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Letter from the Director



In this second issue of the University of Michigan Student Biomedical Research Program Newsletter, we highlight the outcome of the 2007 SBRP Summer Program Awards competition. As indicated in the next section, 82 M1 students and 1 pre-M1 matriculant (for a total of 83 applicants) submitted proposals for potential funding by the SBRP and other summer research program initiatives. The Committee for Student Biomedical Research and I were very impressed with the diversity and quality of the majority of the proposals submitted. Most were deemed worthy of support either initially or after revision. Despite the temporary loss of NIH support from the T-35 Training Grant (revised competing renewal is currently under review), the Office of Student Programs was able to identify funds sufficient to support all approved applicants who did not receive funding from other sources (e.g., MCRiT Programs, National Institute for Aging T-35 Grant) – a fantastic show of institutional support!!! I look forward to hearing how the research progresses for our fellows over the summer and anticipate the most exciting Fall Forum of research presentations ever!

In addition to the results of the 2007 SBRP Summer Research Program awards, we also want to take this opportunity to highlight the success of our summer program graduates in competing for prestigious year-long research fellowships. In the second section below, graduates of the 2002, 2003, 2004, 2005, 2006 summer research program describe their research experiences supported by the Howard Hughes Medical Institute, the National Institutes of Health, the Sarnoff Foundation, the AOA Foundation, etc. Graduates of the 2005 and 2006 SBRP summer program were particularly successful in this fellowship awards competition leading to an all time record number of students planning a year-long research experience in 2007. M1 and M2 students who are considering an application to a year-long research opportunity during the M3 and M4 years should plan to make contact with these prior awardees to get more specific information! (see pages 7-11)

Goals of the Student Biomedical Research Program

The goals of the SBRP are to:

- Provide medical students with the opportunity to learn research concepts and methodology from experienced investigators, and to assess their desires to pursue careers in research.
- Expand the scholarly and research experiences of medical students as part of an overall career development strategy aimed at increasing the number of talented students choosing careers as physician-scientists.
- Promote high quality and intensive research opportunities for those students who are already on a path towards academic medicine.
- Provide students who elect not to go into academic medicine with an understanding of the scientific method and critical analysis of literature through their research experience.
- Promote research experiences which can develop into longer-term student-faculty mentoring relationships.
- Provide trainees with experience in scientific presentation and publication of research through the annual Student Biomedical Research Fall forum, and other scientific meetings at a regional or national level.
- Provide students with a high quality didactic program in research with an emphasis on the ethical and responsible conduct of research.

Results of the 2007 SBRP Summer Fellowship Award Competition

A total of 83 students (82 M1 students and 1 incoming M1 student) submitted proposals for the summer biomedical research program by the February 2nd deadline. Each of these proposals was reviewed by the Program Director as well as by four members of the Committee for Student Biomedical Research (see issue I of Volume I for a list of the committee members). As indicated in Table I, each proposal was judged on the basis of five criteria which were weighted equally with a maximum score of 10 points. As shown in Table II, the range of scores was 5.25 to 9.75 with the vast majority of proposals (nearly 90%) scoring 7 or above. Students whose proposals scored in the lower 10% were given the opportunity to re-submit revised proposals (and/or provide clarifying information). Among those students submitting revised applications, all were improved with scores above the seven range.

Despite what we hope is a temporary loss of our NHLBI – NIH T-35 Training Grant (a revised renewal application is currently under review), our Associate Director, Dr. Elizabeth Petty (Associate Dean for Student Programs), was able to identify “*stretch funds*” from private donors sufficient to support all 58 SBRP proposals which were not eligible for funding from other sources. Two applicants were offered summer research fellowships in the MCRiT Program, 16 applicants were offered summer fellowships from the National Institutes of Aging T-35 Grant, and four applicants received summer research support from other non-SBRP funding sources. Altogether, 80 applicants whose proposals were reviewed through the SBRP competition (96%) were offered summer fellowship funding support (see Figure I).

