years, 4 year terms thereafter).

- \* **Brian G. Cuddy, M.D., Charleston, SC** — Board Certified Neurosurgeon in private practice, Clinical Associate Professor of Neurosurgery at MUSC, and directly involved in establishing the Spinal Cord Injury Research Fund. (Term: March 08, 2001 — 2004)



**APPENDIX 3**

**FY 01-02 ANNUAL REPORT**

**S.C. Spinal Cord Injury Research Fund**

Board Meeting Agendas

## **AGENDA**

### **SPINAL CORD INJURY RESEARCH FUND BOARD**

**FRIDAY, JUNE 8, 2001**

**1:00 PM in the MUSC BOARD ROOM**

#### **WELCOME / INTRODUCTIONS OF MEMBERS**

Judge Charles L. Allen

Brian G. Cuddy, M.D

David Griesemer, M.D.

Terry Peacock

Phanor L. Perot, Jr, M.D., PhD

David L. Shallcross, M.D

W. Daniel Westerkam, M.D.

#### **ELECTION OF BOARD CHAIR**

#### **BACKGROUND/HISTORY/SCOPE OF FUND**

#### **ORGANIZATION/OPERATIONS/RESPONSIBILITIES OF BOARD AND STAFF**

#### **CURRENT STATUS OF FUND**

#### **DEVELOPING INITIAL FUND MISSION STATEMENT/GOALS**

#### **GOALS AND TIME LINES FOR UPCOMING BOARD AND STAFF ACTIVITIES**

#### **OTHER BUSINESS**

#### **ADJOURN**

## **AGENDA**

### **SPINAL CORD INJURY RESEARCH FUND BOARD**

**FRIDAY, AUGUST 24, 2001**

**1:00 PM in the MUSC BOARD ROOM**

**WELCOME**

**BOARD PHOTOGRAPHS**

**APPROVAL OF JUNE 8, 2001 MINUTES**

**UPDATE ON FINANCIAL STATUS OF FUND**

**REPORT ON MEETING WITH MUSC PRESIDENT & PROVOST**

**WELCOME BY MUSC PRESIDENT & PROVOST**

**FINALIZATION OF BOARD BY-LAWS (INCLUDING DRAFT MISSION STATEMENT)**

**FUND STAFF POSITION DESCRIPTIONS**

**\*Board Chair**

**\*Administrator**

**\*Scientific Director**

**FUND BUDGET FOR FISCAL YEAR 01/02**

**SCI RESEARCH PROJECTS & PROPOSALS**

**\*Methodology/Timelines**

**\*Development of Draft Protocols & RFPs**

**\*Stationery and Mailing Lists**

**OTHER OLD BUSINESS**

**NEXT MEETING(S) DATE(S)**

**OTHER NEW BUSINESS**

**ADJOURN**

## **AGENDA**

### **SPINAL CORD INJURY RESEARCH FUND BOARD**

**FRIDAY, MARCH 22, 2002**

**2:00 PM in the MUSC BOARD ROOM**

#### **PUBLIC FORUM PORTION OF MEETING (2:00 - 3:00 pm)**

- Introduction of Board and Guests
- Overview of Spinal Cord Injury Research Fund
- Open Discussion

#### **BUSINESS PORTION OF MEETING (3:00 - 4:00 pm)**

- Approval of August 24, 2001 Meeting Minutes
- Update on Fund Receipts/Expenditures
- Fund By-Laws
- Fund Scientific Director Position Description
- Senator Waldrep's Letter
- Other Business
- Date of Next Board Meeting
- New Board Photographs

#### **EXECUTIVE SESSSION (during Business Portion of Meeting)**

##### **Fund Project Review Process:**

- Proposed Overall Process
- Proposed Initial Group of Project Reviewers
- Summary of Initial Project Proposals Received by 3/15/02 Deadline
- Final Timetable/Board Logistics for Initial Review



## **AGENDA**

### **SPINAL CORD INJURY RESEARCH FUND BOARD**

**FRIDAY, MAY 31, 2002**

**2:00 PM in the MUSC BOARD ROOM**

**ROLL CALL**

**APPROVAL OF MINUTES**

**REPORT OF FUND CHAIR**

- Update on DUI Revenues

**REPORT OF SCIENTIFIC DIRECTOR**

- Proposal for Future of the Scientific Director Position
- Introduction of Dr. James Krause
- Review of First Round Project Proposals
- Timetable and Procedures for Awarding of Approved Proposals

**REPORT OF FUND ADMINISTRATOR**

- FY 02/03 draft Fund Budget

**PLANS/PRIORITIES FOR FY 02/03 AND FOR ROUND 2 OF PROJECT PROPOSALS**

**DISCUSSION OF POSSIBLE PRIVATE FUNDRAISING INITIATIVE**

**ADDITIONAL PHOTOGRAPHS**

**OTHER OLD BUSINESS**

**NEW BUSINESS**

**DATE OF NEXT MEETING**

**ADJOURN**



## **APPENDIX 4**

### **FY 01-02 ANNUAL REPORT**

### **S.C. Spinal Cord Injury Research Fund**

Duties of Board Chair

## **POSITION DESCRIPTION: SCI FUND BOARD CHAIR**

**Elected annually by a quorum of the full Board, the responsibilities of the Spinal Cord Injury (SCI) Research Fund Board Chair shall be to lead, assist, and represent the full Board in effective and efficient planning, implementation, and administration of the Fund. Specific duties of the Board Chair shall include:**

- Preside at all meetings and coordinate the functions and activities of the Board.
- In consultation with other Board members, set meeting dates and agendas for all regular and special call meetings.
- Serve as direct liaison between the Board, the President and Provost of the Medical University of South Carolina (Fund administration), the Office of the South Carolina Governor (Fund Board appointing authority), and the state Legislature (Board/Fund authorizing authority).
- Interaction with the Fund staff on a regular basis between Board meetings as may be required to facilitate the staff carrying out its Board assigned duties and responsibilities, consulting with the full Board on new responsibilities or issues that may arise.
- Official media spokesperson for the Board/Fund, delegating as/when appropriate to Board colleagues.
- Presentation of periodic Fund progress reports and plans to the Governor and the Legislature.
- Moderate the periodic Fund conferences.
- Oversee annual evaluation of Fund staff by the full Board.
- Make sure full Board is updated at least quarterly on all Fund aspects and programs.

