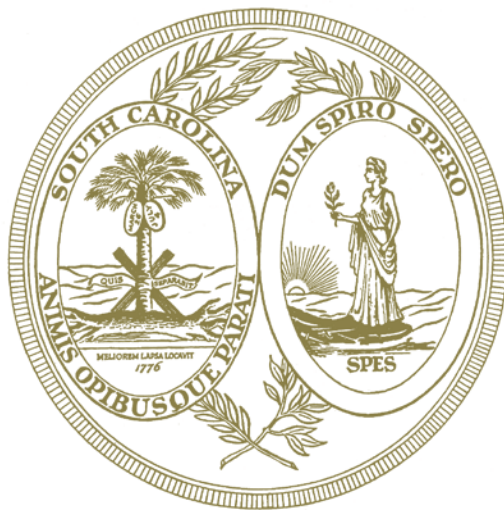




*South Carolina
Spinal Cord Injury
Research Fund*

2006/2007
Annual Report

*South Carolina
Spinal Cord Injury
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2006/2007

Annual Report

South Carolina Spinal Cord Injury Research Fund

Board of Directors



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.
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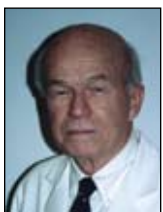


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State of South Carolina

Spinal Cord Injury Research Fund Board

"Dum Spiro Spero - While I breathe I Hope"

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Mark S. Kindy, PhD
Associate Scientific Director

Medical University of South Carolina
Office of the President
P.O. Box 250001
Charleston, SC 29425

December 2007

Dear Friends and Supporters;

On behalf of the Board and staff, it is my pleasure to present this Annual Report for Fiscal Year 06/07 which highlights a sixth year of steady progress and accomplishment in carrying out our mandate of promoting research to develop better understanding causes of, and effective treatment strategies for, spinal cord injuries.

As the year started, we implements a fifth round of research studies and initiatives as well as the special rehabilitation study that has been under discussion and refinement since the December 2003 meeting of state health care leaders to discuss the acute need for sufficient acute care rehabilitation facilities and services in South Carolina. The Board expanded scope of Fund focus and activity in several ways including special initiatives to organize and conduct a statewide interdisciplinary provider conference as well as incentives for the establishment and recruitment of an endowed chair (scientist and clinician-scientist) in the area of spinal cord injury. The latter will be instrumental in attracting and building a future core of expertise and service at levels needed for the people of South Carolina.

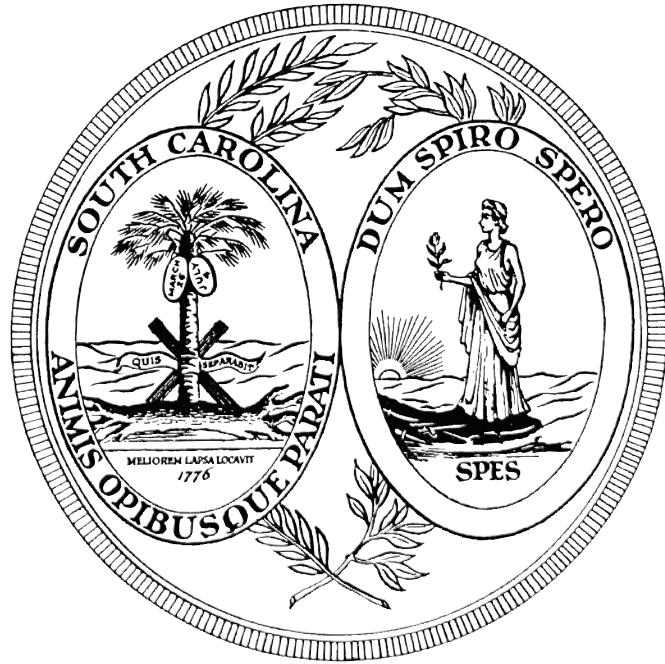
The year also witnessed special activity to directly report on progress as well as discuss our future directions with the State leaders who established and oversee the Fund. In the Fall, members of Board and staff met with Governor Mark Sanford who appoints all Board members based upon recommendations of the President of the Medical University of South Carolina. This was followed by a Winter visit to the South Carolina House of Representatives and subsequent meetings with several individual legislative leaders.

As the year ended, we completed our scientific review of a sixth round of projects; set the initial priorities and timeline for a seventh round; gave preliminary approval to an application for the endowed chair; and received findings of the special Rehabilitation Study. Follow-up on recommendations of this study will be a major priority over the upcoming year, and we have included a study summary in Part III of this Annual Report.

Our Board and staff look forward to an upcoming year of ongoing achievement including finalizing and awarding the endowed chair; awarding the Round 06 projects; conducting Round 07; holding a second Fund sponsored Scientific Conference; and establishing satellite centers as an outgrowth of the Center project funded during Round 04. Special thanks is due to all who have been so interested and supportive—particularly the South Carolina Legislature, the Governor, the Medical University of South Carolina, Clemson University, and the University of South Carolina.

Sincerely,

Brian G. Cuddy, M.D., Board Chair



South Carolina
Spinal Cord Injury Research Fund
Fy 06-07 Annual Report

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PART I

OVERVIEW: {01/01/01 through 06/30/07}

PURPOSE/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.

LEGISLATIVE BACKGROUND: 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 as signed by the Governor on July 20, 2000.

GOVERNANCE: The Fund is governed by a 7 member Board appointed by the Governor upon recommendation of the President of the Medical University of South Carolina. It is comprised of two medical doctors from MUSC; two medical doctors at large specializing or significantly engaged in the treatment of spinal cord injury; two members who have a spinal cord injury or a family member; and one at large medical doctor who is a member of the South Carolina. See **Appendix 1** for detailed Board Member Information.

ADMINISTRATION: The Fund is administered by the Medical University of South Carolina through a part-time Administrator (J. Walker Coleman, MBA) assigned from the Office of the President and two part-time Scientific Directors (Dr. James Krause and Dr. Naren Banik) who oversee all aspects of research development and implementation including setting goals, developing project invitations to meet goals, and scientific review and recommendation to the Board of all such projects received.

AMOUNT COLLECTED: The \$ 100 per DUI surcharges started on January 1, 2001. As of July 2007, the Fund had raised almost \$ 4.6 Million. The average monthly amount collected over the first 78 months has been right at \$ 60,000. **Appendix 2** presents cumulative DUI collection figures.

PRIMARY OBJECTIVES:

- Advance knowledge of SCI injury repair and regeneration within the SC research community by encouraging physicians and scientists to apply expertise to SCI field.
- Foster collaborative interdisciplinary approaches to SCI research among SC hospitals, rehabilitative centers, research universities, and interested organizations.
- Nurture next generation of SCI researchers through support of young scientists and post-doctoral fellows.
- 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.
- 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.

INITIAL FUNDING PRIORITIES:

- Translating basic and pre-clinical findings into clinical applications.
- Studying strategies to promote growth and survival at cellular level.
- Assuring efficacy of drugs or other interventions to prevent or reduce secondary injury and to provide insight to the mechanisms causing this progressive damage.
- Exploring the role of tissue transplantation in restoration of spinal cord function.
- 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.
- Defining anatomical, pathophysiological, inflammatory, and neurochemical characteristics of spinal cord injury or disease in well defined animal models.
- Elucidating biological and physical mechanisms that improve functions compromised by spinal cord injury, including dysfunction, chronic pain, and uncontrolled spasticity. Developing strategies to prevent or treat secondary complications from injury or disease of the spinal cord.
- Developing innovative rehabilitative strategies, services, or priorities to promote recovery and function following spinal cord injury.
- 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.
- Developing education programs for the injured and their families.

REQUESTS FOR PROPOSALS (RFP): There have been six regular rounds as well as two special initiative rounds, and a new round (Round 07) is being developed for a 12/15/07 target issue date:

- ROUND 01--RFP issued 12/15/01 with 3/15/02 deadline. Received 12 proposals and awarded 8.
- ROUND 02--RFP issued 02/01/03 with 5/13/03 deadline. Received 12 proposals and awarded 10. Added were five Funding Mechanisms: Primary Research, Care Access/Delivery, Career Development, NIH Grand Seed, and Research Result Dissemination.
- ROUND 02A (Recruitment)—RFP issued 12/15/03 and remains open for special faculty recruitment initiative. To date no proposals have been received.
- ROUND 02B (Rehabilitation)—RFP issued 02/01/04 for special contract initiative to complete an Assessment of Need and Feasibility of Enhancing Rehabilitation Services in the State of South Carolina. Received 3 bids, but the Board subsequently required additional clarifications and reissued on 12/15/05 with two of the original bidders resubmitting and one awarded Funds.
- ROUND 03—RFP issued 12/15/03 with 03/15/04 deadline. Received 9 regular proposals plus 1 unsolicited special request and awarded 7.
- ROUND 04—RFP issued 12/15/04 with 03/15/05 deadline. Received 9 plus 1 supplemental proposals. Awarded 3 full, and 4 more as initial seed awards.
- ROUND 04 OFF-CYCLE—resulting from Scientific Director recommendations, 6 mid-cycle revised seeds and/or new proposals were received and 5 were awarded.
- ROUND 05—RFP issued 12/15/05 with 03/15/06 deadline. Received 6 with 4 approved (2 contingent upon meeting special conditions).
- ROUND 05A (Bridge Funding)—RFP issued in 05/06/06 and is open. 2 proposals have been funded under this provision (SCIRF 1205 and SCIRF 1004E).
- ROUND 06—RFP issued on 11/15/06 with 01/15/07 deadline. Received 7 with 2 approved followed by later submission and approval of 2 additional projects in response to special Board initiatives.

