



**SUMMARY OF
NIH BIOENGINEERING RESEARCH GRANTS (BRG)
FOR PROGRAM ANNOUNCEMENT PA-99-009**



The following text provides a summary of grants from BECON member institutes and centers for NIH bioengineering research grants (BRG) in response to program announcement PA-99-009 (October 29, 1998). The objective of this program is to support basic bioengineering research whose outcomes are likely to advance health or health-related research within the mission of the NIH.

Funded grants are listed below in alphabetical order by the principal investigator's (PI's) last name. Other information provided for each grant includes PI affiliation, grant title, application number, funding organization, and a brief summary of the project. Please visit <http://crisp.cit.nih.gov/> for additional information about funded grants, including project abstracts.

- 1. PRINCIPAL INVESTIGATOR: [ABBAS, JAMES J.](#)**
AFFILIATION: UNIVERSITY OF KENTUCKY
PROJECT TITLE: PREPARATORY ADJUSTMENTS FOR IMPROVED STANDING WITH FNS
GRANT NUMBER: 5-R01-HD-38570-2-
- 2. PRINCIPAL INVESTIGATOR: [ALSOP, DAVID C](#)**
AFFILIATION: BETH ISRAEL DEACONESS MEDICAL CENTER
PROJECT TITLE: DIAGNOSTIC IMAGING OF CEREBRAL BLOOD FLOW WITH MRI
GRANT NUMBER: 5-R01-AG-19599-2-
- 3. PRINCIPAL INVESTIGATOR: [ANDERSEN, RICHARD A](#)**
AFFILIATION: CALIFORNIA INSTITUTE OF TECHNOLOGY
PROJECT TITLE: NEURAL PROSTHESIS USING POSTERIOR PARIETAL REACH REGION
GRANT NUMBER: 5-R01-EY-13337-2-
- 4. PRINCIPAL INVESTIGATOR: [ATESHIAN, GERARD A](#)**
AFFILIATION: COLUMBIA UNIV NEW YORK MORNINGSIDE
PROJECT TITLE: BIOTRIBOLOGY OF DIARTHRODIAL JOINTS
GRANT NUMBER: 5-R01-AR-43628-7-
- 5. PRINCIPAL INVESTIGATOR: [ATESHIAN, GERARD A](#)**
AFFILIATION: COLUMBIA UNIV NEW YORK MORNINGSIDE
PROJECT TITLE: ANISOTROPY AND NONLINEARITY OF CARTILAGE MECHANICS
GRANT NUMBER: 5-R01-AR-46532-3-
- 6. PRINCIPAL INVESTIGATOR: [BARRON, ANNEISE E](#)**
AFFILIATION: NORTHWESTERN UNIVERSITY
PROJECT TITLE: DEVELOPMENT OF A BIOMIMETIC LUNG SURFACTANT REPLACEMENT
GRANT NUMBER: 1-R01-HL-67984-1-
- 7. PRINCIPAL INVESTIGATOR: [BATES, JASON H](#)**
AFFILIATION: UNIVERSITY OF VERMONT & ST AGRIC COLLEGE
PROJECT TITLE: ASSESSMENT OF LUNG FUNCTION IN MICE
GRANT NUMBER: 1-R01-HL-67273-1-A1
- 8. PRINCIPAL INVESTIGATOR: [BERGSNEIDER, MARVIN](#)**
AFFILIATION: UNIVERSITY OF CALIFORNIA LOS ANGELES
PROJECT TITLE: A HEMODYNAMIC MODEL OF INTRACRANIAL PRESSURE DYNAMICS
GRANT NUMBER: 5-R01-NS-40122-3-

9. **PRINCIPAL INVESTIGATOR: BERNS, GREGORY S**
AFFILIATION: EMORY UNIVERSITY
PROJECT TITLE: INTEGRATION OF BIFURCATION THEORY AND CONTINUOUS FMRI
GRANT NUMBER: 5-R01-MH-61010-3-
10. **PRINCIPAL INVESTIGATOR: BOADA, FERNANDO E**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: METHODOLOGY FOR IN VIVO 3D TRIPLE QUANTUM SODIUM MRI
GRANT NUMBER: 8-R01-EB-291-3-
11. **PRINCIPAL INVESTIGATOR: BOLCH, WESLEY E**
AFFILIATION: UNIVERSITY OF FLORIDA