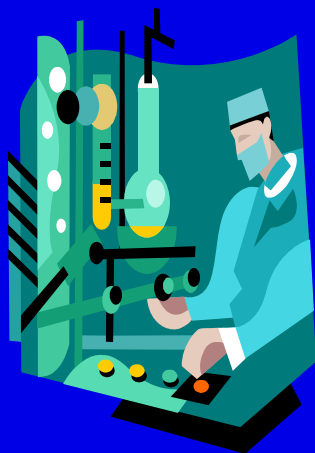


TABLE I
2007 SBRP Summer Program Proposal Review

The applications are scored in the following categories using the (3) point scale as follows:

- 0 = None - application does not demonstrate**
- 1 = Somewhat - application demonstrates to some extent**
- 2 = Satisfactory - application demonstrates**

	<u>Circle Only One</u>		
1. Clear statement of problem, research question and hypothesis.	0	1	2
2. Evidence of scholarly and critical literature review.	0	1	2
3. Research design and methodology are appropriate to answer the research question/hypothesis.	0	1	2
4. Proposed research training environment and student/mentor relationship is strong.	0	1	2
5. Student applicant has contributed significantly to the proposal application and has the ability and enthusiasm to complete the project.	0	1	2

TOTAL SCORE

For applications with a total score ≤ 5 , a brief comment on how the proposal could be improved is provided from the reviewer.

TABLE II
2007 SBRP Summer Program
Range of Scores based on Initial Review

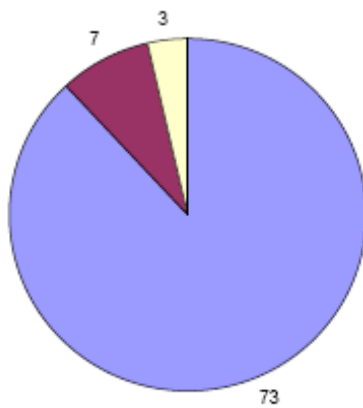
<u>Score Range</u>	<u>Number of Proposals</u> (% of Total)
9.0 – 9.9	26 (31.3)
8.0 – 8.9	32 (38.6)
7.0 – 7.9	17 (20.5)
6.0 – 6.9	5 (6.0) *
5.0 – 5.9	3 (3.6) *

*Applicants given an opportunity to submit revised applications

Figure I shows the thematic focus of the 83 submitted proposals with 30% representing research to be conducted largely in the laboratory setting while 70% involve pre-clinical, clinical or clinical research (including data derived from IRB-approved human research proposals).

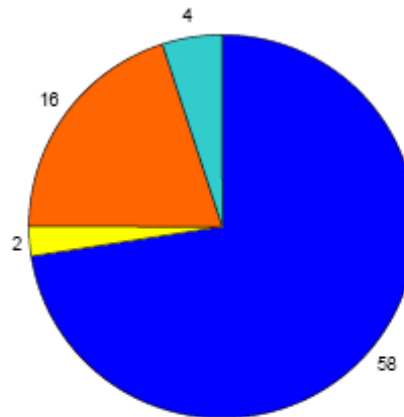
FIGURE I
2007 SBRP Summer Program
Final Funding Results

Review outcome of 83 submitted proposals



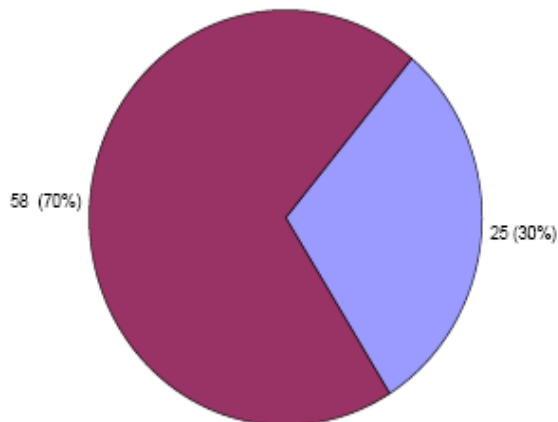
■ Proposals approved based on the initial review
 ■ Approved after revision
 ■ Proposals withdrawn