*Approved 8/24/01 by the Spinal Cord Injury Research Fund Board*



## **APPENDIX 5**

### **FY 01-02 ANNUAL REPORT**

#### **S.C. Spinal Cord Injury Research Fund**

Duties of Fund Administrator and Scientific Director

## **POSITION DESCRIPTION: SCI FUND ADMINISTRATOR**

**Appointed by and under direction of the Spinal Cord Injury (SCI) Research Fund Board, the Administrator is responsible on a day-to-day basis for organizing, implementing and maintaining all administrative aspects of the Fund. Specific duties shall include:**

- Organize and oversee Fund administrative office which will include:
  1. Secretarial support,
  2. Communications (telephone, FAX, e-mail, regular mail),
  3. Filing systems (administration files, scientific files, fiscal files),
  4. Other support (word processing, photocopying, audiovisual for meetings/conferences, etc.).
- Draft and oversee administration of the annual Fund budget, which will have at least three components: general Fund administration, Fund research projects and proposals, and periodic Fund conferences.
- Draft and oversee administration of Fund fiscal and administrative policies and procedures to insure full accountability and compliance with applicable state of South Carolina laws, rules, and regulations.
- Act as Secretary to the Fund Board which includes:
  1. Drafting meeting agendas,
  2. Organizing/distributing agenda related information packages,
  3. Oversee meeting logistics (location, parking, audiovisual support, meals, refreshments, reimbursals, etc),
  4. Record and draft meeting minutes,
  5. Track/facilitate required rotations of membership terms,
  6. Provide public meeting notices as required under the S. C. Freedom of Information Act.
- Maintain close liaison with the South Carolina Department of Treasury to insure that the Fund is being collected from local levels in a consistent and timely manner.
- Establish and maintain liaison with other State agencies and groups directly relevant to the Fund including the Head and Spinal Cord Injury Division of the S. C. Department of Disabilities and Special Needs, the S. C. Department of Health and Environmental Control, the S. C. Department of Vocational Rehabilitation, the S.C. Department of Health and Human Services (Medicaid waiver programs), the South Carolina Spinal Cord Injury Association (formerly South Carolina Disabilities Research Commission), and the other research universities in South Carolina.

- Organize and implement Fund mailouts which include:
  1. Initial solicitation for Fund mailing lists (750+),
  2. Board meeting notices and agenda background materials,
  3. Periodic Requests for Proposals (RFPs),
  4. Ongoing general informational pieces to media, organizations, institutions, and individuals.
  
- Provide staff support to the Fund Scientific Director and the Scientific Review Committee which includes:
  - Receipt and transmittal for scientific review of project proposals,
  - Preparation of reports, recommendations, findings,
  - Preparation and distribution of project proposal scoring/rating tools,
  - Awarding of project funds and ongoing monitoring/evaluation of project activities and expenditures.
  
- Oversee Fund public relations and informational activities to include regular media articles/reports and periodic information dissemination to individuals, organizations, and institutions on the Fund's general mailing lists.
  
- Draft periodic Fund progress reports for finalization by the Board — including an annual report of scientific and administrative accomplishments and plans to be presented to the Governor and the Legislature.
  
- Help organize and implement periodic conferences sponsored by the Fund which will include scientific sessions as well as sessions for the public, SCI survivors/families, and relevant state agencies and institutions.
  
- Additional duties, responsibilities, initiatives, and activities as assigned by the Board in helping to more effectively and efficiently administer the Spinal Cord Injury Research Fund.

*Approved 8/24/01 by the Spinal Cord Injury Research Fund Board*

## **POSITION DESCRIPTION: SCI FUND SCIENTIFIC DIRECTOR**

**Appointed by and acting under the direction of the Spinal Cord Injury (SCI) Research Fund Board, the Scientific Director is responsible for the day-to-day organization, implementation, and maintenance of all scientific aspects of the Fund. This shall include:**

- Ongoing oversight of Fund administration to assure scientific integrity and accountability of all scientific activities.
- Drafting for Board finalization all scientific protocols and Requests for Proposals (RFPs) based on the Fund goals and objectives as set and periodically updated by the Board.
- Finalizing all scientific review criteria and project proposal rating tools/methodologies.
- Annually recommending to the Board proposed areas of research priority/emphasis based upon current needs and latest developments in spinal cord research.
- Advise the Board on all other aspects and issues pertaining to scientific review and the granting process.
- Organize and oversee the scientific review process for Fund project applications including:
  1. Preliminary review of all proposals to screen out insufficient applications and refer remainder on for full scientific review,
  2. Receive nominations, screen, and recommend to the Board all scientific reviewers and review committees,
  3. Assign proposals for review to reviewers and/or committees,
  4. Chair/record meetings of all scientific review committees,
  5. Present findings/recommendations of reviewers and committees to the Board,
  6. Monitoring of all project reviews to insure integrity.
- Ongoing monitoring and evaluation of all funded projects, including coordination of formal periodic evaluations by reviewers and/or committees for purposes of continued funding beyond initial periods of support.
- Nominate to the Board and coordinate a Fund Scientific Advisory Committee of national experts to provide periodic evaluation and overview of overall Fund activities and direction.
- Liaison for the Fund with all Federally required review processes and procedures at MUSC that may be applicable to Fund proposed or approved projects such as the Institutional Review Board for Human Research.
- Drafting scientific portions of the periodic Fund reports to the Governor and Legislature.

- Help organize and maintain Fund information base on relevant SCI research ongoing throughout the state of South Carolina.
- Organize and moderate the scientific portion of periodic Fund supported conferences including lists of scientific invitees and participants over and above the Principal Investigators of ongoing Fund supported projects.
- Additional duties, responsibilities, initiatives, and activities as assigned by the Board in helping to move effective and efficiently administer the scientific aspects of the Spinal Cord Injury research Fund.