- ROUND 06A (Endowed Chair)—RFP issued on 08/01/06 with 12/15/06 deadline. Received 1 with it approved conditionally.
- UNSOLICITED EXTENSION/SUPPLEMENTAL—1 received 04/18/07 and conditionally approved (See SCIRF 1004 and SCIRF 1004E below)
- ROUND 07—under draft with updated priorities for a targeted 12/15/07 issue date.

ROUND 01 PROJECTS: A first round of eight (8) research projects was approved and awarded funds on 07/01/02 for periods ranging from 12 to 18 months, several subsequently requesting and receiving no-cost extensions as noted below.

- **SCIRF0202--Gene Expression Profiling of CNS Regions Implicated in a Mouse Model of Spinal Cord Injury** *{\$ 85,466 for 18 months}*
P.I.: Jacqueline F. McGinty, PhD, Professor, Physiology and Neuroscience
 Medical University of South Carolina
- **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, with subsequent 12 month no-cost extension}*
P.I.: Stephen J. Haines, MD, Professor and Chair, Department of Neurological Surgery, Anbesaw W. Selassie, DrPH., Assistant Professor, Department of Biometry and Epidemiology, Medical University 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, with subsequent 6 month no-cost extension }*
P.I.: Susan J. Middaugh, PhD, PT, Professor, Department of Anesthesia and Perioperative Medicine, Medical University of South Carolina
- **SCIRF 0802--Spinal Modulation of the Nociceptive Pressor Reflex** *{\$ 87,978 for 18 months, with subsequent 6 month no-cost extension}*
P.I.: Britt Wilson, PhD., Associate Professor, Pharmacology and Physiology, University of South Carolina School of Medicine
- **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
- **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, SC Spinal Cord Injury Association
- **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, with 5 subsequent no-cost extensions adding 60 months}*
P.I.: James S. Krause, PhD., (& Danielle N. Ripich, PhD.), Chair, Department of Rehabilitative Sciences, College of Health Professions, Medical University of 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, with 3 subsequent no-cost extensions adding 36 months}*
P.I.: Mark S. Kindy, PhD., (& Peter Kalivas, PhD.), Admiral Pihl Endowed Chair of Neuroscience, Department of Physiology/Neuroscience, Medical University of South Carolina

ROUND 02 PROJECTS: A second round of ten (10) projects was approved on July 11, 2003 for periods ranging from 12 to 18 months and awarded funds as of September 1, 2003 or shortly thereafter.

- **SCIRF 0103--“Taking Charge of Your Life”—Continuing Education for People With Spinal Cord Injury** *{\$65,000 for 12 months}*
P.I.: Kermit Short, Executive Director, SC Spinal Cord Injury Association
- **SCIRF 0303--Development of a Laser Cell Micropatterning System for In Vitro Investigation of Adult Stem Cell Spinal Cord Injury Treatment** *{\$149,890 for 18 months, with subsequent 18 month extension and \$ 23,000 supplement—see 0303S under Round 04 below}*
P.I.: Bruce Z. Gao, PhD., Assistant Professor, Department of Bioengineering, Clemson University
- **SCIRF 0403--In Vitro System to Determine Factors Promote Survival and Regeneration of Principal Neurons of the Spinal Cord** *{\$ 74,892 for 18 months}*
P.I.: Peter Molnar, PhD., Research Assistant Professor, Department of Bioengineering, Clemson University
- **SCIRF 0503--Determination of Occurrence and Causes of Death Among South Carolina Residents with Traumatic Spinal Cord Injury** *{\$ 145,000 for 18 months, with subsequent no-cost extension adding 21 months}*
P.I.: Elisabeth Pickelsimer, DA, Research Assistant Professor, Department of Biometry and Epidemiology/ Rehabilitative Sciences, Medical University of South Carolina
- **SCIRF 0603--The Prevalence of Upper Quarter Pain Among Persons with Long-term Spinal Cord Injury** *{\$ 75,000 for 18 months, with subsequent no-cost extension adding 12 month}*
P.I.: David Morrisette, PT, ATC, MTC, PhD., Associate Professor, Physical Therapy Education Program, Department of Rehabilitative Sciences, Medical University of South Carolina
- **SCIRF 0703--Frequency, Severity, ad Risk Factors for Falls and Fall-Related Injuries Sustained by Individuals with Incomplete Spinal Cord Injury** *{\$ 75,000 for 18 months, with subsequent no-cost extension adding 16 month}*
P.I.: Sandra S. Brotherton, PhD., Assistant Professor, Department of Rehabilitative Sciences, Medical University of South Carolina
- **SCIRF 0803--Estrogen Therapy for Spinal Cord Injury** *{\$ 137,592 for 18 months, with 3 subsequent no-cost extensions adding 36 months}*
P.I.: Swapan K. Ray, PhD., Assistant Professor, Department of Neurology, Medical University of South Carolina
- **SCIRF 0903--Therapeutic Use of Minocycline for Spinal Cord Injury** *{\$ 24,988 for 12 months}*
P.I.: Narayan R. Bhat, PhD., Professor, Department of Neurology, Medical University of South Carolina
- **SCIRF 1003--Project M.I.L.E. (Mobile Inclusion Life-Training Evaluation)**
 {\$ 3,000 seed funds for additional conceptual development, never subsequently expended}
P.I.: Michael E Godkin, Director, Disabilities Resource Center, North Charleston
- **SCIRF 1103--Anti-inflammatory Approaches for Spinal Cord Injury** *{\$ 75,000 for 18 months}*
P.I.: Ernest Barbosa, MD, Associate Professor, Departments of Neurology and Pediatrics, Medical University of South Carolina

ROUND 03 PROJECTS: A third round of seven (7) projects was approved on June 25, 2004 for periods ranging from 12 to 24 months and awarded funds as of July 1, 2004 or shortly thereafter:

- **SCIRF 0104—Biomaterial-based Gene Delivery for Spinal Regeneration**
 {\$ 150,000 for 24 Months, with 2 subsequent no-cost extensions adding 18 months}
P.I.: C. Kenneth Webb, Ph.D., Assistant Professor, Department of Bioengineering, Clemson University

- **SCIRF 0204—2005 Statewide Conference for People with Spinal Cord Injury in South Carolina; And Beyond the Walls—Education Outside of Rehabilitation** *{ \$ 60,000 for 12 Months }*
P.I.: Kermit L. Short, Executive Director, South Carolina Spinal Cord Injury Association
- **SCIRF 0304—Home Physical Activity Program for the Promotion of Health and Wellness in Individuals with Spinal Cord Injury** *{ \$ 150,000 for 24 Months, with 2 subsequent no-cost extension adding 16 months }*
P.I.: Holly H. Wise, PT, Ph.D., Assistant Professor, Department of Rehabilitative Sciences, Medical University of South Carolina
- **SCIRF 0604—Patterns of Care for Spinal Cord Injury: South Carolina and the Model Systems** *{ \$ 61,632 for 12 Months, with subsequent no-cost extension adding 6 months }*
P.I.: David E. Murday, Ph.D., Assistant Director, Center for Health Services Policy & Research Arnold School of Public Health, University of South Carolina
- **SCIRF 0704—Telemedicine: A Lifeline for Continuity of Care for Spinal Cord Injury** *{ \$ 3,000 seed funds for additional conceptual development, never subsequently expended }*
P.I.: Tracie L. Mertz, Ph.D., Clinical Psychologist, Neuropsychologist, Roger C. Peace Rehab Hospital, Greenville Hospital System
- **SCIRF 0804—Dissemination of Information Regarding Evidenced-Based Practices to Enhance Independent Lifestyles for People with Spinal Cord Injuries** *{ \$ 70,000 for 24 Months , with subsequent no-cost extension adding 12 months }*
P.I.: Jill Monger, P.T., MHS; Michael Godkin, Executive Director, DisAbility Resource Center of Charleston
- **SCIRF 1004—Bridge Funding Support for the S. C. Statewide Traumatic Spinal Cord Injury Surveillance and Registry System** *{ \$ 102,000 for 24 Months, with subsequent no-cost extension adding 12 months—also see SCIRF 1004E under ROUND 06 below which provided another 6 month extension with supplemental funds }*
P.I.: Anbesaw W. Selassie, DrPH., Assistant Professor, Department of Biometry and Epidemiology/Rehab. Sci., Medical University of South Carolina

ROUND 02S & 04 PROJECTS: A fourth round of three (3) fully funded and four (4) initial seed projects was approved July 01, 2005 and awarded funds on 07/01/05 and 09/01/02 for periods ranging from 3.5 to 24 months. It was anticipated that several of the seed projects could be fully funded mid-year in December after Fund Board review of revised proposals responding to concerns/suggestions arising during the initial scientific review. In addition, an earlier Round 02 project received a supplemental award. Following are the awards made based on Board decisions at its July 1, 2005 meeting:

- **SCIRF 0303S—(SUPPLEMENTAL AWARD) Development of a Laser Cell Micropatterning System for In Vitro Investigation of Adult Stem Cell Spinal Cord Injury Treatment** *{ \$ 23,000 added to the original \$149,890 for an extended period of 30 months }*
P.I.: Bruce Z. Gao, Ph.D., Assistant Professor, Department of Bioengineering Clemson University
- **SCIRF 0105A—(SEED REDEVELOPMENT) Repetitive Movement Therapy as an Intervention for Individuals with Incomplete Spinal Cord Injury** *{ \$ 5,000 for 3.5 Months }*
P.I.: Stacy L. Fritz, Ph.D., PT, Clinical Assistant Professor, Department of Exercise Science, Physical Therapy Program, University of South Carolina
- **SCIRF 0205—Modulation of Inflammatory Response and Secondary Injury** *{ \$ 25,000 for 12 Months, with subsequent no-cost extension adding 12 months }*
P.I.: Stephen Tomlinson Ph.D., Professor, Department of Microbiology and Immunology Medical University of South Carolina