2007 SBRP summer program final funding result:



■ Applicants offered SBRP funding
 ■ Applicants offered MCRIT funding
 ■ Applicants offered NIA-Aging T-35 funding
 ■ Applicants offered other institutional funding

2007 Proposal research focus of submitted proposals



■ Laboratory-oriented research
 ■ Clinical/translational-oriented research

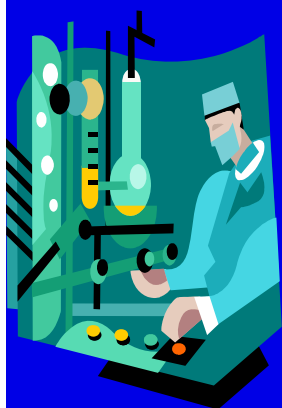


Table III outlines the agenda for the two half-day didactic sessions which will take place on Thursday, June 14 from 8:30 am – 12:30 pm in the North Lecture Hall of Med Sci II and on Thursday, June 21 in South Lecture Hall and rooms 3913, 3917, 2913 and 2917.

The first session will feature didactic presentations from Dr. James Shayman (Professor of Internal Medicine and Associate Vice President for Research, Health Affairs, University of Michigan), Dr. Benjamin Margolis (Professor of Internal Medicine and Associate Chair for Research, Department of Internal Medicine), Dr. Elizabeth Petty (Associate Professor of Internal Medicine and Human Genetics, Associate Director, Student Biomedical Research Program, and Associate Dean, Office of Student Programs), and Mr. Edward Goldman, (Associate Vice-President and Deputy General Counsel, Office of the General Council).

Drs. Shayman and Margolis will highlight exciting advances being made to develop new drugs for rare diseases and cancer, respectively, while Dr Petty and Mr. Goldman will provide an important overview of ethical principals in the conduct of research.

The second didactic session on Thursday, June 21, will feature Dr. Daniel Clauw (Professor of Internal Medicine and Associate Dean for Clinical and Translational Research) and a team of clinical research scientists who will conduct an interactive workshop on the design and execution of clinical research. Students will participate in small group sessions in which they will prepare an outline of specific proposals to address clinical research hypotheses, taking into account all of the parameters required to address meaningful clinical research questions.

TABLE III

2007 SBRP Summer Program

Student Biomedical Research Seminar Thursday, June 14, 2007 North Lecture Hall, Med Sci II

Agenda

8:30 – 8:55 –	Breakfast
8:55 – 9:00 –	Introduction – Robert Todd, M.D., Ph.D. Director, Student Biomedical Research Program, Frances and Victor Ginsberg Professor of Hematology/Oncology, Professor of Internal Medicine and Interim Chair, Department of Internal Medicine
9:00 – 9:45 –	"Designing drugs for rare diseases" – James Shayman, M.D., Professor of Internal Medicine and Pharmacology, and Associate Vice President for Research, Health Sciences
9:45 – 10:30 –	"Basic science research and the development of anti-cancer drugs" – Benjamin Margolis, M.D., Professor of Internal Medicine and Biological Chemistry, and Associate Chair for Research, Department of Internal Medicine
10:30 – 10:45 –	Break
10:45 – 11:30 –	"Privacy, policies, and progress in patient-oriented research" – Elizabeth Petty, M.D., Associate Professor of Internal Medicine and Human Genetics, Associate Director, Student Biomedical Research Program, and Associate Dean, Office of Student Programs
11:30 – 12:30 –	"Ethical conduct of research" – Edward Goldman, Associate Vice-President and Deputy General Counsel, Office of the General Counsel

