



# NEW JERSEY MEDICAL SCHOOL ORSP RESEARCH NEWSLETTER

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VOLUME 14, ISSUE 14

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## FEATURED FACULTY DIEGO FRAIDENRAICH, PH.D. ASSISTANT PROFESSOR CELL BIOLOGY & MOLECULAR MEDICINE

IN 1994, DR. DIEGO FRAIDENRAICH EARNED HIS PHD FROM THE UNIVERSITY OF BUENOS AIRES, ARGENTINA, WHERE HE STUDIED THE MOLECULAR INTERACTION BETWEEN THE PARASITE RESPONSIBLE FOR CAUSING THE 'CHAGAS' DISEASE AND THE INSECT VECTOR. THE RESULTS OF HIS THESIS RESEARCH WERE PUBLISHED IN THE *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES, USA*, AND WERE COMMUNICATED BY NOBEL LAUREATE DR. JAMES WATSON. IN 1995, DR. FRAIDENRAICH JOINED NEW YORK UNIVERSITY AS A PEW LATIN AMERICAN FELLOW, TO INVESTIGATE MECHANISMS OF MUSCLE DEVELOPMENT IN MOUSE EMBRYOS. THE RESULTS WERE PUBLISHED IN *DEVELOPMENTAL BIOLOGY* AND *MECHANISMS OF DEVELOPMENT*. IN 2001, DR. FRAIDENRAICH JOINED THE MEMORIAL SLOAN-KETTERING CANCER CENTER IN NEW YORK AS A RESEARCH FELLOW AND FOCUSED HIS ATTENTION ON THE STUDIES OF CONGENITAL HEART DISEASE IN MICE. RELEVANT TO HIS CURRENT RESEARCH, DR. FRAIDENRAICH INJECTED WILD TYPE MURINE EMBRYONIC STEM (ES) CELLS INTO EMBRYOS CONTAINING MUTATIONS IN THE 'INHIBITOR OF DNA BINDING' (Id) GENES (Id KNOCKOUT EMBRYOS) OR INTO FEMALE MICE HARBORING THE Id KNOCKOUT EMBRYOS. THE Id KO EMBRYOS DEVELOP AN EMBRYONIC LETHAL CARDIAC ABNORMALITY, BUT ES CELL INJECTION RESCUED THE CARDIAC PHENOTYPE AND LETHALITY. USING GENE EXPRESSION ARRAYS, DR. FRAIDENRAICH IDENTIFIED MEMBERS OF THE INSULIN-LIKE GROWTH FACTOR (IGF) FAMILY AS MEDIATORS OF THE ES CELL RESCUE EFFECT. THESE RESULTS WERE PUBLISHED IN THE JOURNALS *SCIENCE* AND IN *NATURE CLINICAL PRACTICE CARDIOVASCULAR MEDICINE*.

IN DECEMBER 2006, DR. FRAIDENRAICH JOINED THE NEW JERSEY MEDICAL SCHOOL AT UMDNJ, WHERE HE IS AN ASSISTANT PROFESSOR AND DIRECTOR OF STEM CELL RESEARCH IN THE DEPARTMENT OF CELL BIOLOGY AND MOLECULAR MEDICINE. THE MAIN FOCUS OF HIS LAB IS TO STUDY CORRECTIVE ACTIVITIES OF THE PLURIPOTENT STEM CELLS AND THEIR SECRETED FACTORS IN MOUSE MODELS OF HUMAN DISEASE. THE STEM CELLS ARE INJECTED VIA VARIOUS ROUTES IN THE ADULT DEFICIENT MOUSE, OR INTO DEFICIENT EMBRYOS, OR ARE FIRST TURNED INTO TISSUE IN THE PETRI DISH (E.G. CARDIAC MYOCYTES) BEFORE IMPLANTATION. SOME EXAMPLES OF PATHOLOGIES UNDER STUDY ARE MUSCULAR DYSTROPHY, DILATED CARDIOMYOPATHY AND WOUND HEALING. SOME STEM CELL-DERIVED FACTORS, LIKE MEMBERS OF THE IGF FAMILY, ARE ALREADY UNDER INVESTIGATION. ULTIMATELY, THE LONG-TERM GOAL OF DR. FRAIDENRAICH'S LAB IS TO REPLACE STEM CELL-BASED THERAPY BY THE DEFINED FACTORS THAT ARE RESPONSIBLE FOR THEIR THERAPEUTIC EFFECTS. DURING HIS TENURE AT UMDNJ, DR. FRAIDENRAICH HAS PUBLISHED THE RESULTS IN *PLoS ONE*, *DEVELOPMENTAL BIOLOGY*, *STEM CELLS* AND *STEM CELL REVIEWS AND REPORTS*. DR. FRAIDENRAICH IS ALSO A FACULTY MEMBER OF THE GRADUATE SCHOOL OF BIOMEDICAL SCIENCES AND OF THE HISPANIC CENTER OF EXCELLENCE (HCoE). HIS LAB IS CONFORMED BY DR. QINGSHI ZHAO (RESEARCH ASSOCIATE), JOSEPH VITALE AND JOEL SCHNEIDER (PHD STUDENTS) AND COREY CHANG (MD/PHD STUDENT). DR. FRAIDENRAICH'S CAREER DEVELOPMENT PATH IS SUPPORTED BY A MENTORING PROGRAM FROM THE HCoE, HIS RESEARCH EFFORTS ARE ALSO SUPPORTED BY THE NATIONAL INSTITUTE OF HEALTH AND THE UMDNJ FOUNDATION.