PROJECT TITLE: TOMOGRAPHIC DOSIMETRY PHANTOMS FOR PEDIATRIC RADIOLOGY
GRANT NUMBER: 5-R01-HD-38932-2-
12. **PRINCIPAL INVESTIGATOR: BOONE, JOHN M**
AFFILIATION: UNIVERSITY OF CALIFORNIA DAVIS
PROJECT TITLE: FEASIBILITY OF CT IN HIGH RISK BREAST CANCER PATIENTS
GRANT NUMBER: 1-R01-CA-89260-1-A1
13. **PRINCIPAL INVESTIGATOR: BOTTOMLEY, PAUL A**
AFFILIATION: JOHNS HOPKINS UNIVERSITY
PROJECT TITLE: INNOVATIVE MRI RESEARCH TECHNOLOGY
GRANT NUMBER: 1-R01-RR-15396-1-A1
14. **PRINCIPAL INVESTIGATOR: CAMPAGNOLA, PAUL J**
AFFILIATION: UNIVERSITY OF CONNECTICUT SCH OF MED/DNT
PROJECT TITLE: MULTIPHOTON BIOMEDICAL NANOFABRICATION
GRANT NUMBER: 5-R01-GM-60703-2-
15. **PRINCIPAL INVESTIGATOR: CARRINGTON, WALTER A**
AFFILIATION: UNIV OF MASSACHUSETTS MED SCH WORCESTER
PROJECT TITLE: HIGH RESOLUTION 4-DIMENSIONAL FLUORESCENCE MICROSCOPY
GRANT NUMBER: 5-R01-GM-61981-2-
16. **PRINCIPAL INVESTIGATOR: CELLIERS, PETER M**
AFFILIATION: UNIVERSITY OF CALIF-LAWRNC LVRMR NAT LAB
PROJECT TITLE: CLINICAL DIAGNOSTICS USING NONLINEAR OPTICAL IMAGING
GRANT NUMBER: 8-R01-EB-337-2-
17. **PRINCIPAL INVESTIGATOR: CHAPIN, JOHN K**
AFFILIATION: SUNY DOWNSTATE MEDICAL CENTER
PROJECT TITLE: ROBOT ARM CONTROL USING CORTICAL MULTINEURONAL RECORDING
GRANT NUMBER: 5-R01-NS-40543-2-
18. **PRINCIPAL INVESTIGATOR: CHEN, ZHONGPING**
AFFILIATION: UNIVERSITY OF CALIFORNIA IRVINE
PROJECT TITLE: HIGH SPEED HIGH RESOLUTION PHASE RESOLVED OCT/ODT
GRANT NUMBER: 8-R01-EB-293-3-
19. **PRINCIPAL INVESTIGATOR: CHEUNG, ANTHONY T**
AFFILIATION: UNIVERSITY OF CALIFORNIA DAVIS
PROJECT TITLE: BIOENGINEERING METHODS TO STUDY BLOOD SUBSTITUTES
GRANT NUMBER: 1-R01-HL-67432-1-A1
20. **PRINCIPAL INVESTIGATOR: CHILKOTI, ASHUTOSH**
AFFILIATION: DUKE UNIVERSITY
PROJECT TITLE: ELASTIN FUSION PROTEINS
GRANT NUMBER: 5-R01-GM-61232-3-

21. **PRINCIPAL INVESTIGATOR: CHO, MICHAEL R**
AFFILIATION: UNIVERSITY OF ILLINOIS AT CHICAGO
PROJECT TITLE: ELECTROMECHANICAL CONTROL OF CELL ADHESION AND MOTILITY
GRANT NUMBER: 1-R01-GM-60741-1-A2
22. **PRINCIPAL INVESTIGATOR: COLTON, RICHARD J.**
AFFILIATION: U.S. NAVAL RESEARCH LABORATORY
PROJECT TITLE: SINGLE CELL DETECTION AND ANALYSIS
GRANT NUMBER: 1-R01-GM-61358-1-
23. **PRINCIPAL INVESTIGATOR: COWAN, DOUGLAS B**
AFFILIATION: CHILDREN'S HOSPITAL (BOSTON)
PROJECT TITLE: ENGINEERING OF PACEMAKER TISSUE FOR CARDIAC IMPLANTATION
GRANT NUMBER: 1-R01-HL-68915-1-
24. **PRINCIPAL INVESTIGATOR: DARQUENNE, CHANTAL J**
AFFILIATION: UNIVERSITY OF CALIFORNIA SAN DIEGO
PROJECT TITLE: MODELING OF AEROSOL TRANSPORT IN ALVEOLATED AIRWAYS
GRANT NUMBER: 1-R01-ES-11177-1-
25. **PRINCIPAL INVESTIGATOR: DEMBO, MICAH**
AFFILIATION: BOSTON UNIVERSITY
PROJECT TITLE: THE BIOPHYSICS OF CELL-SUBSTRATUM TRACTION STRESS
GRANT NUMBER: 5-R01-GM-61806-2-
26. **PRINCIPAL INVESTIGATOR: DOBBINS, JAMES T**
AFFILIATION: DUKE UNIVERSITY
PROJECT TITLE: TOMOSYNTHESIS FOR IMPROVED PULMONARY NODULE DETECTION