TABLE III con't

**Student Biomedical Research Seminar
Thursday June 21, 2007
South Lecture Hall Med Sci II**

Agenda

8:00 – 8:30 am	Continental Breakfast
8:30 – 8:45 am	Introduction and Overview – Robert Todd, M.D., Ph.D. Director, Student Biomedical Research Program, Frances and Victor Ginsberg Professor of Hematology/Oncology, Professor of Internal Medicine and Interim Chair, Department of Internal Medicine
8:45 – 10:00 am	“The early steps in designing a clinical research project” - Daniel Clauw, M.D., Professor of Internal Medicine and Associate Dean, Clinical and Translational Research, Director, Michigan Institute for Clinical and Health Research, Director, Chronic Pain and Fatigue Research Center
10:00 – 10:15 am	Break
10:15 – 12:00 pm	Group sessions of designing your own clinical research project (3813, 3817 & 2913, 2917)
12:00 - 12:30 pm	Reconvene in South Lecture Hall for Wrap-Up

Participation of SBRP Graduates in Year-Long Research Fellowships

A major goal of the Student Biomedical Research Program is to stimulate and enhance the interest of student participants in the conduct of *more biomedical research* as a spring board to a career in academic medicine. Accordingly, one of the measures of the success of the summer program is the number of students who elect to pursue additional research training during medical school in the form of year-long (or additional summer) research fellowships sponsored by federal and non-federal funding agencies. This includes The National Institutes of Health, The Howard Hughes Medical Institute, The Sarnoff Foundation, The AOA Foundation, The American Federation for Aging Research, among several others. As shown in Table IV, a significant number of University of Michigan medical students have successfully competed for these national fellowship opportunities. In the pages that follow Table IV, we highlight the research experiences of nine of our recent SBRP graduates who have completed or will participate in a year-long program.



Table IV

Success of U of M Medical School Students in Competing for Positions in Year-Long or Summer Research Training Programs

2004*			Applied to and Approved for Research
Last	First	Current Yr	
Bansal	Roopali	2006 Grad	Doris Duke Clinical Research Fellowship (CRF) Program
Cantor	Lauren E.	M4	NIH Summer Research Training Program
Doshi	Arpi	2006 Grad	NIH Clinical Research Training (CRTP) Program
Escobedo	Joel	M4	2004 RPS/AFAR Medical Student Geriatric Scholarship
Hsiao	Jonie	M4	NIH MIRT Program
Jabbari	Siavash	2005 Grad	Paul & Deanna Virciglio Scholarship
Lopez	Michael	M3	National Medical Fellowships, Inc. - Fellowship Program in Academic Medicine
Miller	Carl N.	M4	NIH Summer Research Training Program
Montero	Merdith J.	M4	2004 RPS/AFAR Medical Student Geriatric Scholarship

Continued on page 6

Table IV con't

**Success of U of M Medical School Students in Competing for Positions in
Year-Long or Summer Research Training Programs**

2005*

Last	First	Current Yr	Applied to and Approved for Research
Breymann	Laura M.	M3	The American Federation for Aging Research (AFAR)
Chang	Lan	M4	NIH-Clinical Research Training Program (CRTP)
Schneider	Eric W.	M3	Sloan-Kettering Summer Student Fellowship
Velander II	Alan	M4	AOA Year Long Fellowship
Yuen	Jacqueline K	M3	The American Federation for Aging Research (AFAR)

2006*

Bicknell	Amy L.	M2	AFAR in Aging Summer Research
Charters	Michael	M2	Henry Ford Health System-Summer Fellowship
Dalmia	Manoj	M4	MCRiT Program
Hiniker	Susan	M2	AFAR in Aging Summer Research
Leung	Sonia W.	M4	MCRiT Program
Messacar	Kevin B.	M4	Grant for International Outreach Program
Niemeyer	Matthew	M2	NIH Summer Research Program
Rosenberg	Kevin	M2	NIH Summer Research Program
Tandon	Animesh	M4	HHMI - NIH Research Scholars Program
Thawani	Jayesh	M2	AOA Year-Long Fellowship
Wansom	Tanyaporn	M4	FIC/Ellison Overseas Fellowships in Global Health and Clinical Research