David Alland, MD  
PROFESSOR  
DEPARTMENT OF MEDICINE

WE WOULD LIKE TO RECOGNIZE THE ACHIEVEMENT OF DR. DAVID ALLAND AND HIS COLLEAGUES FOR THE DEVELOPMENT OF A RAPID DETECTION TEST FOR TUBERCULOSIS, PUBLISHED RECENTLY IN THE NEW ENGLAND JOURNAL OF MEDICINE. THIS DISCOVERY WILL REVOLUTIONIZE TB DETECTIONS WORLD-WIDE.



**DEBORAH A. LAZZARINO, PH.D.**  
 ASSISTANT DEAN FOR  
 RESEARCH ADMINISTRATION  
 OFFICE OF RESEARCH &  
 SPONSORED PROGRAMS

FOR THE PAST FIVE YEARS, AS A RESEARCH FACULTY MEMBER IN THE DEPARTMENT OF NEUROLOGY & NEUROSCIENCES, I HAVE THOROUGHLY ENJOYED WORKING WITH MANY OF THE NJMS RESEARCHERS AND ADMINISTRATORS. I AM THRILLED TO BE PLAYING NOW A NEW ROLE AS AN NJMS ADMINISTRATOR, SERVING THE RESEARCH, PATIENT AND STUDENT COMMUNITIES. IN MY ROLE AS DIRECTOR OF ORSP, I HOPE TO HELP TO CREATE NEW DIRECTIONS FOR OUR BASIC AND CLINICAL RESEARCHERS AS WELL AS ENHANCE THE LEARNING ENVIRONMENT AT OUR MEDICAL AND GRADUATE SCHOOLS. PLEASE FEEL FREE TO CONTACT ME WITH ANY IDEAS OR SUGGESTIONS ON HOW TO IMPROVE ALL ASPECTS OF RESEARCH PROGRAMS AT NJMS, AND THANK YOU FOR THE OPPORTUNITY TO SERVE YOU.



**FEATURED FACULTY**  
**KEVIN D. BECK, PH.D.,**  
**ASSISTANT PROFESSOR**  
**NEUROLOGY AND NEUROSCIENCES**

KEVIN D. BECK PH.D. HAS SPENT OVER A DECADE STUDYING HOW STRESSFUL EXPERIENCES CAUSE DIFFERENT COGNITIVE AND BEHAVIORAL DISTURBANCES IN SPECIFIC VULNERABLE POPULATIONS. BEGINNING AS A CITY UNIVERSITY OF NEW YORK DOCTORAL STUDENT IN THE LABORATORY OF VICTORIA LUINE PH.D., DR. BECK ESTABLISHED THAT CHRONIC STRESSOR EXPOSURE CAUSED SEX-SPECIFIC IMPAIRMENTS IN SPATIAL AND NON-SPATIAL MEMORY IN RATS. THESE BEHAVIORAL DIFFERENCES WERE ASSOCIATED WITH DIFFERENCES IN NOREPINEPHRINE AND DOPAMINE LEVELS IN THE HIPPOCAMPUS AND PREFRONTAL CORTEX, RESPECTIVELY. IN 1999, DR. BECK BEGAN A POST-DOCTORAL FELLOWSHIP AT UMDNJ-NEW JERSEY MEDICAL SCHOOL IN THE LABORATORY OF RICHARD SERVATIUS. THERE, HE BEGAN TO STUDY THE EFFECTS OF ACUTE TRAUMA UPON SENSORY REACTIVITY AND SIMPLE ASSOCIATIVE LEARNING. SINCE THAT TIME, DR. BECK WAS APPOINTED RESEARCH PHYSIOLOGIST AT ONE OF THE UDMNJ AFFILIATE HOSPITALS, THE VA NEW JERSEY HEALTH CARE SYSTEM (EAST ORANGE) AND APPOINTED ASSISTANT PROFESSOR AT THE NEW JERSEY MEDICAL SCHOOL IN THE DEPARTMENT OF NEUROLOGY AND NEUROSCIENCES IN 2003.