- **SCIRF 0505A—(SEED INITIATION AND REDEVELOPMENT) Engineering Regeneration Through Bridge/Host Distal Interference** *{\$ 25,000 for 6 Months, with subsequent no-cost extension adding 3 months}*
P.I.: Andrew T. Metters, Ph.D., Assistant Professor, Department of Chemical and Biomolecular Engineering, Clemson University
- **SCIRF 0605—Tissue Engineering for Spinal Cord Regeneration** *{\$ 100,000 for 24 Months, with subsequent no-cost extension adding 12 months}*
P.I.: Xuejun Wen, M.D., Ph.D., Assistant Professor, Clemson-Medical University of South Carolina Bioengineering Program
- **SCIRF 0705—Assessing Disparities in Patterns of Health Care After Traumatic Spinal Cord Injury** *{\$ 119,598 for 24 Months, with subsequent no-cost extension adding 12 months}*
P.I.: Elisabeth Pickelsimer, DA, Research Assistant Professor, Department of Biometry and Epidemiology/ Rehabilitative Sciences, Medical University of South Carolina
- **SCIRF 0805—(SEED REDEVELOPMENT) Dynamic Postural Patterns during Task Performance in Individuals with Paraplegia** *{\$ 5,000 for 3.5 Months, with 2 subsequent no-cost extensions adding 15.5 months}*
P.I.: Hon K. Yuen, Associate Professor, Department of Rehabilitative Sciences
- **SCIRF 1005—(SEED DEVELOPMENT) South Carolina Spinal Cord Injury Association Cooperative Study** *{\$ 5,000 for 9 Months}*
P.I.: Richard F. Bridges, Executive Director, South Carolina Spinal Cord Injury Association

ROUND 04 OFF-CYCLE PROJECTS: In follow-up to decisions made at the prior July Board meeting, a mid-cycle additional review resulted in approval by the Board on 01/27/06 of three mid-cycle revised seed projects as well as two new unsolicited proposals responding to Fund priorities. They were awarded funds in February, March, or April of 2007 for Project period ranging from 12 to 36 months.

- **SCIRF 0105B—Intensive Mobility Training as an Intervention for Individuals with Incomplete Spinal Cord Injury** *{\$ 119,829 for 24 Months, with subsequent no-cost extension adding 12 months }*
P.I.: Stacy L. Fritz, Ph.D., PT, Clinical Assistant Professor, Physical Therapy Program University of South Carolina
- **SCIRF 0505B—Engineering Regeneration Through Bridge/Host Distal Interference** *{\$ 120,000 for 24 Months, with subsequent no-cost extension adding 11 Months}*
P.I.: Andrew T. Metters, Ph.D., Assistant Professor, Department of Chemical and Biomolecular Engineering, Clemson University
- **SCIRF 1005B—Contract to Disseminate Results to Consumers** *{\$ 34,602 for 12 Months}*
P.I.: Richard F. Bridges, Executive Director, South Carolina Spinal Cord Injury Association
- **SCIRF 1105—A Proposal to Build SCI Research Infrastructure via the Development of a Center of Interdisciplinary Spinal Cord Injury Research** *{\$ 499,309 for 36 Months}*
P.I.: James Krause, Ph.D, Scientific Director SCIRF & Mark Kindy, PhD, Associate Scientific Director SCIRF, Medical University of South Carolina
- **SCIRF 1205—Bridge Funding for Role of Proteinase in Spinal Cord Injury** *{\$50,000 for 12 Months, with subsequent no-cost extension adding 14 Months}*
P.I.: Naren L. Banik, Ph.D., Professor, Department of Neurosciences, Medical University of South Carolina

ROUND 02B & 05 PROJECTS: On 06/09/06 the Board approved the final revision of an earlier Round 02 contract proposal as well as four (4) new proposals submitted in Round 05. These were awarded funds on 07/01/06 or shortly thereafter for periods ranging from 12 to 24 months.

- **SCIRF 0102B(REVISED 2005)—The Feasibility of Enhanced Primary Rehabilitation Services in SC** *{ \$ 99,209 for 12 Months }*
P.I.: David E. Murday, Ph.D., Interim Director, Center for Health Services Policy & Research, Arnold School of Public Health, University of South Carolina
- **SCIRF 0206—Nanoscale Biomedical Devices for Treatment of Secondary Spinal Cord Injury** *{ \$ 100,000 for 24 Months }*
P.I.: Alexey Vertegel Ph.D., Assistant Professor, Department of Bioengineering, Clemson University
- **SCIRF 0406—Modulation of Astrogliosis by Statins for Spinal Cord Therapy** *{ \$ 100,000 for 24 Months }*
P.I.: Mushfiquddin Khan, Ph.D., Research Assistant Professor, Department of Pediatrics, Medical University of South Carolina
- **SCIRF 0506—Therapeutic Efficacy of Statin in Neuroprotection in Spinal Cord Injury** *{ \$ 80,000 for 24 Months }*
P.I.: Shailendra Giri, Ph.D, Research Assistant Professor, Department of Pediatrics, Medical University of South Carolina
- **SCIRF 0606—Household Composition, Care Giving Intensity and Labor Market Participation of Individuals with Spinal Cord Injury** *{ \$ 79,955 for 24 Months }*
P.I.: Clara E. Dismuke, Ph.D., Assistant Professor, Department of Health Administration and Policy, Medical University of South Carolina,

ROUND 03E & 06 & 06A PROJECTS: On 06/27/07 the Board approved a special extension with additional funds of an earlier Round 03 project along with four (4) Round 06 proposals (two of these being in response to Board Special Initiatives) and one (1) Round 06A proposal. These were awarded funds on 07/01/07 or shortly thereafter for periods ranging from 6 to 36 months, with one possibly becoming permanent if special conditions are met.

- **SCIRF 1004E—Renewal: Bridge Funding Support for the S. C. Statewide Traumatic Spinal Cord Injury Surveillance and Registry System** *{ \$ 38,750 for 6 Months with Conditions }*
P.I.: Anbesaw W. Selassie, DrPH, Associate Professor, Department of Biostatistics, Bioinformatics, and Epidemiology, Medical University of South Carolina
- **SCIRF 0307—Biophysical Modeling of Spinal Cord Under Mechanical Loading** *{ \$100,000 for 24 Months }*
P.I.: Hai Yao, Ph.D., Assistant Professor, Clemson—MUSC Bioengineering Program
- **SCIRF 0607--Melatonin as a Therapy for Spinal Cord Injury** *{ \$79,793 for 24 Months }*
P.I.: Abhay Varma, M.D., Instructor, Department of Neurosurgery, Medical University of South Carolina
- **SCIRF 0707 (RFP 6A)—Phanor L. Perot, Jr. Endowed Chair in Spinal Cord Injury** *{ \$500,000 Provisional for 36 Months, and Permanent Endowment if Conditions Met }*
P.I.: Sunil J. Patel, M.D., Clinical Chair, Department of Neurosciences, Medical University of South Carolina
- **SCIRF 0807A—Conference: An Interdisciplinary Approach to Spinal Cord Injury Management** *{ \$ 25,040 for 12 Months, with subsequent no-cost extension for 6 months }*
P.I.: Nancy C. Wolf, Program Manager, Roger C. Peace Rehabilitation Hospital, Greenville Hospital System
- **SCIRF 0907A—State Spinal Cord Injury Conference: Needs Assessment and Planning Process** *{ \$ 4,985 for 6 months }*
P.I.: Acting Director, South Carolina Spinal Cord Injury Association

SUMMARY PROGRESS: Between July 1, 2002 and June 30, 2007, the Fund obligated a total of \$ 5,055,249 (\$ 171,950 in Administration/Other; \$ 310,816 in Research Development; and \$ 4,572,483 in Funded Projects). These obligations covered Administration and Scientific Development through 06/30/07, and will cover all of the projects until they end, some as late as on 06/30/09. Actual expenditures for the period totaled \$ 3,101,190. The Fund is expected to continue collections at a rate of approximately \$ 60,000+ per month as well as recoup additional unexpended funds at year-end from various budget components.

So far there have been sixteen (16) Basic Science projects awarded, eleven (11) Applied Science, two (2) Interdisciplinary, six (6) Education, two(2) Capacity, four (4) Special Initiatives, two (2) Career Development, two (2) Bridge Funding, and one (1) Endowed Chair. The Medical University of South Carolina has competitively secured twenty-four (24) awards plus one extension with additional funds totaling \$ 2,962,791; Clemson has nine (9) for \$ 942,034; the University of South Carolina with five (5) at \$ 373,645; the South Carolina Spinal Cord Injury Association with six (6) for \$ 198,973; the Disabilities Resource Center of North Charleston with one (1) totaling \$ 70,000; and Greenville General Hospital with one (1) for \$ 25,040.