GRANT NUMBER: 5-R01-CA-80490-3-
27. **PRINCIPAL INVESTIGATOR: DUNCAN, JAMES S**
AFFILIATION: YALE UNIVERSITY
PROJECT TITLE: AUTOMATIC IMAGE REGISTRATION FOR PROSTATE RADIOTHERAPY
GRANT NUMBER: 5-R01-CA-80894-3-
28. **PRINCIPAL INVESTIGATOR: DURAND, DOMINIQUE M**
AFFILIATION: CASE WESTERN RESERVE UNIVERSITY
PROJECT TITLE: ACTIVATION OF TONGUE MUSCLES IN OBSTRUCTIVE SLEEP APNEA
GRANT NUMBER: 5-R01-HL-66267-2-
29. **PRINCIPAL INVESTIGATOR: EPPSTEIN, MARGARET J**
AFFILIATION: UNIVERSITY OF VERMONT & ST AGRIC COLLEGE
PROJECT TITLE: 3 D FREQUENCY DOMAIN OPTICAL MAMMOGRAPHY WITH APPRIZE
GRANT NUMBER: 5-R01-CA-88082-2-
30. **PRINCIPAL INVESTIGATOR: FEDERSPIEL, WILLIAM J**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: PERCUTANEOUS RESPIRATORY ASSIST CATHETER
GRANT NUMBER: 1-R01-HL-70051-1-
31. **PRINCIPAL INVESTIGATOR: FIELDS, ALAN P**
AFFILIATION: UNIVERSITY OF TEXAS MEDICAL BR GALVESTON
PROJECT TITLE: LIPID SIGNALLING IN THE CELL NUCLEUS
GRANT NUMBER: 5-R03-TW-1381-2-
32. **PRINCIPAL INVESTIGATOR: GARD, STEVEN A**
AFFILIATION: NORTHWESTERN UNIVERSITY
PROJECT TITLE: INFLUENCE OF ANKLE MOTION ON BILATERAL AMPUTEE GAIT
GRANT NUMBER: 1-R01-HD-42592-1-

33. **PRINCIPAL INVESTIGATOR: GILBERTSON, LARS G.**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: DEVELOPMENT OF A ROBOTICS-BASED SPINE TESTING SYSTEM
GRANT NUMBER: 1-R01-AR-47336-1-A1
34. **PRINCIPAL INVESTIGATOR: GLUCKSBERG, MATTHEW R.**
AFFILIATION: NORTHWESTERN UNIVERSITY
PROJECT TITLE: COLOR DOPPLER IMAGING OF THE RETINA AND CHOROID
GRANT NUMBER: 5-R01-EY-13002-2-
35. **PRINCIPAL INVESTIGATOR: GRIFFIN, LANNY V**
AFFILIATION: CALIFORNIA STATE POLY U SAN LOUIS OBISPO
PROJECT TITLE: INTERFACIAL PROPERTIES OF HAVERSIAN BONE
GRANT NUMBER: 5-R01-DE-13579-2-
36. **PRINCIPAL INVESTIGATOR: GRIFFITH, BARTLEY P**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: BIOENGINEERING-BIOLOGIC STUDY OF NON-PULSATILE PERFUSION
GRANT NUMBER: 5-R01-HL-64950-2-
37. **PRINCIPAL INVESTIGATOR: GRIFFITH, BARTLEY P**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: DEVELOPMENT OF A CHRONIC ARTIFICIAL LUNG
GRANT NUMBER: 5-R01-HL-65740-2-
38. **PRINCIPAL INVESTIGATOR: HASKELL-LUEVANO, CARRIE**
AFFILIATION: UNIVERSITY OF FLORIDA
PROJECT TITLE: STRUCTURAL DETERMINANTS OF NEUROENDOCRINE RECEPTORS
GRANT NUMBER: 3-R01-DK-57080-2-S1
39. **PRINCIPAL INVESTIGATOR: HASKELL-LUEVANO, CARRIE**
AFFILIATION: UNIVERSITY OF FLORIDA
PROJECT TITLE: STRUCTURAL DETERMINANTS OF NEUROENDOCRINE RECEPTORS
GRANT NUMBER: 3-R01-DK-57080-2-S2
40. **PRINCIPAL INVESTIGATOR: HASKELL-LUEVANO, CARRIE**
AFFILIATION: UNIVERSITY OF FLORIDA
PROJECT TITLE: STRUCTURAL DETERMINANTS OF NEUROENDOCRINE RECEPTORS
GRANT NUMBER: 5-R01-DK-57080-2-
41. **PRINCIPAL INVESTIGATOR: HEIDEMANN, STEVEN R**
AFFILIATION: MICHIGAN STATE UNIVERSITY
PROJECT TITLE: CYTOMECHANICS OF CELL CRAWLING
GRANT NUMBER: 5-R01-GM-61339-3-
42. **PRINCIPAL INVESTIGATOR: HERMAN, GABOR T**