DR. BECK'S LAB CONTINUES TO DISCOVER HOW CERTAIN POPULATIONS DIFFERENTIALLY RESPOND TO STRESS, LEAVING THEM VULNERABLE TO EXHIBIT ABNORMAL BEHAVIORS ANALOGOUS WITH SYMPTOMS OF CLINICAL ANXIETY AND DEPRESSION. IN DOING SO, THE LAB DISCOVERED ELEVATED LEVELS OF CIRCULATING INTERLEUKIN-1 AND PROGESTERONE, DURING STRESSOR EXPOSURE, CAUSE FEMALES TO DAMPEN THEIR REACTIVITY TO STIMULI FOLLOWING THE TRAUMA – LEADING TO SLOWER ASSOCIATIVE LEARNING. IN CONTRAST, WHEN AVOIDABLE, FEMALES MORE READILY LEARN BEHAVIORS THAT MINIMIZE EXPOSURE TO THE STRESSOR. IN PARALLEL WORK, WISTAR-KYOTO RATS, A MODEL OF BEHAVIORALLY INHIBITED TEMPERAMENT, EXHIBIT RAPID ACQUISITION OF AVERSIVE STIMULUS-RESPONSE ASSOCIATIONS AS WELL; HOWEVER, THE MECHANISMS OF RAPID LEARNING APPEAR TO BE DISSOCIABLE FROM THAT ASSOCIATED WITH FEMALE SEX. ACTIVATION OF SEVERAL BRAIN AREAS ASSOCIATED WITH THE DETECTION OF THREAT (MEDIAL PREFRONTAL CORTEX), MOBILIZATION TO THREAT (AMYGDALA), AND LEARNING OF STIMULUS-RESPONSE ASSOCIATION (DORSAL STRIATUM) ARE DIFFERENTIALLY OVER-ACTIVE IN WISTAR-KYOTO RATS AFTER LEARNING HOW TO AVOID STRESSOR EXPOSURE. THE RESULT OF THIS DIFFERENTIAL BRAIN PROCESSING IS A RESISTANCE TO EXTINGUISH AVERSIVELY LEARNED BEHAVIORS – A PARAMOUNT SIGN OF CLINICAL ANXIETY. THE LAB CONTINUES TO EXPLORE THE NEURAL MECHANISMS UNDERLYING AVERSIVE STIMULUS-RESPONSE LEARNING THAT LEAD TO INCREASED VULNERABILITY TO EXHIBIT SYMPTOMS OF CLINICAL ANXIETY IN CERTAIN POPULATIONS.



CHUNXIANG ZHANG, M.D., Ph.D.  
ASSOCIATE PROFESSOR  
ANESTHESIOLOGY

### CONGRATULATIONS!

DR. ZHANG'S miR-145 ARTICLE WAS SELECTED AS THE WINNER OF THE "2010 BEST MANUSCRIPT AWARDS". HERE IS AN EXCERPT FROM THE RECOGNITION LETTER...

"Five papers will be recognized among all 262 original research articles published in *Circulation Research* from July 2009 and June 2010. We are pleased to inform you that your manuscript (Cheng et al., MicroRNA-145, A Novel Smooth Muscle Cell Phenotypic Marker and Modulator, Controls Vascular Neointimal Lesion Formation. *Circ Res.* 2009; 158-166) has been selected by the Editors as one of the five winners of our 2010 Best Manuscript Awards. Your article has met high standards of scientific excellence in terms of novelty, impact, and methodology; it has been both widely read online and highly cited in print, and represents some of the very best work published in *Circulation Research*."

### CONGRATULATIONS!

STEVEN SCHUTZER, MD  
PROFESSOR  
DEPARTMENT OF MEDICINE

CONGRATULATIONS TO YOU ON YOUR RECENT ACHIEVEMENT "Spinal Fluid Research Wins Gordon Battelle Prize".

FOR FULL REVIEW OF THE ARTICLE, PLEASE LINK TO:

<http://www.pnl.gov/science/highlights/highlight.asp?id=897>

## ALERT! IMPORTANT NIH ANNOUNCEMENTS

### I. NIH, AHRQ, CDC, FDA & NIOSH TO REQUIRE Use of Updated Electronic Application Forms (ADOBE-FORMS-B1) in 2011

Notice # NOT-OD-11-007 (<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-007.html>)

### II. NIH, AHRQ, AND NIOSH TO ELIMINATE ERROR CORRECTION WINDOW FOR DUE DATES ON OR AFTER JANUARY 25, 2011

Notice # NOT-OD-10-123 (<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-123.html>)

#### JANUARY 25, 2011

- **ERROR CORRECTION WINDOW ELIMINATED:** STARTING JANUARY 25, 2011, APPLICATIONS SUBMITTED THROUGH GRANTS.GOV MUST BE ERROR-FREE PRIOR TO THE DEADLINE. CORRECTING NIH eRA COMMONS-IDENTIFIED ERRORS AND WARNINGS AFTER THE DEADLINE WILL NO LONGER BE AN OPTION. CHANGED/CORRECTED APPLICATIONS CAN STILL BE SUBMITTED **BEFORE** THE DEADLINE. CHANGED/CORRECTED APPLICATIONS SUBMITTED **AFTER** THE DEADLINE (TO ADDRESS SYSTEM IDENTIFIED ERRORS/WARNINGS) WILL NO LONGER BE ACCEPTED.
- **ADOBE-FORMS-B1 REQUIRED FOR KS, TS, DS, AND FS:** APPLICANTS SUBMITTING FOR THE FOLLOWING NIH PROGRAMS MUST USE ADOBE-FORMS-B1 PACKAGES FOR DEADLINES ON OR AFTER JANUARY 25, 2011: INDIVIDUAL RESEARCH CAREER DEVELOPMENT AWARD PROGRAMS (KS), INSTITUTIONAL TRAINING AND CAREER DEVELOPMENT PROGRAMS (TS AND DS), OR INDIVIDUAL NATIONAL RESEARCH SERVICE AWARDS (FS).