Two of the education projects held very successful statewide conferences on spinal cord injury and continuing education programs for people with SCI (May of 2003 and 2005). In addition, the Fund and its Scientific Staff held the first Annual Scientific Conference on the MUSC campus May 13, 2005 which included presentations about current and future state of spinal cord research from national leaders as well as findings/accomplishments by Principle Investigators of ten (10) of the completed Fund projects. The Fund also organized, financed, and co-sponsored (with the South Carolina Spinal Cord Injury Association, the South Carolina Brain Injury Alliance, and the South Carolina Brain Injury Leadership Council) the "South Carolina Rehabilitation Meeting" of statewide leadership to discuss parameters of an acute care rehabilitation services need/feasibility study. This resulted in RFP 02B, subsequent award of 0102B, and completion of the feasibility study as the Fiscal Year ended. Under a special SCIRF Board initiative, final plans are underway for a statewide interdisciplinary provider education project in November 2007 with plans being finalized by the Scientific Directors for a second Scientific Conference in the May of 2008.

FUTURE GOALS: Fund goals have been and will continue to be driven by the needs of people with SCI in the state of South Carolina. Following are main ongoing focus areas:

- Review/explore opportunities to support a broad range of research projects that will address the needs of people with SCI in the state, similar to those that have been done previously with respect to access to care, life expectancy, and needs for rehabilitation.
- Continue to fund education for both professionals and consumers. This is fundamental to the research mission since it disseminates important findings directly to those stakeholders that will use it, consumers for whom it may directly impact decisions of regarding care, and professionals who will use the information in the provision of care.
- Give particular priority to continuing great strides already made in affecting the environment, both in terms of people and the physical environment, such as to increase the resources for people with SCI. Primary examples include funds allocated for an endowed chair which will bring a specialist in SCI and bring both research and clinical skills to the state; evaluation of rehabilitation needs and funding of programs that may serve as a basis for both research and clinical care; skill development through career development grants that bring establish investigators and clinicians from other areas into the area of SCI; and through basic, applied, and interdisciplinary research that will better position the state of South Carolina with the National Institute of Health (NIH). This will serve the multiple purposes of enhancing competitiveness for research grant funds, increasing the amount of federal funds coming back to the state of South Carolina for SCI research, and ensuring that qualified clinicians are available in the state to deliver state-of-the-art care based on evidence from scientifically valid research.

PART II

PROGRAM/BUDGET HIGHLIGHTS {Report of Administrator}

CHRONOLOGICAL HIGHLIGHTS OF FY 06—07: The year witnessed a steady progression of activity, the highlights of which follow:

- **July:** Four (4) Round 05 projects awarded funds for 24 month periods. Additionally, the Board initiated special rehabilitation study (*The Feasibility of Enhanced Rehabilitation Services in S. C.*) was awarded funds.
- **August:** The Board finalized and issued RFP 06A (Endowed Chair) (**See Appendix 5**)
- **September:** Board Chair Cuddy, member Westercam, and Fund staff met with Governor Sanford and staff for update on Fund progress and discuss Future directions
- **October:** Board Chair Cuddy made Fund presentations at the Annual Meeting of the South Carolina Spinal Society.
- **November:** The Board finalized and issued RFP 06 (**See Appendix 5**).
- **January:** The Board met and received a report on the visit with the Governor; finalized Round 06 review schedule with expanded review component; issued special initiative request for an interdisciplinary health professionals conference in SCI; gave initial review of RFP 06A (Endowed Chair) proposal, stipulating required conditions for additional review/consideration; and directly informed invited guest (Senator Limehouse, original Fund legislative sponsor) about Fund progress as well as discussed future directions.
- **February:** Annual Report completed and distributed to the full mailing list as well as posted on the updated Web page (<http://www.scscirf.org/>).
- **April:** Board Chair and staff visited the State House of Representatives where they were introduced and distributed a written summary of Fund progress followed by meeting with several of the legislative leaders.
- **June:** The Board met and approved Dr. Naren Banik as new Associate Scientific Director; awarded with conditions a special extension with additional funds to the Statewide Carolina Spinal Cord Injury Trauma Registry; approved four (4) Round 06 proposals (two of these being in response to Board Special Initiatives), and gave a second review with approval for funding of the one (1) Round 06A proposal

BUDGET DISCUSSION: FY 06-07 witnessed the fifth full year of research project activity with final budget and actual expenditures as follows:

**SC SPINAL CORD INJURY RESEARCH FUND
~FY 06/07 FINAL EXPENDITURE REPORT~**

	<u>BUDGET</u>	<u>EXPENDITURES</u>
ADMINISTRATION		
I. PROGRAM ADMINISTRATION CORE		
PERSONNEL	29,432.00	28,929.00
OTHER	<u>7,665.00</u>	<u>3,862.05</u>
TOTAL	37,097.00	32,791.05
RESEARCH		
II. RESEARCH DEVELOPMENT CORE		
PERSONNEL	47,208.00	32,625.26
OTHER	<u>17,250.00</u>	<u>1,862.46</u>
TOTAL	64,458.00	34,487.72
PROJECTS		
III. ONGOING ROUND 01 PROJECTS (EXTENSION)		
SCIRF 1302 KRAUSE	44,356.00	22,977.49
IV. ONGOING ROUND 02 PROJECTS (EXTENSION)		
SCIRF 0503 PICKELSIMER	3,622.00	1,588.01
SCIRF 0803 RAY	<u>30,385.00</u>	<u>29,889.22</u>
TOTAL	34,007.00	31,477.23
V. ONGOING ROUND 03 PROJECTS (EXTENSION)		
SCIRF 0104 WEBB	38,026.00	34,436.86
SCIRF 0304 WISE	35,572.00	29,139.23
SCIRF 0804 MONGER/GODK	61,699.00	14,154.90
SCIRF 1004 SELASSIE	<u>71,109.00</u>	<u>76,357.70</u>
TOTAL	206,406.00	154,088.69
VI. ONGOING ROUND 04 PROJECTS		
SCIRF 0205 TOMLINSON	21,010.00	20,914.16
SCIRF 0605 WEN	72,235.00	24,828.00
SCIRF 0705 PICKELSIMER	115,852.00	51,713.53
SCIRF 0805A YUEN	1,643.00	1,633.79
SCIRF 0105B FRITZ	96,697.00	26,075.95
SCIRF 0505B METTERS	102,627.00	39,311.87
SCIRF 1005B BRIDGES	5,426.00	5,426.00
SCIRF 1105 KRAUSE	148,578.00	127,829.49
SCIRF 120 BANIK	<u>43,075.00</u>	<u>31,653.21</u>
TOTAL	607,143.00	329,386.00
VII. AWARDED ROUND 02B PROJECT		
SCIRF 0102B	99,206.00	70,124.65
VIII. AWARDED ROUNF 05 PROJECTS		
SCIRF 0206 VERTIGEL	50,000.00	19,153.50
SCIRF 0406 KHAN	50,000.00	50,684.88
SCIRF 0506 GIRI	40,000.00	40,220.32
SCIRF 0606 DISMUKE	<u>40,000.00</u>	<u>39,445.67</u>
TOTAL	180,000.00	149,504.37
GRAND TOTALS	<u>\$1,272,673.00</u>	<u>\$ 824,837.20</u>

A more detailed 06-07 budget is presented in **Appendix 3**. While it might appear from the above actual expenditures that about a third of the budget was saved, it should be remembered that many of the projects have additional year(s) of support obligated and will be expending most funds not used during this budget period (see the following draft budget approved for FY 07-08). In addition, all funds unexpended at the end of any project or budget component period are returned to the overall budget to support new projects and activities. As mentioned in previous Reports, Program Administration saves significant funds each year through the assistance volunteered by several offices of MUSC including the Office of the President, Research Office, Grants Accounting, the MUSC Medical Center Marketing Department that coordinated the Annual Report statewide mailings, and the College of Health Professions which designed and maintains the Web page

The following first draft budget was approved for FY 07-08. It includes consideration of actual ongoing project expenditures through June 30 as well as estimated expenditures of those operational throughout the year. Note that it includes a \$ 500,000 set aside for the Endowed Chair which will receive a final voted at the January 2007 Board meeting and, if approved, would require an immediate commitment of the whole \$ 500,000 total.

~FISCAL YEAR 07/08 BUDGET—NEW FUNDS ONLY SCI RESEARCH FUND~

{3rd Draft, based on 06/22/07 Board Actions & Final FY 06 Expenditures--jwc}

NOTE: This draft of the Budget includes all known possible expenditures and commitments of new monies during the year based on actions of the Fund Board at its 06/22/07 meeting and any subsequent actions via email.

I. <u>PROGRAM ADMINISTRATION CORE</u>		<u>\$ 36,000</u>
PERSONNEL (<i>Incl. F. B. at 28.6%</i>)	30,000	
OTHER	6,000	
II. <u>RESEARCH DEVELOPMENT CORE</u>		<u>\$ 55,000</u>
PERSONNEL (<i>Incl. F. B. at 28.6%</i>)	50,000	
TRAVEL (Fund Promotion)	2,000	
REVIEW PROCESS	3,000	
III. <u>ALL ROUND 06 PROJECTS (2 yr Commitment)</u>		<u>\$ 179,973</u>
SCIRF 0307 Yao	100,000	
SCIRF 0607 Varma	79,973	
IV. <u>ENDOWED CHAIR</u>		<u>\$ 500,000</u>
SCIRF 0707 Patel	500,000	
V. <u>ADDITIONAL BOARD INITIATIVES</u>		<u>\$ 30,025</u>
SCIRF 00807 Wolfe	25,040	
SCIRF 0907 Matney	4,985	
VI. <u>EXTENSION/CONTINUATION</u>		<u>\$ 77,500</u>
SCIRF 1004E Selassie	77,500	
TOTAL NEW BUDGET ESTIMATE 07/08		<u>\$ 878,498</u>

Also presented in **Appendix 3** is the ongoing Fund “Cash Analysis” through June 30, 2007 with projections through June 30, 2008 based on the above draft budget. The bottom line in this Analysis is helpful to the Board in determining the amount of funds they have to work with in awarding the Round 07 projects which will be reviewed and voted on at the May 2008 Board meeting. It also shows Fund expenditures since it began.