AFFILIATION: CUNY GRADUATE SCH AND UNIV CTR
PROJECT TITLE: IMAGE PROCESSING IN BIOLOGICAL 3D ELECTRON MICROSCOPY
GRANT NUMBER: 1-R01-HL-70472-1-
43. **PRINCIPAL INVESTIGATOR: HERZENBERG, LEONARD A**
AFFILIATION: STANFORD UNIVERSITY
PROJECT TITLE: MULTI COLORS FACS--ADVANCEMENT FOR EXTENDED APPLICATIONS
GRANT NUMBER: 3-R01-CA-89499-2-S1
44. **PRINCIPAL INVESTIGATOR: HERZENBERG, LEONARD A**
AFFILIATION: STANFORD UNIVERSITY
PROJECT TITLE: MULTI COLORS FACS--ADVANCEMENT FOR EXTENDED APPLICATIONS
GRANT NUMBER: 5-R01-CA-89499-2-

45. **PRINCIPAL INVESTIGATOR: HOH, JAN H**
AFFILIATION: JOHNS HOPKINS UNIVERSITY
PROJECT TITLE: NANOFABRICATION OF HIGH PERFORMANCE AFM CANTILEVERS
GRANT NUMBER: 1-R01-GM-64020-1-
46. **PRINCIPAL INVESTIGATOR: HOLSCHNEIDER, DANIEL P**
AFFILIATION: UNIVERSITY OF SOUTHERN CALIFORNIA
PROJECT TITLE: AN IMPLANTABLE BOLUS INFUSION PUMP FOR THE NEUROSCIENCES
GRANT NUMBER: 5-R01-MH-62148-2-
47. **PRINCIPAL INVESTIGATOR: HU, XIAOPING P**
AFFILIATION: UNIVERSITY OF MINNESOTA TWIN CITIES
PROJECT TITLE: IMPROVEMENT AND APPLICATIONS OF FUNCTIONAL MRI
GRANT NUMBER: 5-R01-MH-55346-6-
48. **PRINCIPAL INVESTIGATOR: HUMPHREY, JAY D.**
AFFILIATION: TEXAS A&M UNIVERSITY SYSTEM
PROJECT TITLE: MECHANICAL STRESS AND THE HEAT-TREATMENT OF SOFT TISSUE
GRANT NUMBER: 1-R01-HL-68118-1-
49. **PRINCIPAL INVESTIGATOR: JUNG, RANU J**
AFFILIATION: UNIVERSITY OF KENTUCKY
PROJECT TITLE: A RODENT MODEL FOR LOCOMOTOR TRAINING WITH FNS
GRANT NUMBER: 1-R01-HD-40335-1-A1
50. **PRINCIPAL INVESTIGATOR: KHOUBEHI, BAHRAM**
AFFILIATION: LOUISIANA STATE UNIV HSC NEW ORLEANS
PROJECT TITLE: RETINAL AND CHOROIDAL BLOOD FLOW IMAGING
GRANT NUMBER: 8-R01-EB-242-3-
51. **PRINCIPAL INVESTIGATOR: KHOURY, DIRAR S**
AFFILIATION: BAYLOR COLLEGE OF MEDICINE
PROJECT TITLE: VIRTUAL ELECTRICAL-ANATOMICAL IMAGING OF THE HEART
GRANT NUMBER: 1-R01-HL-68768-1-
52. **PRINCIPAL INVESTIGATOR: KILGORE, KEVIN L**
AFFILIATION: CASE WESTERN RESERVE UNIVERSITY
PROJECT TITLE: A NOVEL WAVEFORM FOR ELECTRICAL NERVE CONDUCTION BLOCK
GRANT NUMBER: 1-R01-NS-40553-1-A1
53. **PRINCIPAL INVESTIGATOR: KIRZ, JANOS**
AFFILIATION: STATE UNIVERSITY NEW YORK STONY BROOK
PROJECT TITLE: HIGH RESOLUTION 3D X-RAY DIFFRACTION MICROSCOPE
GRANT NUMBER: 1-R01-GM-64846-1-
54. **PRINCIPAL INVESTIGATOR: KOHN, DAVID H.**
AFFILIATION: UNIVERSITY OF MICHIGAN AT ANN ARBOR
PROJECT TITLE: 3-D BIOMIMETIC SCAFFOLDS FOR BONE TISSUE ENGINEERING
GRANT NUMBER: 5-R01-DE-13380-2-
55. **PRINCIPAL INVESTIGATOR: KWON, GLEN S**
AFFILIATION: UNIVERSITY OF WISCONSIN MADISON
PROJECT TITLE: BIOSPECIFIC POLYMER ENZYME CONJUGATES FOR DRUG DELIVERY
GRANT NUMBER: 5-R01-CA-86010-2-
56. **PRINCIPAL INVESTIGATOR: LARSON, RONALD G**
AFFILIATION: UNIVERSITY OF MICHIGAN AT ANN ARBOR
PROJECT TITLE: A MICROFABRICATED DEVICE FOR RAPID VIRAL GENOME ANALYSIS
GRANT NUMBER: 5-R01-AI-49541-2-

57. **PRINCIPAL INVESTIGATOR: LEDBETTER, JEFFREY A**