#### MAY 7, 2011

- **AFTER MAY 7, 2011:** ALL APPLICANTS MUST USE ADOBE-FORMS-B1 PACKAGES FOR DEADLINES AFTER MAY 7, 2011. APPLICANTS ELIGIBLE TO SUBMIT UNDER NIH'S CONTINUOUS SUBMISSION POLICY MUST USE ADOBE-FORMS-B1 FOR ANY SUBMISSIONS MADE AFTER MAY 7, 2011. SUBMISSIONS USING THE ADOBE-FORMS-B APPLICATION FORMS AFTER MAY 7, 2011 WILL NOT BE ACCEPTED.
- **ON OR BEFORE MAY 7, 2011:** TO ACCOMMODATE THE TRANSITION TO THE NEW ADOBE-FORMS-B1 FORMS IN AN APPLICANT-FRIENDLY MANNER, NIH, AHRQ, CDC, FDA AND NIOSH WILL ACCEPT EITHER ADOBE-FORMS-B OR ADOBE-FORMS-B1 PACKAGES FOR DEADLINES ON OR BEFORE MAY 7, 2011, WITH THE EXCEPTION OF KS, TS, DS, AND FS WHICH MUST BE SUBMITTED USING ADOBE-FORMS-B1 ON OR AFTER JANUARY 25, 2011.

#### ADOBE-FORMS-B1 PACKAGES CHANGES:

- **PROJECT/PERFORMANCE SITE LOCATION(S):** A DUNS (DATABASE UNIVERSAL NUMBERING SYSTEM) NUMBER IS NO LONGER REQUIRED BY GRANTS.GOV FOR THE PRIMARY PERFORMANCE SITE. HOWEVER, THIS FIELD REMAINS AN NIH REQUIREMENT AND IS ENFORCED BY NIH BUSINESS RULES.
- **R&R OTHER PROJECT INFORMATION:** THE FORM HAS BEEN MODIFIED TO ENABLE THE HUMAN SUBJECT ASSURANCE NUMBER FIELD WHENEVER THE ANSWER TO "ARE HUMAN SUBJECTS INVOLVED?" IS "YES."
- **FOR FELLOWSHIP (F) APPLICATIONS,** THE "PHS FELLOWSHIP SUPPLEMENTAL" FORM HAS A NEW "SPONSOR(S) AND CO SPONSOR(S)" ATTACHMENT WHICH WILL BE USED TO COLLECT INFORMATION THAT WAS PREVIOUSLY DOCUMENTED IN THE "OTHER ATTACHMENT" SECTION OF THE R&R "OTHER PROJECT INFORMATION" FORM.

## Office of Research and Sponsored Programs (ORSP) 12 Day/3 Day Review and Submission Policy

AS A RESULT OF THE NEW NIH policy THAT ELIMINATES THE TWO (2 day CORRECTION WINDOW), ORSP WILL STRICTLY ENFORCE OUR 12 Day/3 Day Review and Submission Policy.

Deadlines for receipt of grant applications to the Office of Research and Sponsored Programs (ORSP) for review and submission are:

- I. **Twelve (12) business days before a grant deadline:**  
The ORSP MUST receive all detailed budgets and administrative pages for review.

**NOTE:**

Clinical Research Grants that involve the use of human subjects **MUST** be reviewed by the Office of Clinical Research Administration (OCRA). PLEASE UNDERSTAND THAT REVIEW OF clinical research budgets and determination of study feasibility (including availability of required hospital and medical school resources) REQUIRES A LONGER REVIEW PERIOD THAN GRANTS THAT DO NOT INVOLVE HUMAN SUBJECTS. THE 12 day advance notice is **MANDATORY** and will guarantee review of proposal, signature of signing official and allow PIs to meet deadline submission to the various funding agencies. Clinical Research Grants submitted to the ORSP/OCRA after the 12 day advance deadline may not be reviewed or submitted to the funding agency.

- II. **Three (3) business days before a grant deadline:**  
The ORSP **MUST** have the final version of all sections of the grant proposal, including the scientific narrative.

**NOTE:**

After the three day advance deadline, ORSP CANNOT GUARANTEE successful review or submission. **PLEASE NOTE: Nothing will be accepted on the day of the deadline. Deadline days will be reserved for the upload of grants to grants.gov or other electronic submission systems.**

With the elimination of the correction window, grants will need to be submitted prior to the deadline date. This will allow the ORSP to address any warnings or errors that may arise. **PLEASE NOTE: After the day of deadline, the ORSP will not have the opportunity to correct warnings or errors to proposals.**

To make certain your proposal is submitted and received by the funding agency, please adhere to the above policy.

Thank you.