*Approved 3/22/02 by the Spinal Cord Injury Research Fund Board*





**APPENDIX 6**

**FY 01-02 ANNUAL REPORT**

**S.C. Spinal Cord Injury Research Fund**

**Fund Budgets**

## BUDGET FISCAL YEAR 01-02, SCI RESEARCH FUND

|                                   |   |                     |
|-----------------------------------|---|---------------------|
| <b>I. PROGRAM ADMINISTRATION</b>  |   | <b>45,827 +</b>     |
|                                   | <b>PERSONNEL (Incl. F. B. at avg. of 22.57%)</b>  | <b>42,327</b>       |
|                                   | Scientific Director (5%), Administrator (20%),<br>and Staff Assistant (20%)   |                     |
|                                   | <b>BOARD MEETING TRAVEL/MEALS/REFRESHMENS</b>   | <b>500 Avg.</b>     |
|                                   | 3 Board Members 255 mi. twice year @ .345 mi = \$ 260   |                     |
|                                   | Meals at official meetings and while traveling (\$ 20x3x2) = \$ 120   |                     |
|                                   | Meals for other Board Members (\$ 14x4x2) = \$ 120  |                     |
|                                   | <b>CONSULTANT FEES</b>  | <b>3,000 +</b>      |
|                                   | Scientific Review Committee<br>(6 members @ \$ 500 each per review cycle)   |                     |
|                                   | <b>OTHER</b>  | <b>1,000 +</b>      |
|                                   | Printing stationery/envelopes (first run of 2,500) + \$ 500   |                     |
|                                   | Printing letters, RFPs, Guidelines, insert card, report = \$ 200  |                     |
|                                   | Mail processing (Target Mai)/Postage of initial 750 mailout = \$ 200  |                     |
|                                   | Other mailing throughout the year (RFPs, reports) = \$ 100  |                     |
|                                   | Telephone/e-mail?   |                     |
|                                   | Photocopy?  |                     |
|                                   | Office supplies?  |                     |
| <b>II. FUND RESEARCH PROJECTS</b> |   | <b>944,173</b>      |
|                                   | This will be determined by the amount of funds on hand during each review cycle minus any administration and conference costs as well as any funds already encumbered for ongoing projects. The figure used here is based on some very rough early estimates of \$ 1 Million total annual DUI collections for the period. |                     |
| <b>III. ANNUAL CONFERENCE</b>     |   | <b>10,000</b>       |
|                                   | Costs will include meeting room rentals, audiovisual support, meals, staff support for registration, printing of papers and proceedings, travel/lodging/fees for out-of-town presenters, etc.   |                     |
|                                   | <b>TOTAL 01-02 SCI ANNUAL BUDGET:</b>   | <b>\$ 1,000,000</b> |

*Approved 8/24/01 by the Spinal Cord Injury Research Fund Board*

## FISCAL YEAR 02-03 BUDGET, SCI RESEARCH FUND

(Approved 5/31/02, 6/21/02, and 8/15/02)

|   |           |                           |
|---|-----------|---------------------------|
| <b>I. PROGRAM ADMINISTRATION</b>  | <b>\$</b> | <b><u>38,836</u></b>      |
| <b>PERSONNEL (Incl. F. B. at avg. of 26.6%)</b>   |           | 34,436                    |
| Scientific Director (5%), Coordinator (20%), and Staff Assistant (20%)  |           |                           |
| <b>BOARD MEETING TRAVEL/MEALS/REFRESHMENTS</b>  |           | 900                       |
| Avg. 3 Board 300 mi. three times year @ .345 mi= \$ 300   |           |                           |
| Meals at official meetings and while traveling (\$ 20x3x3)=\$ 180   |           |                           |
| Meals/Refreshments for Board Meetings (\$ 14x10peoplex3)=\$ 420   |           |                           |
| <b>OTHER</b>  |           | 3,500                     |
| Printing stationery/envelopes (second run of 2,500) = \$ 500  |           |                           |
| Printing letters, RFPs, Guidelines, insert card, report = \$ 200  |           |                           |
| Printing first Annual Report = \$ 1,500   |           |                           |
| Mail processing (Target Mail/Postage of any major mailouts = \$ 200   |           |                           |
| Other mailing throughout the year (RFPs, reports) = \$ 100  |           |                           |
| Meeting support materials (visuals/photos) = \$ 500   |           |                           |
| Photocopy and basic office supplies = \$ 500  |           |                           |
| <b>II. RESEARCH DEVELOPMENT</b>   | <b>\$</b> | <b><u>37,852</u></b>      |
| <b>PERSONNEL (Includes F.B. at average of 26.6%)</b>  |           |                           |
| Scientific Director (20%) and Associate Director (5%)   |           | 27,852                    |
| <b>ANNUAL CONFERENCE SCIENTIFIC SESSION</b>   |           | 10,000                    |
| <b>III. FUND ROUND 1 RESEARCH PROJECTS</b>  | <b>\$</b> | <b><u>720,511</u></b>     |
| SCIRF 0202 McGinty  |           | 85,466                    |
| SCIRF 0302 Haines   |           | 123,349                   |
| SCIRF 0602 Middaugh   |           | 91,990                    |
| SCIRF 0802 Wilson   |           | 89,978                    |
| SCIRF 1102 Hickman  |           | 100,252                   |
| SCIRF 1202 Short  |           | 29,476                    |
| SCIRF 1302 Krause   |           | 125,000                   |
| SCIRF 1402 Kindy  |           | 75,000                    |
| <b>IV. FUND ROUND 2 RESEARCH PROJECTS</b>   | <b>\$</b> | <b><u>1,015,801</u></b>   |
| Funds available during year for a Second Round of Research Projects towards year end. If not awarded then, will be carried over to FY 03/04 |           |                           |
| <b>TOTAL 02-03 SCI RESEARCH ANNUAL BUDGET :</b>   | <b>\$</b> | <b><u>1,813,000 *</u></b> |

**\* NOTE: SCIR FUND 2002/2003 BUDGET ASSUMPTIONS ARE AS FOLLOWS:**

|  |        |                   |
|--|--------|-------------------|
| <b>Total DUI Collections as of 7/02:</b>             |        | <b>\$ 983,000</b> |
| <b>Minus Expenditures for 2001/2002:</b>             |        | <b>-40,000</b>    |
| Personnel  | 36,000 |                   |
| All Other  | 4,000  |                   |
| <b>Beginning Budget for 2002/2003</b>                |        | <b>943,000</b>    |
| <b>Estimated Additional 12 mos. DUI Collections:</b> |        | <b>780,000 **</b> |
| <br>   |        |                   |
| <b>TOTAL 2002/2003 BUDGET:</b>                       |        | <b>\$ 870,000</b> |

**\*\* NOTE: For budget assumption purposes, average monthly DUI collections have been projected at \$72,500 over the next 12 months. Based on the trend so far, this might well be considered a minimal figure and the amounts could go higher. All figures are also rounded.**



**APPENDIX 7**

**FY 01-02 ANNUAL REPORT**

**S.C. Spinal Cord Injury Research Fund**

**Fund By-Laws**

## **BY-LAWS: SPINAL CORD INJURY RESEARCH FUND BOARD**

**March 22, 2002**

**BACKGROUND/HISTORY:** The South Carolina Spinal Cord Injury Research Fund (SSCIRF) was established in 2000 by amendment (Bill S54 44-38-510) to Section 2, Chapter 38, Title 44 of the 1976 S.C. Code. Signed by the Governor on July 20, 2000, this legislation:

- Authorized the new South Carolina Spinal Cord Injury Research Fund.
- Specified that it would be derived from a new surcharge of \$ 100 on each driving under the influence (DUI) conviction in South Carolina.
- Established the Spinal Cord Injury Research Board (Board) to administer the Fund.
- Attached the Board to the Medical University of South Carolina (MUSC) for meeting, staff, and administrative purposes.
- Specified that all operating, personnel, and administrative costs and expenses of the Spinal Cord Injury Research Board and its programs must be paid for by the Fund.
- Instructed that the collecting municipal and county governments pay collections on a monthly basis to the State Treasurer where they would be placed in a separate account to be used for Spinal Cord Research by the Medical University of South Carolina.
- Permitted the collecting municipal and county governments to deduct from collections all one-time operating and administrative costs related to computer upgrades or programming.