AFFILIATION: PACIFIC NORTHWEST RESEARCH INSTITUTE
PROJECT TITLE: GENE THERAPY WITH MAB DRIVATIVES EXPRESSED ON TUMORS
GRANT NUMBER: 5-R01-CA-90143-3-
58. **PRINCIPAL INVESTIGATOR: LEWIS, NATHAN S**
AFFILIATION: CALIFORNIA INSTITUTE OF TECHNOLOGY
PROJECT TITLE: BIOMEDICAL APPLICATION OF AN ELECTRONIC NOSE
GRANT NUMBER: 5-R01-DC-4712-2-
59. **PRINCIPAL INVESTIGATOR: LIAO, JAMES**
AFFILIATION: UNIVERSITY OF CALIFORNIA LOS ANGELES
PROJECT TITLE: NITRIC OXIDE DIFFUSION AND REACTION WITH ERTHROCYTES
GRANT NUMBER: 5-R01-HL-65741-2-
60. **PRINCIPAL INVESTIGATOR: LINDSAY, STUART M**
AFFILIATION: ARIZONA STATE UNIVERSITY
PROJECT TITLE: NEW SPM METHODS TO STUDY CHROMATIN REMODELING
GRANT NUMBER: 5-R01-CA-85990-2-
61. **PRINCIPAL INVESTIGATOR: LOTZ, JEFFREY C.**
AFFILIATION: UNIVERSITY OF CALIFORNIA SAN FRANCISCO
PROJECT TITLE: ANALYSIS OF INJURY AVOIDANCE STRATEGIES DURING FALLS
GRANT NUMBER: 5-R01-AR-46890-2-
62. **PRINCIPAL INVESTIGATOR: LOUGHLIN, PATRICK J**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: TIME VARYING CHARACTERISTICS OF HUMAN POSTURAL SWAY
GRANT NUMBER: 5-R01-DC-4435-3-
63. **PRINCIPAL INVESTIGATOR: MACOVSKI, ALBERT**
AFFILIATION: STANFORD UNIVERSITY
PROJECT TITLE: DEVELOPMENT OF A PREPOLARIZED MRI EXTREMITY SCANNER
GRANT NUMBER: 1-R01-CA-92409-1-
64. **PRINCIPAL INVESTIGATOR: MAHVI, DAVID M.**
AFFILIATION: UNIVERSITY OF WISCONSIN MADISON
PROJECT TITLE: HEPATIC RF ABLATION: DEVELOPMENT OF EFFECTIVE DEVICES
GRANT NUMBER: 1-R01-DK-58839-1-A1
65. **PRINCIPAL INVESTIGATOR: MAKRIGIORGOS, MIKE G.**
AFFILIATION: DANA-FARBER CANCER INSTITUTE
PROJECT TITLE: MICROSPHERE ARRAY FOR LUNG CANCER MUTATION SCANNING
GRANT NUMBER: 1-R01-CA-90422-1-
66. **PRINCIPAL INVESTIGATOR: MARGULIES, SUSAN S**
AFFILIATION: UNIVERSITY OF PENNSYLVANIA
PROJECT TITLE: BIOMECHANICS OF PEDIATRIC HEAD INJURY
GRANT NUMBER: 1-R01-NS-39679-1-A2
67. **PRINCIPAL INVESTIGATOR: MARRO, KENNETH I**
AFFILIATION: UNIVERSITY OF WASHINGTON
PROJECT TITLE: NMR MEASUREMENT OF PERFUSION IN SKELETAL MUSCLE & BRAIN
GRANT NUMBER: 1-R01-HL-64946-1-A1
68. **PRINCIPAL INVESTIGATOR: MATSUMOTO, HIROYUKI**
AFFILIATION: UNIVERSITY OF OKLAHOMA HLTH SCIENCES CTR
PROJECT TITLE: OCULAR PROTEOMICS OF RODENT RETINA
GRANT NUMBER: 1-R01-EY-13877-1-

69. **PRINCIPAL INVESTIGATOR: MATTHEW, HOWARD W**
AFFILIATION: WAYNE STATE UNIVERSITY
PROJECT TITLE: NON-DIFFERENTIATIVE HEMATOPOIETIC STEM CELL EXPANSION
GRANT NUMBER: 1-R01-DK-58711-1-A1
70. **PRINCIPAL INVESTIGATOR: MAUDSLEY, ANDREW A**
AFFILIATION: NORTHERN CALIFORNIA INSTITUTE RES & EDUC
PROJECT TITLE: PROTON MR SPECTROSCOPIC IMAGING OF EPILEPSY
GRANT NUMBER: 1-R01-NS-41946-1-
71. **PRINCIPAL INVESTIGATOR: MERFELD, DANIEL M**
AFFILIATION: MASSACHUSETTS EYE AND EAR INFIRMARY
PROJECT TITLE: ADAPTATION TO CONTROLLED VESTIBULAR STIMULATION
GRANT NUMBER: 2-R01-DC-3066-8-
72. **PRINCIPAL INVESTIGATOR: MESSERSMITH, PHILLIP B.**