### THE SYSTEM FOR ADMINISTERING GRANTS ELECTRONICALLY (SAGE)

The System for Administering Grants Electronically (SAGE) is a web-based application used by the State of New Jersey to accept and approve grant applications and manage executed grants. Municipalities, developers, non-profits, and all other eligible agencies submit their applications and manage their grants using SAGE. The two security roles for NJMS users are: Agency Staff and Authorized Officials. New user accounts within the organization will be assigned as Agency Staff. They will be able to edit their own user information, enter and update information on applications as well as download and attach files to applications. Authorized Officials are responsible for assigning Agency Staff, initiating grants and submitting applications. All grant applications must be coordinated through ORSP where the staff is designed as Authorized Officials. This system is now being used successfully by NJMS faculty.

### HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA)

Electronic Handbooks (EHBs) are designed to streamline the grants application and administration process and enable applicants and grantee organizations to communicate with HRSA and conduct activities electronically. They provide all potential grantees a means to access competitive funding opportunities published as a part of the annual HRSA Preview. This system also allows applicants to submit applications electronically in a collaborative fashion. All applications must be submitted through ORSP by the Authorized Officials (AO) for the organization. The AO binds NJMS to perform within the terms of the grant agreement, common assurances and certifications, administrative requirements, and programmatic requirements. The designated Project Director for an application participates in the electronic process and ensures their application is complete and performs post award activities on their grants.

## STUDENT RESEARCH VOLUNTEERS

Faculty interested in hosting a Student Research Volunteer must notify the Office of Research and Sponsored Programs (ORSP) by completing the required forms listed below.

### Eligibility:

- Must be 18 years of age
- Must have a commitment from a UMDNJ-NJMS Faculty Member
- Must complete the UMDNJ required background and disclosure form

### Required Forms:

Faculty Member must submit a project description to ORSP. Forms can be downloaded from the following website: [http://njms.umdj.edu/research/orsp/documents/projectform\\_003.doc](http://njms.umdj.edu/research/orsp/documents/projectform_003.doc)

### Student Volunteer must complete:

- UMDNJ Background Check
- UMDJ Criminal Background Check
- Disclosure and Authorization Form

Forms can be downloaded from the following website: <http://njms.umdj.edu/research/orsp/volunteer.cfm>

All required forms must be completed and returned six (6) weeks prior to anticipated start date for processing.

### Completed forms should be sent to:

Ms. GIOVANNA COMER  
PROGRAM ADMINISTRATOR  
Office of Research and Sponsored Programs  
MSB, C690

### For more information contact:

Ms. GIOVANNA COMER  
Telephone: 973-972-7090  
Email: [COMERGI@UMDNJ.EDU](mailto:COMERGI@UMDNJ.EDU)

### NOTES:

Forms not required for UMDNJ students

Students cannot begin projects until required forms are reviewed and approved and appropriate lab safety training has been obtained. The Office of Research and Sponsored Programs (ORSP) is responsible for compliance and tracking. ORSP does not provide funding for volunteers. Student volunteers may participate in the ORSP concluding poster session event and may also submit an abstract for inclusion in the annual Summer Student Research Abstract Booklet.

## HIGH SCHOOL INTERNS

Faculty interested in hosting a High School Student Intern must notify the Office of Research and Sponsored Programs (ORSP) by completing the required forms listed below.

High School Intern policies and procedures here must be followed to ensure that all minors receive:

- Appropriate instruction and supervision
- Have parental consent for their activities in a NJMS research laboratory
- All activities are in compliance with NJ Child Labor regulations. (University Policy can be downloaded from: (<http://njms.umdj.edu/research/orsp/documents/ApprovalProcedure.pdf>))

### Eligibility:

- High School student must be at least 16 years of age
- Must have a commitment from a UMDNJ-NJMS Faculty Member (as host)
- Must complete the UMDNJ-NJMS required consent forms

### Required Forms:

- High School Intern Proposal Form
- High School Student Sponsorship Form
- High School Parental Consent & Insurance Documentation

(Forms can be downloaded from the following website: <http://www2.umdj.edu/eohssweb/publications/highschool.htm>)

All required forms must be submitted four (4) weeks prior to anticipated start date for processing. Students cannot begin projects until required forms are reviewed and approved and appropriate lab safety training has been obtained.

### Completed forms should be sent to:

Ms. GIOVANNA COMER  
PROGRAM ADMINISTRATOR  
Office of Research and Sponsored Programs  
MSB, C690

### For more information contact:

Ms. GIOVANNA COMER  
Telephone: 973-972-7090  
Email: [COMERGI@UMDNJ.EDU](mailto:COMERGI@UMDNJ.EDU)

NOTE: The ORSP is responsible for compliance and tracking. The ORSP does not provide funding for interns.

**REMINDER:** If your funding application requires a 501c3 tax exempt status letter, the Foundation of UMDNJ should be contacted to assist with the submission. CONTACT: Elizabeth Ketterlinus, Vice President of Development, Foundation of UMDJ at [EKETTERLINUS@NJHF.ORG](mailto:EKETTERLINUS@NJHF.ORG) OR 973-679-4684. All other ORSP review processes also apply.