**CLASSIFICATION/TERMS OF APPOINTMENT:** The Spinal Cord Injury Research Fund Board is a standing State of South Carolina Board. This Charter shall be periodically reviewed and updated as appropriate by the Board.

**FORMAL CHARGES:** The South Carolina Spinal Cord Injury Research Board is charged with promoting research to develop better understanding of causes and effective treatment strategies for paralysis, sensory loss, and other consequences of spinal cord injury and disease. The primary objectives of this Board are:

- 1) To advance knowledge of spinal cord injury, repair, and regeneration within the South Carolina research community by encouraging physicians and scientists to apply their expertise to the spinal cord injury field.
- 2) To foster collaborative interdisciplinary approaches to spinal cord injury research among South Carolina hospitals, rehabilitative centers, research universities, and interested organizations.

- 3) To nurture the next generation of spinal cord injury researchers through support of young scientists and post-doctoral fellows.
- 4) To improve the well being and quality of life of individuals with spinal cord injury by research programs that prevent or treat the secondary conditions and consequences of spinal cord injury.
- 5) To set budgets and administer funds directed for spinal cord injury research as mandated by the South Carolina Legislative Act and to assure the highest quality of research and commitment by the investigators.

The Spinal Cord Injury Research Board shall award investigators with research grants that promote innovative and potentially ground breaking research, not necessarily to provide long term support. The expectation is that funded researchers and research groups will be able to apply for additional research projects and awards to more widely develop their individual projects and laboratories.

Initial priorities and focus of funding will be:

- 1) Translating basic and preclinical findings into clinical applications.
- 2) Studying strategies to promote growth and survival at cellular level.
- 3) Providing efficacy of drugs and other interventions to prevent or reduce secondary injury and to provide insight to the mechanisms causing this progressive damage.
- 4) Exploring the role of tissue transplantation in restoration of spinal cord function.
- 5) Studying other disorders of spinal cord on brain that are reasonably expected to produce new insight into the mechanism or treatment of dysfunction following spinal cord injury.
- 6) Defining anatomical, pathophysiological, inflammatory, and neurochemical characteristics of spinal cord injury or disease in well defined animal models.
- 7) Elucidating biological and physical mechanisms that improve functions compromised by spinal cord injury, including bladder and bowel dysfunction, sexual dysfunction, chronic pain, and uncontrolled spasticity.
- 8) Developing strategies to prevent or treat secondary complications from injury or disease of the spinal cord.
- 9) Developing innovative rehabilitative strategies, services, or priorities to promote recovery and function following spinal cord injury.

- 10) Developing public education programs to help decrease the occurrence of spinal cord injury by safety education, and better safety practices, and decreased alcohol use as a contributing factor.
- 11) Developing educational programs for the injured and their families.

**REPORTING CHANNELS/PROCEDURES:** The Board shall report to the Governor and the Legislature of the State of South Carolina.

**MEMBERSHIP:** The Board shall be comprised of seven (7) members who must be residents of the State of South Carolina and appointed on the basis of the following qualifications: two members who are medical doctors from the staff or faculty of MUSC; two members who are medical doctors specializing or significantly engaged in treatment of spinal cord injuries in South Carolina; two members who have a spinal cord injury or who have a family member with a spinal cord injury; and an at-large member who is a medical doctor and a member of the South Carolina Medical Association. All terms of Board members shall be four years with exception of staggering the initial appointments to insure turnover with continuity: two year terms for one of the MUSC faculty/staff, one of the S.C. specialist doctors, and one of the spinal cord survivors or family members; and an initial three-year term for the at-large doctor. At the end of a term, a member shall continue to serve until a successor is appointed and qualifies. A member who is appointed after a term has begun shall serve the rest of the term and until a successor is appointed and qualifies. A member who has served two consecutive four-year terms shall not be reappointed for two years after completion of those terms.

**QUORUM:** A majority of the membership of the Board shall constitute a quorum.

**MEMBERSHIP APPOINTMENT:** All members shall be appointed in writing by the South Carolina Governor based on nominations submitted by the President of MUSC.

**OFFICERS:** The Board shall elect, by majority vote, a Chairman who shall be the presiding officer of the Board, preside at all meetings, and coordinate the functions and activities of the Board. The Chairman shall be elected or reelected by the Board each calendar year. The Board shall appoint a Project Administrator who shall act as Board Secretary. The Board may appoint other officers as it deems necessary to carry out its duties.

**COMMITTEES:** The Board shall routinely appoint such ad hoc study groups, task forces, and committees as are deemed necessary in carrying out its responsibilities and goals.

**FREQUENCY OF MEETINGS:** Meetings of the Board shall be held at least twice a year but may be held more frequently as deemed necessary, subject to call by the Chairman or by request of a majority of the Board members.

**NOTICE OF MEETINGS:** Written reminders of all scheduled meetings shall be provided to all members at least two weeks prior to the time scheduled. Call meetings will require telephone and/or e-mail messages to all members, which will be given as far in advance as possible, and will be submitted by either the Chair or Secretary. In addition, appropriate public notice of each meeting will be given in full compliance with current applicable provisions of the State Freedom of Information Act.

**MEETING AGENDA SUPPORT MATERIAL:** A written agenda and appropriate background support materials may be attached to the written notice of the meeting.



**BOARD MINUTES:** Summary minutes, including all actions and decisions, shall be kept by the Secretary for all Board meetings and distributed within a month to each member.

**BOARD REPORTS:** The Board shall summarize its activities and plans in writing annually for reports to the Governor and Legislature as well as distribution to others who may have an interest. Other reports will be prepared and appropriately distributed as ongoing activities dictate.