PART III

RESEARCH HIGHLIGHTS

{Report of Scientific Directors}

FY 06—07 has been one of multiple accomplishments. Three efforts in particular stand out including: (a) the addition of Dr. Naren Banik as Associate Scientific Director of the SCSCIRF and co-Principal Investigator of the Center for interdisciplinary SCI research; (b) completion of the report by David Murday regarding the need for rehabilitation in the state of South Carolina; and (c) funding of the endowed chair at the medical University of South Carolina (the Perot chair).

APPOINTMENT OF DR. BANIK AS ASSOCIATE SCIENTIFIC DIRECTOR

As 2007 started, Dr. Mark Kindy resigned as Associate Scientific Director due to newly added duties as Assistant Provost at the Medical University of South Carolina. Dr. Naren Banik was immediately recruited to take his place on an acting basis, and was given a permanent appointment by the Board at its June meeting.

Dr. Banik received his Ph.D from the University of London, UK in 1970, involved in research related to Multiple Sclerosis (MS). He joined Stanford University in 1974 and continued his research on MS in the Department of Neurology AT VA HOSPITAL, Palo Alto, California. Dr. Banik joined Neurology Department, MUSC in 1976 and, in addition to research on MS, he embarked on investigating the mechanism involved in tissue destruction in SCI and examining the agents that can protect and preserve cells for recovery of function following injury. This research has been supported by NIH for more than two decades. He has made seminal discoveries in SCI research since the move to Charleston. He presently is a Professor of Neurology in Neurosciences Department and his current research interest includes SCI, MS, Parkinson's disease, brain trauma, and others related conditions.

Dr. Banik was instrumental in coordinating the scientific review of Round 06, and brings his exceptional credentials to enhance the activities of the interdisciplinary Center. Over the past year, the Center has seen the purchase of the equipment for the animal motion analysis laboratory. Consistent with the mission of the Center to explore new areas of high potential for translational research, staff have also begun to explore new innovative outcomes after SCI. These include allostatic load which is the accumulation of a minimum of 10 biomarkers that, taken as a whole, are indicative of premature aging and accumulation of physiologic decline in response to lifelong stress. The groundwork for developing and collecting pilot data for this project has been done during the past year. The Center is also exploring the possibility of genetic indicators of early aging in response to SCI related stress, and will have done the groundwork for the study of telomeres by the end of the next year.

COMPLETION OF THE SPECIAL REHABILITATION STUDY

Dr. David Murday of the University of South Carolina, along with colleagues from the Roger C. Peace Rehabilitation Hospital (Dr. Tracey Mertz, Ms. Nancy Wolfe, and Ms. Sherril Portersfield), conducted an extensive analysis of rehabilitation services in the state of South Carolina in a funded project entitled: *The Feasibility of Enhanced Primary Rehabilitation Services in South Carolina*. This was the latest and most important step towards completion of the special initiative started by the Fund Board with a meeting in December of 2003 of state health leaders. The results and recommendations will be presented to legislative and health care leaders over the upcoming year as the next steps are taken to enact all recommendations.

Following is a brief summary of this report:

Background

- Decades of research into rehabilitation for spinal cord injury have shown that early entry into rehabilitation, especially a program that specializes in spinal cord injury, shortens total lengths of stay, reduces medical complications, and improves outcomes.
- During FY 2007, the SCIRF funded a study by USC and Roger C. Peace Rehabilitation Hospital on the feasibility of enhancing primary rehabilitation services across the state.

Findings

- There are enough general inpatient rehabilitation beds, but only 15 of the 588 existing inpatient rehabilitation beds are used for CARF (Commission on the Accreditation of Rehabilitation Facilities) accredited SCI rehabilitation.
- The estimated demand for specialized SCI rehabilitation services is an average daily census of 23 patients, supporting a total of 31 specialized SCI beds.
- Only 8% of SCI patients receive specialized SCI inpatient rehabilitation in SC. (Only 26% of SCI patients receive inpatient rehabilitation in SC and only 30% of those are served in the CARF accredited spinal cord injury program.)
- Distance to specialized SCI rehabilitation programs is a barrier; patients in the Low country are much less likely to receive inpatient rehabilitation.
- Medicare and South Carolina Medicaid policies affect access to rehabilitation.
- Medicare payments for SCI rehabilitation usually exceed the cost of care, but recent changes in Medicare policies are unsettling for rehabilitation facilities.
- South Carolina's Medicaid rehab coverage is very restricted.

Recommendations

- Up to 15 more specialized SCI beds are needed, primarily in the Low country. These can be conversions of existing beds or beds that have been authorized but not yet licensed/built.
- New SCI rehabilitation beds should be developed pursuant to the Companion Care model.
- Issues related to cost, expertise and low volume of patients suggest that starting a ventilator program in South Carolina for SCI patients is not practical. Alternatives are available.
- Develop a case management model for SCI rehabilitation across the continuum of care. SCI nurse case managers would coordinate across levels of inpatient care; social workers would coordinate the outpatient continuum of care.
- The biggest barrier to specialized SCI rehabilitation in South Carolina is related to financing. Medicaid coverage/ reimbursement for primary rehabilitation must be expanded.
- The new DDSN rehab funds must be allocated carefully; the new funds should not be used to supplant Medicaid DSH/UPL funds.

Next Steps

- The Spinal Cord Injury Research Board will need to work with the major stakeholders who play a role in the supply, demand, and financing of rehabilitation for persons with SCI.
- Work with the SC Hospital Association/SC Association of Rehabilitation Facilities to identify new CARF SCI rehabilitation beds from existing or authorized rehab beds.
- Work with DDSN on use of the new funds to advance recommendations (i.e., hiring rehabilitation case managers to ensure effective use of limited funds, or providing training needed by health professionals to improve care for SCI patients in the community).
- Work with Legislature on a proviso to require an actuarial study of the costs and benefits of expanding Medicaid coverage of primary rehabilitation, especially for SCI.

ESTABLISHING AN ENDOWED CHAIR

The Board of Directors of the South Carolina Spinal Cord Injury Research Fund developed and issued a special request for proposals to establish an Endowed Chair in Spinal Cord Injury Research in the State. As the year ended, they awarded \$500,000 for the recruitment of the Phanor L. Perot, Jr. Endowed Chair in Spinal Cord to Dr. Sunil Patel of the Department of Neurosciences at the Medical University of South Carolina. Special conditions of the award included the following:

- Identification of matching funds (\$500,000) from sources other than state monies.
- The endowed chair will collaborate with the Center for Interdisciplinary Spinal Cord Injury Research at MUSC.
- The endowed chair would not limit activities to the applicant institution, but would be charged with helping to develop collaborations in the area of spinal cord injury throughout the state.
- A 36 month time frame will be allocated for identification of an endowed chair candidate. After this time the monies would revert back to the South Carolina Spinal Cord Injury Research Fund should an appropriate candidate not be identified.
- The Board of Directors of the South Carolina Spinal Cord Injury Research Fund will have the opportunity to approve the final candidate selected (review process to be determined but will include a one-page synopsis regarding statewide collaboration).

It is expected that these conditions will be met early in FY 08, a final award made, and the recruitment process begun to locate the most qualified possible chair holder. The endowed chair will serve many functions that benefit people with SCI and the state of South Carolina. First, it will attract an individual with great expertise in SCI treatment and research. The key to promoting the health and well-being of people in South Carolina with SCI depends in part on the extent to which qualified professionals can be attracted into the state to provide and oversee such care. Second, by virtue of having an established research program in applied outcomes and SCI, this individual will be able to facilitate research within the state. Third, since an explicit goal of the endowed chair is to build collaborations around the state, this also will serve to facilitate a greater knowledge base and create synergy between clinicians and investigators. Lastly, the availability of an endowed chair will facilitate the development of clinical trials to promote recovery after SCI.

BROAD OVERVIEW/SUMMARY OF PAST ACCOMPLISHMENTS AND ANTICIPATED FUTURE DIRECTIONS

Constantly moving forward in promoting a research agenda, the Fund will continue to support projects submitted by investigators from around the state through the competitive process of grant submission and peer review. This is consistent with the ongoing goal of enhancing the quality of research in spinal cord injury throughout the state, as well as increasing the number of investigators performing this research. Priority will be given to young investigators who are first-time applicants.

Whereas the open call for proposals ensures that novel ideas are reviewed and funded as appropriate, in order to further address its research goals and agenda, the Fund intends to additionally invest in broader special initiatives that concentrate on areas of greatest need. The Board of Directors, with the recommendations of the Scientific Directors, have placed great emphasis on several initiatives including the endowed chair, the Center for Interdisciplinary SCI Research, evaluation of rehabilitation needs within the state, and the proposed conference for care providers. Such initiatives will continue to be dictated by the need to move the SCI agenda forward. Whereas individual projects move the Fund with relatively small steps, these larger projects allow the Fund to move forward in a more integrated manner.