## CONTRATULATIONS! NJMS GRANT AWARD RECIPIENTS

SEPTEMBER 2010-JANUARY 2011

PI: XILIN ZHAO, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: PHRI  
PROJECT TITLE: ANAEROBIC SHOCK AS A NOVEL  
TREATMENT FOR TUBERCULOSIS  
INSTITUTION: NATIONAL INSTITUTE OF HEALTH  
DURATION OF AWARD: 5 YEARS  
TOTAL AMOUNT OF AWARD: \$840,000

PI: NIKHAT PARVEEN, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: MICROBIOLOGY & MOLECULAR GENETICS  
PROJECT TITLE: A UNIQUE APPROACH TO IDENTIFY MARKERS  
FOR CONGENITAL SYPHILIS AND NEUROSYPHILIS  
INSTITUTION: NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES  
DURATION OF AWARD: 2 YEARS  
TOTAL AMOUNT OF AWARD: \$117,600

PI: BARRY KREISWIRTH, PH.D., PROFESSOR  
DEPARTMENT: PHRI  
PROJECT TITLE: THE MOLECULAR BASIS OF EPIDEMIC blaKPC  
KLEBSIELLA PNEUMONIAE AND ENTEROBACTERIACE  
INSTITUTION: NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES  
DURATION OF AWARD: 2 YEARS  
TOTAL AMOUNT OF AWARD: \$196,851

PI: GEORGE HASKO, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: SURGERY  
PROJECT TITLE: TREATMENT OF SHOCK WITH ADENOSINE RECEPTOR LIGANDS  
INSTITUTION: UNITED STATES DEPARTMENT OF DEFENSE  
DURATION OF AWARD: 2 YEARS  
TOTAL AMOUNT OF AWARD: \$175,000

PI: MARIA GENNARO, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: PHRI  
PROJECT TITLE: MAPPING AND MODELING HOST PATHOGEN  
INTERACTIONS IN TB LATENCY AND REACTIVATION (MPI)  
INSTITUTION: NATIONAL HEART, LUNG AND BLOOD INSTITUTE  
DURATION OF AWARD: 4 YEARS  
TOTAL AMOUNT OF AWARD: \$768,643

PI: ELDO KUZHIKANDATHIL, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: PHARMACOLOGY & PHYSIOLOGY  
PROJECT TITLE: REGULATION OF D1 DOPAMINE RECEPTOR EXPRESSION  
BY ncRNA IN COCAINE ADDICTION  
INSTITUTION: NATIONAL INSTITUTE ON DRUG ADDICTION  
DURATION OF AWARD: 1 YEAR  
TOTAL AMOUNT OF AWARD: \$42,000

PI: PATRICK O'CONNOR, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: BIOCHEMISTRY & MOLECULAR BIOLOGY  
PROJECT TITLE: NOVEL CELL TARGETS FOR ENHANCING OSTEOGENESIS  
INSTITUTION: UNITED STATES DEPARTMENT OF DEFENSE  
DURATION OF AWARD: 1 YEAR  
TOTAL AMOUNT OF AWARD: \$53,864

PI: DAVID PERLIN, PH.D., PROFESSOR & EXECUTIVE DIRECTOR  
DEPARTMENT: PHRI  
PROJECT TITLE: EVALUATION OF PDE4 INHIBITORS IN INFLUENZA MODELS  
INSTITUTION: CELGENE CORPORATION  
DURATION OF AWARD: 1 YEAR  
TOTAL AMOUNT OF AWARD: \$33,047

## CONGRATULATIONS! NJMS FUMDNJ SEED/COLLABORATIVE & BRIDGE AWARD RECIPIENTS

AWARDED: FEBRUARY 1, 2011 – JANUARY 31, 2012

PI: AMY DAVIDOW, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: PREVENTIVE MEDICINE  
PI: ANUSHUA SINHA, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: PREVENTIVE MEDICINE  
PROJECT TITLE: "TUBERCULOSIS TESTING IN A MULTI-ETHNIC  
INNER CITY POPULATION OF HIGH-RISK PREGNANT WOMEN"  
TOTAL AMOUNT OF AWARD (COLLABORATIVE): \$35,000

PI: SALLY HODDER, M.D., PROFESSOR & CHAIR  
DEPARTMENT: MEDICINE  
PI: ANUSHUA SINHA, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: PREVENTIVE MEDICINE  
PROJECT TITLE: "MODELING HIV TRANSMISSION AND PREVENTION IN NEWARK, NJ"  
TOTAL AMOUNT OF AWARD (COLLABORATIVE): \$35,000

PI: CHRISTOPHE FRITON, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: ORTHOPAEDICS  
PROJECT TITLE: "DISSECTING THE ROLE OF THE IGF-1/  
MECHANICAL LOADING AXIS TO COMBAT OSTEOPOROSIS"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

PI: JORGE CONTRERAS, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: PHARMACOLOGY & PHYSIOLOGY  
PROJECT TITLE: "REGULATION OF THE CONNEXIN CHANNEL  
THAT PRODUCES DEAFNESS AND SKIN DISORDERS"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

PI: BIN TIAN, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: BIOCHEMISTRY & MOLECULAR BIOLOGY  
PI: MICHAEL MATHEWS, PROFESSOR & CHAIR  
DEPARTMENT: BIOCHEMISTRY & MOLECULAR BIOLOGY  
PROJECT TITLE: "DEEP SEQUENCING RNA LIGANDS FOR DOUBLE-  
STRANDED RNA BINDING DOMAIN PROTEINS"  
TOTAL AMOUNT OF AWARD (COLLABORATIVE): \$35,000