**STAFF SUPPORT:** The Board shall be attached to the Medical University of South Carolina for meetings, staff, and administrative purposes. Duties and responsibilities of MUSC shall include:

- 1) Assist the Board in administering the Fund and its programs to achieve the goals and objectives set by the Board.
- 2) Assist the Board in organizing, implementing, and overseeing procedures and processes to solicit, review, fund, and administer grants and other initiatives of the Fund.
- 3) Receive, disburse, and be fully accountable under applicable State laws for all monies placed in the Fund and subsequently expended by the Fund.
- 4) Assist the Board in identifying and setting up effective communications channels with all relevant organizations, agencies and individuals throughout the State who should be kept currently aware of the priorities and opportunities of the Fund.
- 5) Help organize and staff regular meetings of the South Carolina Spinal Cord Injury Research Board to conduct Board business.
- 6) Carry out any other directives or initiatives of the Board.
- 7) Have performance evaluated annually by the Board.

**LIABILITY OF BOARD MEMBERS:** No member of the Board shall be subject to any personal liability or accountability for any loss sustained or damages suffered on account of any action or inaction of the Board.

**OTHER FINANCIAL STIPULATIONS OF ENABLING LEGISLATION:** Board members shall be reimbursed for ordinary travel expenses, including meals and lodging, incurred during the performance of their duties. Nothing in this article prohibits the Board from allocating spinal cord research projects to institutions other than MUSC as long as the receiving institution shares the research statistics with each medical institution in the State. All Fund expenditures shall be made in accord with applicable South Carolina policies, procedures, and laws concerning the expenditure of State funds.

**AMENDMENT TO BY-LAWS:** Any amendment(s) to these By-Laws require vote from a majority of Board members at an official Board meeting based upon a written draft of proposed amendment(s) submitted to all Board members at least one month in advance.

**THIS CHARTER OF THE SPINAL CORD INJURY RESEARCH FUND BOARD WAS ADOPTED BY THE BOARD ON MARCH 22, 2002 AND IS EFFECTIVE AS OF THAT DATE.**

*Brian G. Cuddy, M.D.*

**Chairman**



**APPENDIX 8**

**FY 01-02 ANNUAL REPORT**

**S.C. Spinal Cord Injury Research Fund**

Fund Orientation Slides Available

**Following is a listing of the slides prepared for the Spinal Cord Injury Research Fund Board to use in informational/orientation sessions for public and professional groups. The texts of several slides are also presented here if the information is not already contained elsewhere in this Annual Report or its Appendices.**

## **# 1 — SC SCI PARAMETERS**

- Average annual SC incidence rate of TSCI is 67/1,000,000.
- Rate 22% higher than national average of 55/1,000,000.
- About 12% of the TSCI injuries have TBI.
- 11% of the TSCI injuries are complete (ASIA=A).
- Another 11% have sensory function only (no motor function preserved below the neurological level up to the sacral segment).
- 66% of the TSCI occur at prime of lives (age 20-54).
- 3/4th of injuries occur among males.
- All races are equally affected.
- Highest average acute care charge of \$ 85,256 is incurred by those with complete paralysis (ASIA=A).
- Lowest is \$ 27,248 incurred by those with recoverable TSCI (ASIA=E).
- Overall acute care charge of TSCI (Acute care hospital fee) from 1990-2000 is \$ 111,409,136 which indicates an annual acute care charge of \$ 10,000,000 is expended for acute hospital care of TSCI only.
- Using the willingness-to-pay method of cost analysis, the total economic impact of TSCI in SC is estimated at \$ 25,765,812 per annum in 1997-dollar values.
- 58% of the TSCI are the result of motor vehicle injuries.

## # 2 — CHRONOLOGY OF SCI RESEARCH FUND

### 1998/1999

---

- \* Dr. Brian Cuddy contacted SC Legislature about possibility of establishing a SC Spinal Cord Injury (SCI) Research Fund modeled on New Jersey with revenue through DUI surcharges.
- \* Legislation drafted under leadership of Representative Fleming (Union County), Representative Limehouse (Charleston) and Senator Ravenel (Charleston).

### 2000

---

- \* Legislation introduced by Limehouse/Fleming and subsequently spearheaded by Fleming.
- \* Legislation passed and signed by the Governor on July 20.
- \* MUSC began gathering nominees for the Fund Board to recommend to the Governor as required under the law.

### 2001

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- \* In January, local governments began assessing and collecting the \$ 100 per DUI conviction surcharge.
- \* In February, the seven final MUSC nominees of President Greenberg were hand carried to the Governor's Office.
- \* On March 8 the seven nominees were appointed by the Governor.
- \* First meeting of SCI Research Fund Board held on 6/8/01. Cuddy elected Chair, Coleman appointed Administrator, and Fund balance stood at \$ 125,750 as of end of May.
- \* Fund office and administrative support structure set up at MUSC with drafting of all policy/procedure documents started.
- \* Second meeting of SCI Research Fund Board held on 8/24/01. Appointed Kalivas as Scientific Director, approved first annual budget, and Fund balance stood at \$ 230,080 as of end of July.
- \* Initial mailing lists developed and Requests for Proposals for a first round of projects sent out on December 15. Fund balance at this time exceeded \$ 468,000.

**2002** -----

- \* 12 first round proposals received by the March 15 deadline.
- \* Third meeting of the SCI Research Fund Board held on 3/22/02 to include a public forum segment with State leaders.
- \* Fourth meeting of SCI Research Fund Board held on 5/31/02 and reviewed 12 project proposals submitted for funding as well as 2 special recruitment requests.

### **#3 — SPINAL CORD INJURY RESEARCH FUND BOARD**

**NOTE:** See Appendix 2.

### **#4 — SCIRF ENABLING LEGISLATION**

**Amendment (Bill S54 44-38-510) to Section 2, Chapter 38, Title 44 of the 1976 S.C. Code was ratified on July 20, 2000 and:**

- Authorized new SC Spinal Cord Injury Research Fund.
- Provided from \$ 100 surcharge on each DUI conviction.
- Administered by new Spinal Cord Injury Research Board.
- Attached to MUSC for staff and administrative purposes.
- Authorized coverage of operating and administrative costs.
- Balance of Fund to be used for SCI research projects.

### **#5 — SCIRF BOARD CHARGE**

**Promoting research to develop better understanding of causes and effective treatment strategies for paralysis, sensory loss, and other consequences of spinal cord injury and disease.**

## #6 — PRIMARY FUND OBJECTIVES

NOTE: See Appendix 9. Primary Fund Objectives included in the RFP.

## #7 — INITIAL FUNDING PRIORITIES & FOCUS

NOTE: See Appendix 9. Primary Fund Objectives included in the RFP.