In the future, particular focus will be placed on establishing satellite centers for interdisciplinary research that would interface with the Center for interdisciplinary spinal cord research at the Medical University of South Carolina. Satellite centers will be developed in areas other than the low country, with eventual contributions from the University of South Carolina and Clemson, as well as CARF (Commission on the Accreditation of Rehabilitation Facilities) certified facilities. The Fund will also continue to evaluate the special needs of people in the state of South Carolina with SCI; special education efforts that are cost effective means of promoting the overall quality of care within the state; promote awareness of SCI issues; and promote research initiatives through a network of clinical collaborators.

APPENDIX 1—DETAILED BOARD INFO

- ~ 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 and past Department Chairman. *{initial 2 year term expired 2003, 1st 4 yr. Term Expires 2007}*
 - * **David A. Griesemer, M.D.**, Charleston, SC—Board Certified in Child Neurology, Director of Pediatric Neurosciences, and Professor of Neuroscience and Pediatrics. *{initial 2 year term expired 2003, 1st 4 yr. Term Expires 2007}*
- ~ 2 MEDICAL DOCTORS 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. *{1st 4 yr. Term Expired 2005, reappointed through 2009}*
 - * **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. *{1st 4 yr. Term Expires 2005, reappointed through 2009}*
- ~ 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 injured, Charleston Municipal Court Judge and teaches at Trident Technical College. *{initial 2 year term expired 2003, 1st 4 yr. Term Expires 2007, but deceased 12/29/03}*
 - * **John H. Stevens, M.Ed.**, Columbia, SC—spinal cord injured, retired Division Administrator, Head and Spinal Cord Injury of the S. C. department of Disabilities and Special Needs. *{appointed by Governor on to fill vacated Judge Allen 1st 4 year Term which will Expire 2007}*
 - * **Terry Peacock**, Columbia, SC—mother of a spinal cord injured who retired from the Office of Minority Affairs of the SC Department of Health and Environmental Control. *{1st 4 yr. Term Expired 2005, reappointed through 2009}*
- ~ 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. *{initial 3 year expired 2004, 1st 4 yr. Term Expires 2008}*

APPENDIX 2—CUMULATIVE DUI

DUI FINE COLLECTIONS FOR THE SCIR FUND SINCE INCEPTION OF FUND {running total last updated 07/15/07}

	~2001~	~2002~	~2003~		
Jan.	\$ 4,285.00	43,035.45	56,063.61		
Feb.	10,774.90	67,213.13	79,548.82		
Mar.	26,570.32	110,797.84	75,621.55		
Apr.	41,513.91	68,851.75	67,871.19		
May	42,606.41	73,028.36	69,933.84		
June	50,170.12	82,816.19	64,092.46		
Extra			14,143.05		
July	54,159.28	58,312.09	49,138.21		
Aug.	62,635.31	76,064.34	70,190.90		
Sept.	53,845.08	60,925.72	62,249.13		
Oct.	61,642.97	67,764.04	52,129.53		
Nov.	60,039.88	69,631.96	55,817.92		
Dec.	<u>63,716.54</u>	<u>65,987.31</u>	<u>49,267.84</u>		
	<u>\$ 531,929.72</u>	<u>\$ 849,428.11</u>	<u>766,068.05</u>		
	~2004~	~2005~	~2006~	~2007~	~Cumulative~
Jan.	63,663.52	53,425.96	44,937.24	44,707.64	4,241,524.20
Feb.	57,270.58	57,445.32	69,271.72	73,209.95	4,314,734.15
Mar.	59,148.68	59,519.99	66,122.55	76,915.55	4,391,649.70
Apr.	57,654.32.	65,713.64	57,349.43	58,314.69	4,449,964.39
May	68,408.00	71,195.33	76,984.57	60,762.94	4,510,727.33
June	49,806.85	47,422.28	58,308.24	61,040.84	4,571,768.16
Extra	4,318.19	11,840.75	2,890.34	-0-	
July	55,373.62	55,200.43	52,944.66	65,188.54	
Aug.	61,492.46	52,186.44	54,331.33	67,482.75	
Sep.	47,197.81	48,844.66	55,875.47	61,205.30	
Oct.	32,037.14	65,694.81	64,546.13	58,630.09	
Nov.	51,773.76	55,735.32	51,117.05	58,898.92	
Dec.	54,640.47	41,315.54	46,386.08	55,068.52	
TOT:	<u>662,785.40</u>	<u>685,540.47</u>	<u>701,064.81</u>	<u>741,425.72</u>	
	{avg. per mo. \$ 55,232}	{avg. \$ 57,128}	{avg. \$ 58,422}	{avg. \$ 61,785}	

APPENDIX 3—FUND BUDGET INFO

~FISCAL YEAR 06—07 BUDGET, SCI RESEARCH FUND~ {4th Draft 06/07--jwc}

I. <u>PROGRAM ADMINISTRATION CORE</u>		<u>\$ 37,097</u>
PERSONNEL (Incl. F. B. at 28.6%)	29,432	
Fund Administrator (20%)		
BOARD MEETING TRAVEL/MEALS/REFRESHMENTS	1,615	
Avg. 4 Board 1500 mi. two times year @ \$.345 mi= \$ 1035		
Meals at official meetings and while traveling (\$20x4x2)=\$160		
Meals/Refreshments for Board Meetings (\$21x10peoplex2)=\$420		
OTHER	6,050	
Printing stationery/envelopes (next run of 2,500)= \$ 500		
Printing letters, RFPs, Guidelines, insert card, report= \$250		
Printing 04/05 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=\$ 2,000		
Contingency for unexpected overruns= \$1,000		
II. <u>RESEARCH DEVELOPMENT CORE</u>		<u>\$ 64,458</u>
PERSONNEL (Incl. F. B. at 28.6%)	47,208	
Scientific Director (15%) and Assoc. Dir (10%)		
TRAVEL (Fund Promotion)	10,000	
REVIEW PROCESS		
Stipends(\$1,000), Travel(\$2,000), Meetings(\$3,000),		
Mail(\$500), Other (\$704)	7,250	
III. <u>ONGOING ROUND 01 PROJECTS (Extension)</u>		<u>\$ 44,356</u>
SCIRF 1302 Krause	44,356	
IV. <u>ONGOING ROUND 02 PROJECTS (Extension)</u>		<u>\$ 34,007</u>
SCIRF 0503 Pickelsemer	3,622	
SCIRF 0803 Ray	30,385	
V. <u>ONGOING ROUND 03 PROJECTS (Extension)</u>		<u>\$ 206,406</u>
SCIRF 0104 Webb	38,026	
SCIRF 0304 Wise	35,572	
SCIRF 0804 Monger/Godk	61,699	
SCIRF 1004 Selassie	71,109	

VI. ONGOING ROUND 04 PROJECTS **\$ 607,143**

SCIRF 0205	Tomlinson	21,010
SCIRF 0605	Wen	72,235
SCIRF 0705	Pickelsimer	115,852
SCIRF 0805A	Yuen	1,643
SCIRF 0105B	Fritz	96,697
SCIRF 0505B	Metters	102,627
SCIRF 1005B	Bridges	5,426
SCIRF 1105	Krause	148,578
SCIRF 1205	Banik	43,075

VII. AWARDED ROUND 02B PROJECT **\$ 99,206**

SCIRF 0102B	Murday	99,206
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VIII. AWARDED ROUND 05 PROJECTS **\$ 180,000**

SCIRF 0206	Vertigel	50,000 (est. ½)
SCIRF 0406	Khan	50,000 (est. ½)
SCIRF 0506	Gir	40,000 (est. ½)
SCIRF 0606	Dismuke	40,000 (est. ½)

TOTAL BUDGET ESTIMATE 06/07 **\$ 1,272,673****SOUTH CAROLINA SPINAL CORD INJURY RESEARCH FUND—
ONGOING CASH/COMMITMENT ANALYSIS**

(incl. 07/06/07 & Final Expenditures for FY 07)

jwc 11/15/07

• **INITIAL 18 MONTHS (01/01/01—06/30/02)**

Total Collections	977,703
Total Expenditures	30,675

YEAR-END CASH BALANCE **947,028**• **FY 03 (07/01/02—06/30/03)**

Carryover from Prior Period	947,028
DUI Collections through 06/30/03	825,957
TOTAL CASH	1,772,985

Program Admin. Core Expenditures	27,624
Program Scientific Core Expenditures	18,987
Round 01 Projects First 12 Mos. Expenditures	301,951
TOTAL EXPENDITURES	349,562

YEAR-END CASH BALANCE **1,423,423**

<ul style="list-style-type: none"> • FY 04 (07/01/03—06/30/04) 	
Carryover from Prior Period	1,423,423
Additional Collections through 06/30/04	699,064
TOTAL CASH	2,122,487
Program Admin. Core Expenditures	32,184
Program Scientific Core Expenditures	21,093
Round 01 Projects Expenditures	228,719
Round 02 Projects Expenditures	386,838
TOTAL EXPENDITURES	668,834
YEAR-END CASH BALANCE	1,453,653
<ul style="list-style-type: none"> • FY 05 (07/01/04—06/30/05) 	
Uncommitted Carryover from Prior Period	1,453,653
Additional Collections through 06/30/05(est)	669,078
TOTAL CASH	2,122,731
Program Admin. Core Expenditures 04/05	33,058
Program Scientific Core Expenditures 04/05	62,152
Round 01 Ongoing Projects Expenditures	54,716
Round 02 Ongoing Projects Expenditures	267,099
Round 03 Ongoing Projects Expenditures	193,929
TOTAL EXPENDITURES	610,955
YEAR-END CASH BALANCE	1,511,776
<ul style="list-style-type: none"> • FY 06 (07/01/05—06/30/06) 	
Cash Carryover from Prior Period	1,511,776
Additional Collections through 06/30/06	694,841
TOTAL CASH	2,206,617
Program Admin. Core Expenditures 05/06	34,981
Program Scientific Core Expenditures 05/06	40,834
Round 01 Ongoing Projects Expenditures	52,907
Round 02 Ongoing Projects Expenditures	156,605
Round 03 Ongoing Projects Expenditures	191,245
Round 04 Ongoing Projects Expenditures	73,866
Round 04 Off-Cycle Ongoing Proj. Expend.	85,120
TOTAL EXPENDITURES	635,558
YEAR-END CASH BALANCE	1,571,059
<ul style="list-style-type: none"> • FY 07 (07/01/06—06/30/07) 	
Cash Carryover from Prior Period	1,571,059
Additional Collections through 06/30/06(est)	765,341
TOTAL CASH	2,336,400
Program Admin. Core Expenditures 06/07	32,791