AFFILIATION: NORTHWESTERN UNIVERSITY
PROJECT TITLE: BIOADHESIVE POLYMER HYDROGELS: BASIC AND APPLIED STUDIES
GRANT NUMBER: 1-R01-DE-14193-1-A1
73. **PRINCIPAL INVESTIGATOR: MEWES, KLAUS**
AFFILIATION: EMORY UNIVERSITY
PROJECT TITLE: ADVANCED METHODS FOR MICROELECTRODE GUIDED NEUROSURGERY
GRANT NUMBER: 5-R01-NS-40548-2-
74. **PRINCIPAL INVESTIGATOR: MILLER, CHRISTINE E**
AFFILIATION: UNIVERSITY OF ROCHESTER
PROJECT TITLE: CONTROL OF STRESS AND STRAIN IN THE EMBRYONIC HEART
GRANT NUMBER: 5-R01-HL-65908-2-
75. **PRINCIPAL INVESTIGATOR: MOURANT, JUDITH R**
AFFILIATION: UNIVERSITY OF CALIF-LOS ALAMOS NAT LAB
PROJECT TITLE: RAMAN SPECTROSCOPY FOR CANCER DIAGNOSIS AND MONITORING
GRANT NUMBER: 5-R01-CA-89255-2-
76. **PRINCIPAL INVESTIGATOR: MUNN, LANCE L**
AFFILIATION: MASSACHUSETTS GENERAL HOSPITAL
PROJECT TITLE: CELL-SURFACE ADHESION--INFLUENCE OF BLOOD RHEOLOGY
GRANT NUMBER: 5-R01-HL-64240-2-
77. **PRINCIPAL INVESTIGATOR: NAGARAJAN, SRIKANTAN S**
AFFILIATION: UNIVERSITY OF UTAH
PROJECT TITLE: CORTICAL SPATIOTEMPORAL PLASTICITY IN HUMANS
GRANT NUMBER: 1-R01-DC-4855-1-A1
78. **PRINCIPAL INVESTIGATOR: NORMANN, RICHARD A**
AFFILIATION: UNIVERSITY OF UTAH
PROJECT TITLE: A PERIPHERAL NERVE, INTRAFASCICULAR MULTIELECTRODE ARRAY
GRANT NUMBER: 5-R01-NS-39677-3-
79. **PRINCIPAL INVESTIGATOR: OBER, RAIMUND J**
AFFILIATION: UNIVERSITY OF TEXAS DALLAS
PROJECT TITLE: IMAGE PROCESSING OF IMMUNOLOGICAL MICROSCOPY SAMPLES
GRANT NUMBER: 1-R01-AI-50747-1-
80. **PRINCIPAL INVESTIGATOR: ONG, JOO L**
AFFILIATION: UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT
PROJECT TITLE: EARLY BONE FORMATION AT BONE BIOMATERIAL INTERFACE
GRANT NUMBER: 5-R01-AR-46581-2-

81. **PRINCIPAL INVESTIGATOR: PALANKER, DANIEL**
AFFILIATION: STANFORD UNIVERSITY
PROJECT TITLE: ELECTRICAL ALTERNATIVE LASERS INTRAOCULAR MICROSURGERY
GRANT NUMBER: 5-R01-EY-12888-2-
82. **PRINCIPAL INVESTIGATOR: PATWARDHAN, ABHIJIT R**
AFFILIATION: UNIVERSITY OF KENTUCKY
PROJECT TITLE: CARDIO-RESPIRATORY INTERACTION: CONTRIBUTION IN SYNCOPE
GRANT NUMBER: 1-R01-HL-65735-1-A1
83. **PRINCIPAL INVESTIGATOR: PETERKA, ROBERT J**
AFFILIATION: OREGON HEALTH & SCIENCE UNIVERSITY
PROJECT TITLE: NEW METHOD TO IDENTIFY UNILATERAL VESTIBULAR DYSFUNCTION
GRANT NUMBER: 5-R01-DC-4592-2-
84. **PRINCIPAL INVESTIGATOR: PETERSON, ELLENGENE H**
AFFILIATION: OHIO UNIVERSITY ATHENS
PROJECT TITLE: BIOMECHANICS OF VERTEBRATE HAIR CELLS
GRANT NUMBER: 1-R01-DC-5063-1-
85. **PRINCIPAL INVESTIGATOR: PETROLL, WALTER M**
AFFILIATION: UNIVERSITY OF TEXAS SW MED CTR/DALLAS
PROJECT TITLE: ASSESMENT OF CORNEAL FIBROBLAST BIOMECHANICAL BEHAVIOR
GRANT NUMBER: 5-R01-EY-13322-2-
86. **PRINCIPAL INVESTIGATOR: PHILLIPS, CHARLOTTE L**
AFFILIATION: UNIVERSITY OF MISSOURI COLUMBIA
PROJECT TITLE: BIOMOLECULAR MECHANICS OF COLLAGEN MONOMERS AND FIBRILS
GRANT NUMBER: 1-R01-AR-48195-1-
87. **PRINCIPAL INVESTIGATOR: REBRIN, KERSTIN**
AFFILIATION: MINIMED, INC.