## #8 — TIMELINE FOR RESEARCH PROTOCOL/RFP

|                    |   |
|--------------------|---|
| <b>2001</b>        | -----   |
| <b>OCTOBER</b>     | Mail draft protocol/RFP and proposed Scientific Review Committee to Board for final approval.                   |
| <b>OCTOBER</b>     | Complete mailing list for RFPs and Scientific Reviewers based on comprehensive mail poll.                       |
| <b>DECEMBER 15</b> | Mail RFPs .   |
| <b>2002</b>        | -----   |
| <b>FEBRUARY</b>    | Mail letters soliciting Scientific Reviewer volunteers/nominations.   |
| <b>MARCH 15</b>    | Deadline for receipt of all proposals and volunteers/nominees for Scientific Reviewers.                         |
| <b>MARCH 22</b>    | Board meets for update on the Fund including number of proposals received and approval of Scientific Reviewers. |
| <b>MAY 31</b>      | Board reviews findings/recommendations of Scientific Review and makes final decisions.                          |
| <b>JULY 1</b>      | Initial round of projects funded with Fund resources estimated to be approaching \$ 1 million.                  |



**APPENDIX 9**

**FY 01-02 ANNUAL REPORT**

**S.C. Spinal Cord Injury Research Fund**

First Round Request For Proposals (RFP)



# **RESEARCH ON SPINAL CORD INJURY (SCI)**

## **Request For Proposals (RFP)**

Issued by the Spinal Cord Injury Research Fund Board

Judge Charles L. Allen, Brian G. Cuddy, MD(Chair), David Griesemer, MD, Terry Peacock,  
Phanor L. Perot, MD, PhD, David L. Shallcross, MD, and W. Daniel Westerkam, MD

**Administered by the Medical University of South Carolina (MUSC)**

**Date of Release: December 15, 2001**

**Deadline for Submission: March 15, 2002**

**BACKGROUND:** Amendment (Bill S54 44-38-510) to Section 2, Chapter 38, Title 44 of the 1976 S.C. Code was ratified on July 20, 2000 and authorized the new South Carolina Spinal Cord Injury Research Fund provided from a \$ 100 surcharge on each Driving Under the Influence (DUI) conviction. The Fund is administered by new Spinal Cord Injury Research Board appointed by the Governor, and was attached to MUSC for staff and administrative purposes. The law authorizes Fund use to cover basic operating and administrative costs, but directed that the balance be provided for spinal cord injury research projects.

The Board set the following primary Fund objectives: 1). Advance knowledge of SCI injury repair and regeneration within the SC research community by encouraging physicians and scientists to apply expertise to SCI field. 2). Foster collaborative interdisciplinary approaches to SCI research among SC hospitals, rehabilitative centers, research universities, and interested organizations. 3). Nurture next generation of SCI researchers through support of young scientists and post-doctoral fellows. 4). Improve well being and quality of life of individuals with SCI by research programs that prevent or treat the secondary conditions and consequences of SCI. 5). Set budgets and administer funds for SCI research as mandated by the SC Legislative Act, and assure highest quality of research and commitment by investigators.

It also set initial research funding priorities and focus: 1). Translating basic and preclinical findings into clinical applications. 2). Studying strategies to promote growth and survival at cellular level. 3). Assuring efficacy of drugs or other interventions to prevent or reduce secondary injury and to provide insight to the mechanisms causing this progressive damage. 4). Exploring the role of tissue transplantation in restoration of spinal cord function. 5). Studying other disorders of spinal cord or brain that are reasonably expected to produce new insight into the mechanism or treatment of dysfunction following spinal cord injury. 6). Defining anatomical, pathophysiological, inflammatory, and neurochemical characteristics of spinal cord injury or disease in well defined animal models. 7). Elucidating biological and physical mechanisms that improve functions compromised by spinal cord injury, including dysfunction, chronic pain, and uncontrolled spasticity. 8). Developing strategies to prevent or treat secondary complications from injury or disease of the spinal cord. 9). Developing innovative rehabilitative strategies, services, or priorities to promote recovery and function following spinal cord injury. 10). Developing public education programs to help decrease the occurrence of spinal cord injury by safety education, better safety practices, and decreased alcohol use as a contributing factor. 11). Developing education programs for the injured and their families.

**REQUEST FOR PROPOSALS:** The South Carolina Spinal Cord Injury Research Board invites grant and contract applications for research on all aspects of spinal cord injury (SCI) in an effort to develop better understanding and ultimately treatment for paralysis and other consequences of spinal cord injury and disease. This is the first periodic call for grants that outline innovative and potentially groundbreaking research. It is estimated that \$ 1,000,000 will be available for projects funded in response to this request.

SCI is a serious and seldom reversible cause of disability. Often traumatic in origin, it may also result from inflammatory, neoplastic, developmental, or rarely infectious causes. The consequences of SCI are legion, including paralysis of legs and arms, even muscles of respiration; loss of sensation and autonomic control; chronic pain; impairment of bowel, bladder, and sexual dysfunction; metabolic disorders such as hypercalcemia; muscle spasticity with contractures of joints, fractures, and heterotopic ossification; complications such as decubitus ulcers, uncontrolled blood pressure, and frequent infections. Victims of SCI typically lose the ability to function productively in society because of extraordinary demands of their medical care, limitations in rehabilitation resources after profound loss of mobility, and psychosocial difficulties associated with their severe impairment and total dependency upon others. The loss to spouses and children of SCI victims is substantial and the cost of care to families and the residents of South Carolina is extraordinary and ongoing. The long-term goal of this research initiative is to minimize the risk and incidence of SCI, interrupt or reverse the process of SCI, and improve the quality of life for residents of South Carolina with SCI.

Areas of potential research interest include: basic neurobiology, including regeneration of cells and axons, modulation of inflammatory and destructive processes, prevention of injury-induced neurotoxicity or secondary injury; pre-clinical studies, including refinement of animal models of SCI; translation of pre-clinical findings into treatment, including pharmacological trials, surgical approaches, and previously unexplored treatments; clinical issues, including diagnostic assessment and monitoring, relationship to other spinal cord disorders and psychological disorders; outcomes of rehabilitation, including therapies (prosthetic, physical, occupational, speech/language, recreational), quality of life (technological solutions, functional improvement), and attendant care; epidemiology, including factors affecting incidence, availability and quality of SCI care in South Carolina; education and prevention, including education curriculum for patients and families in appropriate and adequate SCI care (classroom, career), community (prevention of alcohol-related injury, opportunities for therapy and rehabilitation), and health care providers (curriculum at South Carolina colleges and universities, professional education).