SOUTH CAROLINA SPINAL CORD INJURY RESEARCH FUND

Program Scientific Core Expenditures 06/07	34,487
Round 01 Ongoing Projects Expenditures	22,977
Round 02 Ongoing Projects Expenditures	31,477
Round 03 Ongoing Projects Expenditures	154,088
Round 04 Ongoing Projects Expenditures	329,386
Round 02B Ongoing Projects Expenditures	70,124
Round 05 Ongoing Projects Expenditures	149,504
TOTAL EXPENDITURES	824,837

YEAR-END CASH BALANCE **1,511,563**

- **FY 07 (07/01/07—06/30/08)**

Cash Carryover from Prior Period	1,511,563
Additional Collections through 06/30/07(est)	720,000
TOTAL CASH	2,231,563

Program Admin. Core Budget 06/07	36,000
Program Scientific Core Budget 06/07	55,000
Unexpended Round 01 Projects	21,379
Unexpended Round 02 Projects	2,530
Unexpended Round 03 Projects	52,318
Unexpended Round 04 Projects	277,757
Unexpended Round 02 B Project	29,082
Unexpended Round 05 Projects	156,496
Round 06 Projects (2yr Commitment)	179,973
Endowed Chair (3yr to permanent Commit.)	500,000
Additional Board Initiatives (6mos to 18mos Com)	30,025
Unsolicited Extension (12mos Commitment)	77,500
UNEXPENDED/COMMITTED FUNDS	1,418,060

EST. UNEXP./UNCOMM. YEAR-END BAL **813,503**

TOTAL SCIRF EXPENDITURES SINCE 2001

<u>BUDGET COMPONENTS</u>	<u>FY01-06</u>	<u>FY07</u>	<u>TOTAL</u>
PROGRAM ADMINISTRATION	\$ 127,847	32,791	160,638
RESEARCH AND DEVELOPMENT	143,066	34,487	177,553
FUNDED PROJECTS	2,005,441	757,558	2,752,999
TOTAL EXPEND:	2,276,354	824,836	3,101,190

APPENDIX 4—BOARD AGENDAS

~ AGENDA~

SPINAL CORD INJURY RESEARCH FUND BOARD

Friday January 26, 2007, 12:00 Noon

*Corporate Offices of the Medical Society of South Carolina,
69-B Barre Street, Charleston, S.C. (carriage house behind Edward Bennett House)*

Roll Call/Introductions

Approval of June 9, 2006 Board Minutes

Report of Chairman

- Meeting with South Carolina Governor & Staff
- Update on special SCI edition of South Carolina Medical Association Journal
- Proposed House Bill 3151

Report of Fund Administrator

- DUI Collections Update
- Final 05/06 Budget/Expenditures
- Total Fund Expenditures Since 2001
- Updated Cash/Commitments Analysis
- Updated Working 06/07 Budget
- Round 05 Projects Approved and Awarded
- Current Status of All SCIRF Funded Projects
- 05/06 Annual Report

Report of Scientific Directors

- Update on Round 06 Projects Received by January 15 Deadline
- Round 06 Review Schedule
- May 17/18 Scientific Conference and Board Meeting
- Preliminary Discussion of Round 07 Priorities/Timetable
- Board Review of Endowed Chair Application, Including P. I. Interview
- Update on 0102B (Rehab Study)

New Business

- Date of Next Board Meeting
- Other New Business

Adjourn

~AGENDA~

SPINAL CORD INJURY RESEARCH FUND BOARD

Friday June 22, 2007, 12:00 Noon

2nd Floor Conference Room, Colcock Hall

Medical University of South Carolina

Roll Call/Introductions

Approval of January 26, 2007 Board Minutes

Report of Chairman

- Visit to the Legislature
- Update on special SCI edition of South Carolina Medical Association Journal
- Board Member Terms Expiring

Report of Fund Administrator

- DUI Collections Update
- Updated 06/07 Budget
- Updated Cash/Commitments Analysis
- Draft 07/08 Budget
- Current Status of All SCIRF Funded Projects

Report of Scientific Directors

- Update on Endowed Chair RFP
- Plans for Next Scientific Conference
- Recommended Funding Priorities/Timetable RFP 07
- Scientific Review of Final Revised RFP 06 Applications

SCIRF0107-- Type Two Diabetes and Spinal Cord Injury, (PI: Dawn Clancy, MD, MSCR—MUSC)

WITHDRAWN

SCIRF0207--Role of Calcium-Binding Proteins in Hyperreflexive Bladder Following SCI

(PI: Jiro Nagatomi, PhD., Clemson)

SCIRF0307--Biophysical Modeling of Spinal Cord Under Mechanical Loading

(PI: Hai Yao, PhD—Clemson/MUSC)

SCIRF0407--Biodegradable Scar-Inhibiting Implants for Guided Spinal Cord Regeneration

(PI: Esmail Jabbari, PhD—USC)

SCIRF0507--Therapeutic Effect of Complement Inhibition in Spinal Cord Injury (PI: JinYu, MD—MUSC)

WITHDRAWN

SCIRF0607--Melatonin as a Therapy for Spinal Cord Injury (PI: Abhay Varma. MD—MUSC)

- Review of Additional Board Directed Initiatives

SCIRF0807--An Interdisciplinary Approach to Spinal Cord Injury Management {A Conference}

(PI: Nancy Wolfe--GHS/RCP)

SCIRF0907--Statewide Conference Feasibility Study (PI: Jules Riley—S.C. Spinal Cord Injury Association)

- Unsolicited Extension & Additional Funding Request

SCIRF1004E--{Extension}The SC Traumatic Spinal Cord Injury Registry

(PI: Abensaw Selassie, DrPH—MUSC)

New Business

- Date of Next Board Meeting
- Other New Business

Adjourn

APPENDIX 5—RFPs ISSUED FY 05-06

RFP 06

RESEARCH ON SPINAL CORD INJURY

Request For Proposals (RFP) 06

Issued by the Spinal Cord Injury Research Fund Board

*Brian G. Cuddy, MD(Chair), David A Griesemer, MD, Terry Peacock, Phanor L. Perot, MD, PhD,
David L. Shallcross, MD, John H. Stevens, MEd, and W. Daniel Westerkam, MD*

Administered by the Medical University of South Carolina (MUSC)

RFP 06

Date of Release: November 15, 2005

Deadline for Submission: January 15, 2006

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 (SCI) research projects.

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. People with SCI may face extraordinary demands due to the costs of medical care, limitations in rehabilitation resources after profound loss of mobility, and the absence of environmental supports. The spouses

and children of people SCI also face additional demands and the cost of care to families and the residents of South Carolina are 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 health and 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).

Request For Proposals: The South Carolina Spinal Cord Injury Research Board invites grant and contract applications for research on all aspects of SCI in an effort to develop better understanding and ultimately treatment for paralysis and other consequences of SCI and disease. This is the sixth annual call for grants that outline innovative and potentially groundbreaking research. It is estimated that \$300,000 will be available for projects funded in response to this request (3-4 awards).

FUNDING MECHANISMS

1. Primary research grants will not exceed \$100,000 over a 24-month period (\$50,000 per year). These will support research activities of junior faculty (usually within 1 to 5 years of their first faculty position or first research position) that may include, basic, applied, or translational research. Those proposing translational projects may wish to contact the directors of the Center for Interdisciplinary Spinal Cord Injury Research (Dr. Krause or Dr. Kindy) to discuss collaboration or coordination of projects (this is not mandatory but may be helpful). The primary goal of these research grants will be to perform studies that lay the foundation for larger projects that may bring federal funds into the state of South Carolina. We are particularly interested in funding projects that specifically addresses issues related to access to care or the health care delivery in the state of South Carolina. Possible topics include but are not limited to attendant care, access to primary rehabilitation, access to follow-up services, availability of physicians and other health care professions, the efficacy of existing programs, or outcomes associated with the quality of existing or pilot programs. No more than 20% effort for principal investigator may be paid from primary grant funds.
2. Career development awards will be utilized to support new investigators in the field of SCI, or to support the work of individuals crossing over to SCI research from other areas. A maximum of \$80,000 will be granted over a 24-month period. The primary goals of this mechanism will be to increase the likelihood that a researcher will be able to successfully compete for a federally funded K grant or other federally funded career development award upon completion of the project.

The proposed award will give new investigators set-aside time from their other activities to focus on research, not to exceed 50% effort and lay the foundation for them to obtain awards. These awards may reflect either basic science projects or applied projects. Investigators must include a plan to develop an application for a federal career development as part of their scope of work. Quality of investigators career plans and likelihood of success in obtaining future extramural funds will be heavily weighed in evaluating career development applications.