PI: NIKHAT PARVEEN, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: MICROBIOLOGY & MOLECULAR GENETICS  
PROJECT TITLE: "A NOVEL APPROACH TO EXAMINE THE FUNCTION  
OF TWO TREPONEMA PALLIDUM PROTEINS AND TO EVALUATE THEIR  
POTENTIAL AS VACCINE CANDIDATES AGAINST SYPHILIS"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

PI: CAROLYN SUZUKI, PH.D., ASSOCIATE PROFESSOR  
DEPARTMENT: BIOCHEMISTRY & MOLECULAR BIOLOGY  
PROJECT TITLE: "ROLES OF THE MITOCHONDRIAL CHAPERONES  
MORTALIN AND TTD1 IN PROTEIN DISAGGREGATION AND DEGRADATION"  
TOTAL AMOUNT OF AWARD (BRIDGE): \$35,000

PI: CHAOYANG XUE, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: MICROBIOLOGY & MOLECULAR GENETICS  
PROJECT TITLE: "ROLE OF AN SCF E3 UBIQUITIN LIGASE  
IN CRYPTOCOCCUS VIRULENCE"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

## CONGRATULATIONS! NJMS FUMDNJ SEED/COLLABORATIVE & BRIDGE AWARD RECIPIENTS

AWARDED: FEBRUARY 1, 2011– JANUARY 31, 2012

PI: RAYMOND BIRGE, PH.D., PROFESSOR  
DEPARTMENT: BIOCHEMISTRY & MOLECULAR BIOLOGY  
PROJECT TITLE: "NON-CONONICAL METASTATIC PATHWAY FOR CRK ONCOGENE IN BREAST CANCER"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

PI: PURNIMA BHANOT, PH.D., ASSISTANT PROFESSOR  
DEPARTMENT: MICROBIOLOGY & MOLECULAR GENETICS+  
PROJECT TITLE: PLASMODIUM BERGHEI CALCIUM DEPENDENT PROTEIN KINASE 4 AS A DRUG-TARGET"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

PI: PADMINI SALGAME, PH.D., PROFESSOR  
DEPARTMENT: MEDICINE  
PROJECT TITLE: "MEMORY IMMUNITY IN TUBERCULOSIS"  
TOTAL AMOUNT OF AWARD (SEED): \$25,000

PI: ELIZABETH MORAN PH.D., PROFESSOR  
DEPARTMENT: ORTHOPAEDICS  
PROJECT TITLE: "THE ROLE OF SWI/SNF-RELATED COMPLEX COMPONENTS IN OSTEOBLAST DIFFERENTIATION"  
TOTAL AMOUNT OF AWARD (BRIDGE): \$25,000

PI: DIEGO FRAIDENRAICH, ASSISTANT PROFESSOR  
DEPARTMENT: CELL BIOLOGY & MOLECULAR MEDICINE  
PROJECT TITLE: "INDUCED PLURIPOTENT STEM CELL CORRECTION OF MUSCULAR DYSTOPHY-ASSOCIATED CARDIOMYOPATHY"  
TOTAL AMOUNT OF AWARD (BRIDGE): \$25,000

PI: MURIEL LAMBERT, PH.D., PROFESSOR  
DEPARTMENT: PATHOLOGY  
TITLE: DNA REPAIR DEFECT IN FANCONI ANEMIA, GROUP A  
TOTAL AMOUNT OF AWARD (BRIDGE): \$25,000

### THANK YOU! UMDNJ-NJMS FOUNDATION PEER GRANT REVIEWERS!

WE WOULD LIKE TO THANK THE NJMS FACULTY FOR TAKING TIME FROM THEIR RESEARCH, TEACHING AND ADMINISTRATIVE RESPONSIBILITIES TO REVIEW PROPOSAL APPLICATIONS. YOUR COMMITMENT AND DEDICATION HAS CONTRIBUTED TO THE SUCCESS OF OUR NJMS INTERNAL FUNDING PROGRAMS.

WE WOULD LIKE TO ACKNOWLEDGE THE EFFORTS OF THE FOLLOWING NJMS FACULTY WHO SERVED AS REVIEWERS FOR THE FUMDNJ SEED, COLLABORATIVE AND BRIDGE GRANTS PEER REVIEW SESSIONS: DR. GEORGE YAP, DR. DAVID LUKAC, DR. DIEGO FRAIDENRAICH, DR. PETER FREDERIKSE, DR. CHERYL KENNEDY, DR. ELIZABETH MORAN, DR. WLODEK MANDECKI, DR. TERESA WOOD, DR. ANDREAS IVESSA, DR. ANNIE BEUVE, DR. ZOLTAN SPOLARICS, DR. NICHOLAS ILLSLEY, DR. WALTER DURAN, DR. JANINE SANTOS, DR. SALLY HODDER, DR. GILL DIAMOND, DR. SCOTT KACHLANY, DR. HUA ZHU, DR. ISSAR SMITH, DR. MARIA GENNARO, DR. PADMINI SALGAME, DR. RICHARD HOWELLS, DR. STEVE LEVISON, DR. ANDREW HARRIS, DR. RAYMOND BIRGE, DR. LUIS ULLOA AND DR. EDOUARD AZZAM.