**RESEARCH GUIDELINES:** A broad range of applications are encouraged. Examples of development and research programs that will be considered include:

- 1) Pilot Projects. Obtaining significant extramural funding for creative, high-impact research or treatments may be hampered by lack of resources to obtain the preliminary data or products necessary to demonstrate the value of the hypotheses. Grants will be made available to fund such novel and innovative research that significant extramural funding and/or product development is subsequently probable.
- 2) Collaborative Projects. Proposals requiring cooperation between professionals, specialties, laboratories, or institutions may require additional resources for larger projects or coordination of effort. Grants will be made available to fund such collaborative efforts if innovative efforts or productive new relationships develop.
- 3) Research of High Value to the Citizens of South Carolina. Certain research projects may be of demographic or cultural value specific to the State of South Carolina and may not be easily justified on a national research agenda. Proposals of such unique benefit to South Carolina will be considered.
- 4) Assist in Recruiting Clinicians, Educators, or Researchers into the State of South Carolina. Under exceptional circumstances monies may be made available to assist in attracting nationally recognized clinicians, educators or researchers in the field of SCI into state institutions.

**ELIGIBILITY AND TERMS OF SUPPORT:** Applications will be accepted from clinicians, therapists, educators, and scientists in South Carolina who have a terminal professional degree in their field and, in the case of research involving human subjects, have access to an Institutional Review Board. This includes, but is not limited to, faculty members of research and educational institutions throughout the state.

**FUNDING:** Grant or contract support will be awarded initially for 18 months, with no guarantee of renewal. Further funding will depend on progress reports at 6-month intervals that include evidence of productivity, with consideration for renewal of projects that show progress or significant promise on re-submission. Reasonable amount of funds for support of the Principal Investigator's salary will be considered, but should not exceed 20% of the total requested budget. Grant or contract fund uses for equipment are not encouraged, but minor items will be considered provided they are clearly justified as absolutely essential to the successfully conduct of proposed research. Requests for travel should be focused on development of networking necessary for the conduct of research. The Spinal Cord Injury Research Fund does not provide support for indirect costs and any such related costs essential to the proposed research should be included in the direct cost budget request.

**TIMEFRAMES:** There will be at least one call for proposals annually. The review of all proposals will be completed within 60 days following the grant submission deadline. The deadline for applications in response to this Request for Proposals is Friday, March 15, 2002, at 5:00 PM. Money will be made available within 30 days following a recommendation for funding by the Review Committee and approval by the South Carolina SCI Research Board.

**REVIEW PROCESS:** Proposals will be reviewed by committees of reviewers approved by the Spinal Cord Injury Research Fund Board as drawn from a mailing list of volunteers as well as those recommended by knowledgeable peers. One review committee will consider basic science or pre-clinical proposals, and another review committee will consider applied or clinical proposals. Investigators will be asked to submit the names of two (2) reviewers qualified to review their proposals, and these individuals may be selected as ad hoc reviewers. Each member of the Review Committees will have or have had a national competitive research award. Grants will be scored in a manner similar to an NIH grant review committee where 100 is the best possible score and 500 is the lowest score. Two reviewers will be assigned to each grant and all members of the appropriate review committee present for the review will have an opportunity to vote on each proposal. The Board will consider these reviews and scores in making all final award decisions.

**SUBMISSION ADDRESS:** Grant applications should be submitted to Peter Kalivas, PhD, Scientific Director, South Carolina Spinal Cord Injury Research Fund, c/o Fund Administrator, Office of the President, Medical University of South Carolina, 171 Ashley Avenue, Suite 200-A, PO Box 250001, Charleston, SC 29425.

**APPLICATION FORMAT:** The proposal must not exceed 12 pages in length, including the biosketch of the Principal Investigator. Proposals not adhering to page limitation may be refused. The format is similar to that of a National Institutes of Health (NIH) research proposal. Specific elements which should be included are:

- I. Face page (name, position, department, proposal title, abstract)
- II. Response to previous critique (only for renewal applications or resubmission of a previously unfunded proposal – maximum of 1 extra page)
- III. Specific aims

- IV.** Value to the State of South Carolina (benefit to the people of the State and/or plans for obtaining extramural funding and/or compatibility with Fund's primary objectives and initial priorities)
- V.** Background and rationale
- VI.** Methods
- VII.** Evaluation strategy (with measurable goals)
- VIII.** References
- IX.** Detailed Budget (with narrative justification)
- X.** Biosketch (abridged NIH format, additional biosketches for each co-investigator should be included, adjusting page limit to accommodate more than one)

**Please submit the original and six copies.**

**REVIEW CRITERIA:** Proposals will be reviewed by the Review Committees according to the following criteria:

1. Originality and significance of the hypothesis or product.
2. Feasibility and adequacy of the proposed research or product.
3. Qualifications and experience of the Principal Investigator and other key personnel. Special consideration will be given to new faculty and individuals less familiar with the extramural funding process.
4. Likelihood of the project ultimately receiving extramural support and/or benefiting the people of the State of South Carolina.
5. Availability of adequate facilities to conduct the proposed project
6. Appropriateness of the budget.
7. Relevance to the Fund's primary objectives and initial priorities as presented in the Background section of this RFP.

**AWARDING OF FUNDS:** Projects will be awarded by grant or contract based upon applicable South Carolina policies, procedures, and laws concerning the expenditure of State funds.

**For Questions or Additional Information: Potential applicants should contact Dr. Peter Kalivas, Scientific Director, South Carolina Spinal Cord Injury Research Fund, at the above address; or by telephone: (843) 792-4400, fax: (843) 792-4423, or e-mail: kalivasp@MUSC.edu.**



## **APPENDIX 10**

### **FY 01-02 ANNUAL REPORT**

### **S.C. Spinal Cord Injury Research Fund**

#### **Project Review Process Overview**

**NOTE: The following is an excerpt from the May 13, 2002 Memorandum to the SCIR Fund Board from the Scientific Director that described the review process.**

Projects were broken down into two groups or committees for review (Clinical Sciences Proposals and Preclinical Sciences Proposals) with primary, secondary, and tertiary reviewers assigned to each project.

The scoring of grants was based on the protocol used by the National Institutes of Health. Grants were scored between 100 and 500, with 100 being the better score. The reviewers assigned to each project were asked to recommend a score according to the scale below, and the entire committee voted on each grant.