3. Small pilot grant funds of up to \$25,000 will be available for single year projects. The goal of this award is specifically to support investigators who need to collect a modest amount of pilot data or purchase equipment necessary to position themselves for NIH grants. This mechanism will support the work of senior investigators.

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. All applicants will be required to submit a two-page progress report within 60 days of the termination of the award period. In addition, all applicants will be required to present their research at a Spinal Cord Injury Research Fund meeting and to have prepared a research proposal on SCI to be submitted within 6 months of the termination of the award.

Funding: Grant or contract support will be awarded initially for 24 months (except for pilot projects which are 12 months), with no guarantee of renewal. Further funding will depend on progress reports at 12-month intervals that include evidence of productivity, with consideration for renewal of projects that show progress or significant promise on re-submission. All grantees and must submit a progress report summarizing the accomplishments during the preliminary year of the award and submit this to the fund administrator 30 days prior to completion of the first 12 months of project. 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 (except for Career Development applications where it shall not exceed 50%). 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 successful 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 **January 15, 2005, at 5:00 PM.** The South Carolina SCI Research Board will make money available within 30 days following a recommendation for funding by the Review Committee, approval from the Board of Directors, and receipt of acceptance forms from successful applicants.

Review Process: Proposals will be reviewed by committees of reviewers approved by the Spinal Cord Injury Research Fund Board as drawn from a list of volunteers as well as those recommended by knowledgeable peers. 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. 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. A minimum of two reviewers (generally 3) 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: Both hard copies and electronic copies must be submitted. Electronic copies must be sent *in PDF form and emailed to sci-researchfund@musc.edu.* Five hardcopies should also be sent to Mark S. Kindy, PhD, Associate 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 8 pages in length, not including the biosketch of the Principal Investigator. Pilot proposals should not exceed 5 pages. *Proposals not adhering to page limitation may be refused.* Please send a cover letter and complete the face page (attached to the end of this announcement) indicating which of the grant mechanisms to which you are applying and you may include the names and contact information for up to 2 reviewers who are experts in the field (there is no guarantee they will be used). The cover letter will not count against the page limit. The format is similar to that of a National Institutes of Health (NIH) research proposal. Specific elements that 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 (Note: Career Development applications should focus on their rationale on how the proposed activities will facilitate the applicant's research career development and how the award will assist the applicant in successfully competing for a federally funded career development award. Applicants also need to describe and highlight the qualifications of at least one mentor who will provide mentorship to them during the 24-month period and outline a plan for mentorship (e.g., how often they will meet).
- 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.

Note: Career Development Awards will be reviewed based on the quality and clarity of the overall career development plan and how the current award will enhance the qualifications of the investigator and assist in obtaining an extramural career development award. Quality of mentorship will also be evaluated in applications for Career Development

Awards. Although applicants research plan will be evaluated, it will not be expected to be as rigorous as with primary grants, as a greater emphasis will be placed on the career development plan, particularly how the applicant will gain expertise in SCI.

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. James Krause, Scientific Director or Dr. Mark S. Kindy, Associate Director, South Carolina Spinal Cord Injury Research Fund. Procedural and basic science questions should be addressed to Dr. Kindy. Questions regarding applied or clinical research, the set aside funds for special needs of people with SCI in South Carolina, career development awards, or consumer education should be addressed to Dr. Krause.

James S. Krause, Ph.D.

Krause@muscd.edu
843-792-1337

Mark S. Kindy, Ph.D.

kindyms@muscd.edu
843-792-0808

RFP 06 A

RESEARCH ON SPINAL CORD INJURY

Request For Proposals (RFP) for the establishment and recruitment of an endowed chair (scientist and clinician-scientist) in the area of spinal cord injury.

RFP 06A

Issued by the South Carolina Spinal Cord Injury Research Fund Board

*Brian G. Cuddy, MD(Chair), David Griesemer, MD, Terry Peacock, Phanor L. Perot, MD, PhD,
David L. Shallcross, MD, John H. Stevens, MD and W. Daniel Westerkam, MD*

Administered by the Medical University of South Carolina (MUSC)

Date of Release: August 13, 2006

Deadline for Submission: December 15, 2006

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 the 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.

Spinal cord injury (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.

People with SCI may face extraordinary demands due to the costs of medical care, limitations in rehabilitation resources after profound loss of mobility, and the absence of environmental supports. The spouses and children of people SCI also face additional demands and the cost of care to families and the residents of South Carolina are 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 health and 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).

The South Carolina Spinal Cord Injury Research Fund acknowledges the need to increase the number of highly qualified SCI researchers and clinician-researchers in the state. In particular, there is a need to recruit outstanding, established investigators who may serve as a catalyst for SCI research in the state. Building a critical mass of SCI investigators that have the capacity and resources to establish basic, applied and interdisciplinary research programs is an essential step in facilitating SCI research. Qualified scientists and clinician-scientists, not only contribute to the advancement of the field, but increase the overall capacity within the state to successfully compete for federal research funds that will enhance both the visibility and the scope of SCI research in the state of South Carolina. The Fund must assist in the recruitment of the outstanding researchers and clinician-researchers if we are to fully address the mission of enhancing the quality of life of citizens of South Carolina with SCI.

Request for Proposals: The South Carolina Spinal Cord Injury Research Board invites applications to establish and recruit an endowed chair who specializes in the area of SCI and has an established record of extramural research funding support.

Funding Mechanism

Qualifying institutions within the state of South Carolina may apply for a grant of \$500,000 to assist in the establishment and recruitment of a scientist or clinician-scientist specializing in the area of SCI. Transmittal of the funds is dependent upon obtaining matching funds by the applicant institution from external sources other than the Spinal Cord Injury Research Fund. A high priority will be given the proposal having greatest matching funds potential from demonstrated sources and appropriate timelines to match SCI funds. Competitive applicants must attend the Board of Directors meeting in January in order to present and defend their proposals.

The applicant must specify the nature of the institution and unit within the institution (eg, department) to which the endowed chair will be recruited. The application must also describe the qualifications of an acceptable applicant. If an award is made to institution to initiate a search for qualified SCI researcher or clinician-researchers, the institution will be required to gain approval by the Spinal Cord Injury Research Fund Board of the specific individual after a specific candidate has been identified. This step is necessary to ensure that the primary focus of the scientist or clinician-scientist is in the area of SCI.

Institutions will have a twelve month period from the time of the award to identify and recruit an appropriate candidate, although the actual hire date may exceed this timeframe. If a candidate has not been identified/selected at the end of twelve months, an extension with justification must be requested, or the money will revert back to the SCSCRIE.

Eligibility and Terms of Support: Applications will be accepted to recruit scientists and clinician-scientists to 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. In addition, all applicants will be required to present their research at a Spinal Cord Injury Research Fund meeting.

Funding: A one time award of \$500,000 will be made.

Review Process: Proposals will be reviewed by the Board of Directors of the Spinal Cord Injury Research Fund . Applications 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.

Submission Address: Grant applications should be submitted to Mark S. Kindy, PhD, Associate Scientific Director, South Carolina Spinal Cord Injury Research Fund, c/o Fund Administrator, Office of the President, Medical University of South Carolina, 179 Ashley Avenue, Colcock Hall, PO Box 250001, Charleston, SC 29425.

Application Format: The proposal must not exceed 12 pages, not including the cover letter or the vita/biosketch of the recruit, if available. Specific elements of the application should include:

- XI. Face page (name, department, proposal title, abstract)
- XII. Specific aims (goals to be accomplished with the endowed chair)
- XIII. Background and rationale
- XIV. Plan of operation (how the recruitment will proceed; how the endowed chair will be used to promote SCI research)
- XV. 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).
- XVI. Institutional resources and capacity to support the research activities of the endowed chair including the availability of matching funds and an environment conducive to SCI research.
- XVII. References
- XVIII. Detailed Budget (with narrative justification)
- XIX. Biosketch – if available

Please submit the original and seven copies, as well as emailing the full application in PDF format to the Scientific Director, James Krause, at krause@musc.edu

Review Criteria: Proposals will be reviewed by the S. C. Spinal Cord Injury Research Fund Board according to the following criteria:

8. Clarity of the rationale for hiring an endowed chair.
9. Feasibility and adequacy of recruiting an appropriate candidate
10. Qualifications of the candidate, if one has been identified.
11. Likelihood of the candidate ultimately receiving extramural support and/or benefiting the people of the State of South Carolina.
12. Availability of adequate facilities to conduct the proposed project and to support the career of the research candidate.
13. Availability of matching funds.
14. Relevance to the Fund's primary objectives and initial priorities as presented in the Background section of this RFP.
15. Appropriateness of the budget.

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. James Krause, Scientific Director or Dr. Mark S. Kindy, Associate Director, South Carolina Spinal Cord Injury Research Fund.

James S. Krause, Ph.D.
Krause@musc.edu
843-792-1337

Mark S. Kindy, Ph.D.
kindyms@musc.edu
843-792-0808

South Carolina Spinal Cord Injury Research Fund

*c/o Office of President, Medical University of South Carolina
PO Box 250001, Charleston, SC 29425*

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

Web Page: <http://www.scscirf.org/>

FUND ADMINISTRATOR: J. Walker Coleman/telephone numbers and E-Mail above

SCIENTIFIC DIRECTOR: James S. Krause, Ph.D. /843-792-1337/ krause@musc.edu

ASSOCIATE DIRECTOR: Naren Banik, Ph. D./843-792-7594/ baniknl@musc.edu