PROJECT TITLE: SUPPORT SYSTEM FOR SUBCUTANEOUS INSULIN DELIVERY BY PUMP
GRANT NUMBER: 5-R01-DK-57210-2-
88. **PRINCIPAL INVESTIGATOR: ROORDA, AUSTIN J**
AFFILIATION: UNIVERSITY OF HOUSTON-UNIVERSITY PARK
PROJECT TITLE: ADAPTIVE OPTICS SCANNING LASER OPHTHALMOSCOPE
GRANT NUMBER: 1-R01-EY-13299-1-
89. **PRINCIPAL INVESTIGATOR: SACKS, MICHAEL S**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: ENHANCED DURABILITY OF BIOPROSTHETIC HEART VALVES
GRANT NUMBER: 5-R01-HL-63026-2-
90. **PRINCIPAL INVESTIGATOR: SACKS, MICHAEL S**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: BIOMECHANICAL OPTIMIZATION OF TE HEART VALVES
GRANT NUMBER: 1-R01-HL-68816-1-
91. **PRINCIPAL INVESTIGATOR: SETTON, LORI A**
AFFILIATION: DUKE UNIVERSITY
PROJECT TITLE: MECHANICAL STIMULATION OF IVD CELLS
GRANT NUMBER: 5-R01-AR-47442-2-
92. **PRINCIPAL INVESTIGATOR: SMITH, GEORGE M**
AFFILIATION: UNIVERSITY OF KENTUCKY
PROJECT TITLE: BIORESORBABLE MICROFILAMENTS FOR NERVOUS SYSTEM REPAIR
GRANT NUMBER: 5-R01-NS-40592-3-

93. **PRINCIPAL INVESTIGATOR: SODICKSON, DANIEL K**
AFFILIATION: BETH ISRAEL DEACONESS MEDICAL CENTER
PROJECT TITLE: PARALLEL MR IMAGING: NEW TECHNIQUES AND TECHNOLOGIES
GRANT NUMBER: 1-R01-EB-447-1-
94. **PRINCIPAL INVESTIGATOR: SUN, MINGUI**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: DATA COMMUNICATION WITH IMPLANTABLE MICRO DEVICES
GRANT NUMBER: 1-R01-NS-43791-1-
95. **PRINCIPAL INVESTIGATOR: TABER, LARRY A**
AFFILIATION: WASHINGTON UNIVERSITY
PROJECT TITLE: BIOMECHANICS OF LOOPING IN THE EMBRYONIC HEART
GRANT NUMBER: 5-R01-HL-64347-3-
96. **PRINCIPAL INVESTIGATOR: TENDER, LEONARD M**
AFFILIATION: U.S. NAVAL RESEARCH LABORATORY
PROJECT TITLE: BIOSENSOR FOR INVESTIGATING A DEVELOPING IMMUNE RESPONSE
GRANT NUMBER: 1-R01-AI-47427-1-A1
97. **PRINCIPAL INVESTIGATOR: TIRRELL, DAVID A**
AFFILIATION: CALIFORNIA INSTITUTE OF TECHNOLOGY
PROJECT TITLE: NEW AMINO ACIDS FOR PROTEIN ENGINEERING
GRANT NUMBER: 5-R01-GM-62523-2-
98. **PRINCIPAL INVESTIGATOR: TITZE, INGO R**
AFFILIATION: UNIVERSITY OF IOWA
PROJECT TITLE: NEUROMUSCULAR CONTROL OF THE LARYNX DURING PHONATION
GRANT NUMBER: 5-R01-DC-4347-2-
99. **PRINCIPAL INVESTIGATOR: TORZILLI, PETER A**
AFFILIATION: HOSPITAL FOR SPECIAL SURGERY
PROJECT TITLE: CARTILAGE DEGENERATION FOLLOWING JOINT TRAUMA
GRANT NUMBER: 5-R01-AR-47656-2-
100. **PRINCIPAL INVESTIGATOR: TRIOLO, RONALD J**
AFFILIATION: CASE WESTERN RESERVE UNIVERSITY