- 100-200 Outstanding proposal worthy of funding
  
- 201-300 Excellent but with substantive concerns, fund if money is available
  
- 301-400 Decent proposal with potentially fixable problems
  
- 401-500 Little or no merit



## **APPENDIX 11**

### **FY 01-02 ANNUAL REPORT**

#### **S.C. Spinal Cord Injury Research Fund**

Additional Information on Funded Projects



**FIRST ROUND PROJECTS APPROVED  
BY THE SPINAL CORD INJURY RESEARCH FUND BOARD**

**(5/31/02, 6/21/02 and 8/15/02)**

**SCIRF 0202** — Gene Expression Profiling of CNS Regions Implicated in a Mouse Model of Spinal Cord Injury Pain {\$ 85,466 for 18 months}

**P.I.** Jacqueline F. McGinty, PhD  
Professor, Physiology and Neuroscience  
Medical University of South Carolina  
Charleston, SC 29425

**Tel:** (843) 792-9036

**Fax:** (843) 792-4423

**e-mail:** mcginty@musc.edu

**GOALS:** *This project will use an animal model of spinal cord injury and after inducing injury determine the damage-induced changes in expression of genes. Specific brain regions will be characterized for changes in gene expression that are related to spinal cord motor functions and the emotional responses to pain.*

**SCIRF 0302** — Statewide Outcome Assessment for Spinal Cord Injury (SOASCI): Assessing the Implementation and Effectiveness of Methylprednisolone Protocol and Other Outcomes of Spinal Cord Injury In South Carolina {\$ 123,349 for 12 months}

**P.I.** Stephen J. Haines, MD, Professor and Chair  
Department of Neurological Surgery  
Medical University of South Carolina  
Charleston, SC 29425

**Tel:** (843) 792-2422

**Fax:** (843) 792-0468

**e-mail:** hainesj@musc.edu

**GOALS:** *This project will provide definitive analysis of the effectiveness in the use of methylprednisolone in the treatment of spinal cord injury. This project will establish and manage an extensive patient database for citizens of South Carolina.*

**SCIRF 0602** — Assessment and Treatment of Musculoskeletal Pain in the Shoulder Girdle in SCI Through Surface-Recorded EMG and EMG Biofeedback {\$ 91,990 for 18 months}

**P.I.** Susan J. Middaugh, PhD, PT, Professor  
Department of Anesthesia and Perioperative Medicine  
Medical University of South Carolina  
Charleston, SC 29425

**Tel:** (843) 792-2215

**Fax:** (843) 792-2726

**e-mail:** middaugh@musc.edu

**GOALS:** *This project will evaluate the use of shoulder girdles in the treatment of musculoskeletal pain. This instrument is widely used and by assessing involuntary physiological measures the researchers hope to provide more accurate evaluations of this instrument than have been previously obtained.*

**SCIRF 0802** — Spinal Modulation of the Nociceptive Pressor Reflex {\$ 87,978 for 18 months}

**P.I.** Britt Wilson, PhD  
Associate Professor, Pharmacology and Physiology  
University of South Carolina School of Medicine  
Basic Science Building 1  
VA Campus, 3rd Floor, RM D-54  
Columbia, SC 29208

**Tel:** (803) 733-3250

**Fax:** (803) 733-1523

**e-mail:** bwilson@gw.med.sc.edu

**GOALS:** *This study will examine the underlying cellular physiology mediating nociceptive pressor reflexes that are modified by spinal cord injury.*

**SCIRF 1102** — An In Vitro Model of the Reflex Arc as Applied to Spinal Cord Injury {\$ 100,252 for 18 months}

**P.I.** James J. Hickman, PhD  
Hunter Endowed Chair of Biomaterials  
Department of Bioengineering  
Clemson University  
Clemson, SC 29634

**Tel:** (864) 656-7168

**Fax:** (864) 656-4466

**e-mail:** hickman@clemson.edu

**GOALS:** *This study will culture neurons on materials that will permit the establishment of a spinal reflex arc. This project will establish the proper materials for directing spinal cell growth with the goal of determining the best materials to be used in vivo to promote reinnervation of damaged spinal cord.*

**SCIRF 1202** — “**Taking Charge of Your Life**” — Statewide Conference for People With Spinal Core Injuries {\$ 29,476 for 12 months}

**P.I.** Kermit L. Short, Executive Director  
South Carolina Spinal Cord Injury Association  
2009 Hampton Street, Suite A  
Columbia, SC 29204

**Tel:** (803) 252-2198

**Fax:** (803) 376-4156

**e-mail:** 2kermit@bellsouth.net

**GOALS:** *This conference will bring recent information on the existing and future treatments for people suffering spinal cord injury. In addition, it will highlight research generated by funding from this program.*

**SCIRF 1302** — Recruitment Assistance for James S. Krause, PhD as Chair of the Department of Rehabilitative Sciences at MUSC and Scientific Director of the SCI Research Fund {\$ 125,000 for 12 months}

**P.I.** James S. Krause, PhD (and Danielle N. Ripich, PhD)  
Chair, Department of Rehabilitative Sciences  
College of Health Professions  
Medical University of South Carolina  
Charleston, SC 29425

**Tel:** (843) 792-1337

**Fax:** (843) 792-8060

**e-mail:** krause@musc.edu

**GOALS:** *Dr James Krause was recruited in part to be Scientific Director of the SCI program. Thus, he was awarded one-time monies to develop an administrative infrastructure and establish epidemiological databases for spinal cord injuries in South Carolina.*

**SCIRF 1402** — Recruitment Assistance for Mark S. Kindy, PhD as The Admiral Pihl Endowed Chair of Neuroscience at MUSC and Associate Scientific Director of the SCI Research Fund {\$ 75,000 for 12 months}

**P.I.** Mark S. Kindy, PhD (and Peter Kalivas, PhD)  
Admiral Phil Endowed Chair of Neuroscience  
Department of Physiology/Neuroscience  
Medical University of South Carolina  
Charleston, SC 29425

**Tel:** (843) 792-0808 / (843) 792-0559 (Lab)

**Fax:** (843) 792-4423

**e-mail:** kindym@musc.edu

**GOALS:** *Dr. Mark Kindy was recruited in part to be the Associate Scientific Director of the SCI program, and will manage the SCI research pilot program. For this purpose, he was awarded one-time monies to purchase equipment for general use by researchers to evaluate the neurobiology of spinal cord injury.*

## NOTES

**S. C. SPINAL CORD INJURY RESEARCH FUND**

Medical University of South Carolina Administration Building  
171 Ashley Avenue, Suite 200A, PO Box 250001, Charleston, SC 29425

Dr. Brian G. Cuddy, **Board Chair**; Walker Coleman, **Administrator**  
Dr. James Krause, **Scientific Director**; Dr. Mark Kindy, Assoc. **Scientific Director**

**P/** 843-792-2211 **F/** 843-792-1097 **E-mail/** scirfund@musc.edu or colemanw@musc.edu