### 2011 ORSP SUMMER STUDENT RESEARCH PROGRAM

PREPARATIONS ARE UNDERWAY FOR THE 2011 SUMMER STUDENT RESEARCH PROGRAM (SSRP).

FOR THE PAST THIRTY-EIGHT YEARS, THE NJMS OFFICE OF RESEARCH AND SPONSORED PROGRAMS HAS PROVIDED THE FIRST-YEAR AND COMBINED-DEGREE STUDENTS WITH THE OPPORTUNITY TO PARTICIPATE IN A UNIQUE AND REWARDING EIGHT-WEEK RESEARCH EXPERIENCE. THE SUMMER STUDENT RESEARCH PROGRAM PROVIDES TRAINING IN BIOMEDICAL RESEARCH ACTIVITIES IN A LABORATORY OR CLINICAL SETTING THAT ENABLES PARTICIPANTS TO DEVELOP A CLOSE WORKING RELATIONSHIP WITH A FACULTY MENTOR. THE REGISTRATION DEADLINE IS APRIL 15, 2011 AT 5PM. PARTICIPATING FACULTY SHOULD REMIND PROSPECTIVE MENTEES TO RETURN ALL COMPLETED APPLICATIONS TO THE ORSP, MSB, C690 ON OR BEFORE APRIL 15, 2011 BY 5PM. FOR MORE INFORMATION REGARDING THE ORSP SUMMER STUDENT RESEARCH PROGRAM CONTACT: MS. GIOVANNA COMER, PROGRAM ADMINISTRATOR AT 973-972-7090 OR EMAIL: COMERGI@umdnj.edu OR VISIT OUR WEBSITE: [HTTP://NJMS.UMDNJ.EDU/RESEARCH/ORSP](http://njms.umdnj.edu/research/orsp).

### Current Rates for Grant Applications as of January 2011

**Salaries:** current salaries should be increased by 4% for each grant year. The federal government will pay no portion of any salary exceeding \$199,700 (effective 01/01/2010)

**Fringe Benefits:** 36% of requested salary for all Full-time employees or more than half-time employees.

**Postdoctoral Fellows:** 8% of salary plus \$2,832/year (for health and life insurance) (note:\$8,160/years-cost health and life insurance for the entire family) Current NRSA rates as posted in the NIH guide January 13, 2010 are: years of postdoctoral experience (0) \$37,740, (1) \$39,756 (2) \$42,624 (3) \$44,304 (4) \$45,960, (5) \$47,940, (6) \$49, 836, (7)\$52,068.

**Indirect Costs:** Federal negotiated rate applicable to all on-site federally sponsored research grants, contracts and other agreements: 56% of direct costs not including equipment or patient care costs (DHHS Agreement Dated: October 19, 2006), Federal Negotiated Offsite Rate: 26%, Federal Negotiated Rate for training grants: 8%. Industry and/or clinical trial support: 25% minimum. When negotiating with industry, faculty are expected to negotiate for full indirect cost recovery.

For additional budget information, contact Grants and Contracts at 973-972-6456.

## ORSP MISSION STATEMENT

RESEARCH IS AN INTEGRAL COMPONENT OF THE NEW JERSEY MEDICAL SCHOOL (NJMS) AND ITS MISSION AS A HEALTHCARE AND EDUCATIONAL INSTITUTION. THE OFFICE OF RESEARCH AND SPONSORED PROGRAMS (ORSP) IS CHARGED WITH PROVIDING PRE-AWARD ADMINISTRATION TO ALL FACULTY AND STAFF. ORSP IS RESPONSIBLE FOR ASSISTING PRINCIPAL INVESTIGATORS WITH APPLICATION FOR FUNDING OPPORTUNITIES IN SUPPORT OF THEIR RESEARCH ACTIVITIES AND SPONSORED PROGRAMS. THE GOAL OF ORSP IS TO PROVIDE ASSISTANCE, GUIDANCE AND SUPPORT FOR IDENTIFYING FUNDING OPPORTUNITIES, APPLICATION PREPARATION AND PROPOSAL TRACKING. ORSP ALSO PROVIDES OVERSIGHT FOR MEDICAL STUDENT RESEARCH PROGRAMS. ORSP IS DEDICATED TO FACILITATING THE RESEARCH AND RESEARCH-RELATED PROGRAMS OF OUR FACULTY, ADMINISTRATION, STUDENTS AND STAFF.

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## ORSP MANAGEMENT

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QUESTIONS/COMMENTS REGARDING THE ORSP NEWSLETTER  
CONTACT GIOVANNA COMER, PROGRAM ADMINISTRATOR AT:  
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## ORSP GRANT ADMINISTRATOR DEPARTMENT ASSIGNMENTS

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PLEASE CONTACT THE APPROPRIATE GRANT ADMINISTRATOR FOR ASSISTANCE.

THE ORSP MAIN NUMBER: 973-972-7766