PROJECT TITLE: AUTOMATIC CONTROL OF STANDING BALANCE WITH FNS
GRANT NUMBER: 5-R01-NS-40547-2-
101. **PRINCIPAL INVESTIGATOR: UDUPA, JAYARAM K**
AFFILIATION: UNIVERSITY OF PENNSYLVANIA
PROJECT TITLE: BIOMECHANICS OF FOOT/ANKLE INJURIES USING 3D IMAGING
GRANT NUMBER: 5-R01-AR-46902-3-
102. **PRINCIPAL INVESTIGATOR: VENUGOPALAN, VASAN**
AFFILIATION: UNIVERSITY OF CALIFORNIA IRVINE
PROJECT TITLE: PHOTON MIGRATION FOR MEASUREMENT OF SMALL TISSUE VOLUMES
GRANT NUMBER: 1-R01-CA-92063-1-
103. **PRINCIPAL INVESTIGATOR: VIGNERON, DANIEL B**
AFFILIATION: UNIVERSITY OF CALIFORNIA SAN FRANCISCO
PROJECT TITLE: 3D MR SPECTROSCOPIC IMAGING OF THE NEWBORN BRAIN
GRANT NUMBER: 5-R01-NS-40117-2-
104. **PRINCIPAL INVESTIGATOR: VOHRA, YOGESH K.**
AFFILIATION: UNIVERSITY OF ALABAMA AT BIRMINGHAM
PROJECT TITLE: NANOCRYSTALLINE COATINGS FOR DENTAL TMJ IMPLANTS
GRANT NUMBER: 1-R01-DE-13952-1-A1

105. **PRINCIPAL INVESTIGATOR: VORP, DAVID A**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: BIOMECHANICAL EVALUATION OF ABDOMINAL AORTIC ANEURYSM
GRANT NUMBER: 5-R01-HL-60670-2-
106. **PRINCIPAL INVESTIGATOR: VORP, DAVID A**
AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH
PROJECT TITLE: BIOMECHANICAL PRECONDITIONING OF HUMAN VEIN GRAFTS
GRANT NUMBER: 5-R01-HL-65745-2-
107. **PRINCIPAL INVESTIGATOR: WANG, KENNETH K**
AFFILIATION: MAYO CLINIC ROCHESTER
PROJECT TITLE: A NOVEL TECHNIQUE FOR SCREENING BARRETT'S ESOPHAGUS
GRANT NUMBER: 5-R01-CA-85992-3-
108. **PRINCIPAL INVESTIGATOR: WHITE, MORENO J**
AFFILIATION: SPARTA, INC.
PROJECT TITLE: ADVANCED BIOFIDOLIC LOWER EXTREMITY PROSTHESIS RESEARCH
GRANT NUMBER: 5-R01-HD-38933-2-
109. **PRINCIPAL INVESTIGATOR: WILSON, DAVID L**
AFFILIATION: CASE WESTERN RESERVE UNIVERSITY
PROJECT TITLE: TISSUE RESPONSE IN IMRI GUIDED CANCER THERAPY
GRANT NUMBER: 5-R01-CA-84433-2-
110. **PRINCIPAL INVESTIGATOR: WOLF, PATRICK D**
AFFILIATION: DUKE UNIVERSITY
PROJECT TITLE: VERY LOW ENERGY CARDIOVERSION FOR ATRIAL FIBRILLATION
GRANT NUMBER: 5-R01-HL-64238-2-
111. **PRINCIPAL INVESTIGATOR: YOUNG, MARK J**
AFFILIATION: MONTANA STATE UNIVERSITY (BOZEMAN)
PROJECT TITLE: VIRUS BASED BIO-IMAGING & THERAPEUTIC DELIVERY SYSTEMS
GRANT NUMBER: 5-R01-GM-61340-2-
112. **PRINCIPAL INVESTIGATOR: ZHAO, YUNXIN**
AFFILIATION: UNIVERSITY OF MISSOURI COLUMBIA
PROJECT TITLE: ENHANCED MULTIMEDIA TELEHEALTH FOR HEARING DISABILITIES
GRANT NUMBER: 1-R01-DC-4340-1-A2