2007*

Akhtar	Amana	M3	HHMI-NIH Cloister Program
Baxi	Sanjiv M	M3	MCRiT Program
Bryner	Ben	M3	MCRiT Program
Davis	Samantha	M1	American Association of Thoracic Surgeons
Esaki	Roy	M3	MCRiT Program
Godin	Jonathan	M1	Summer Fellowship in Orthopedic Research at Hospital for Special Surgery, New York, NY
Goleski	Patrick	M1	Summer Fellowship in Orthopedic Research at Hospital for Special Surgery, New York, NY
Gracey	Lia	M2	HHMI-NIH Research Fellowship for Medical Students
Issaka	Rachel	M1	MHIRT Program
Krajewski	Megan	M3	NIH Clinical Research Training Program (CRTP)
Kurlander	Jacob	M3	MCRiT Program
Leonard	Ginger J.	M1	Medical Student Anesthesia Research Fellowship
McKellop	Jason	M3	NIH Clinical Research Training Program (CRTP)
Muncey	Aaron	M2	U of M Anesthesiology Lab
Narendra	Derek	M3	HHMI-NIH Cloister Program
Orandi	Babak J (BJ)	M4	HHMI – NIH Research Training Fellowship & AOA Year Long
Ple-Plakon	Patricia	M1	NIH Summer Research Program
Poznanski	Ann	M3	MCRiT Program
Thawani	Jayesh	M2	HHMI – NIH Research Training Fellowship
Viani	Kyle	M3	HHMI – NIH Research Training Fellowship

* Year in which applications were made.

U of M Medical Students Who Participated in the SBRP Program and Have or Will Participate in Year-Long Research Experiences



Jeffrey Huo M4
SBRP-NIH 1998
1999 - HHMI Research Fellowship for Medical Students



Rachel Hopper M4
SBRP-NIH 2002
2003-2004 - HHMI Cloister Program

The **SBRP** in summer 1998 gave me my first opportunity to train in molecular biology research (I was an engineer by training in undergraduate). I had the opportunity to pursue a new project I had proposed, exploring a novel form of gene therapy based on chimeric DNA/RNA oligonucleotides. Thanks to this experience, I both became interested in pursuing, and gained the practical skills to pursue, research during my second year of medical school, leading to a 1999 HHMI Medical Student research fellowship where I continued to explore the biology of human blood coagulation factor IX. These experiences ultimately led me to join the PhD program as well as the MD program, apply for and successfully win NSF Graduate and NDSEG fellowships, and ultimately to a career in academic medicine as a physician-scientist. I am sincerely grateful for the initial opportunity provided by the 1998 **SBRP**.

I have appreciated the research opportunities supported by the University of Michigan Medical School, as research has greatly influenced my experience during medical school as well as my future career goals. I worked in the laboratory of Dr. John Charpie as part of the **SBRP** program (Summer Biomedical Research Program) and appreciated the opportunity to complete a project and present that work to the Department of Pediatrics and at the Society for Pediatric Research Annual Meeting. That extremely positive experience prompted me to explore further research opportunities. Following my M2 year, I spent two years at the National Institutes of Health as part of the Howard Hughes Medical Institute's Research Scholars Program. I worked with Dr. Robert Balaban on a project using proteomics techniques to study the role of signaling pathways in the regulation of mitochondrial energy metabolism during cardiac ischemia. My study implicated numerous mitochondrial proteins in phosphorylation-based signaling and identified an important role for reactive oxygen species, which I hope will help direct future studies in metabolism and cardiac ischemia. I presented this work at several national and international conferences and published this work as first author.



Alan Velander M4
SBRP 2003
2005 - AOA (Alpha Omega
Alpha Year-Long)

Between my third and fourth years of medical school, I researched adult neurogenesis under Jack Parent, with support from the Ruth AOA Fellowship. Neurogenesis persists in the adult mammalian brain, and adult-born neurons are implicated in normal learning and memory, as well as in response to brain injury. To isolate the role of adult neurogenesis, we studied transgenic mice in which a protein specific to neural stem cells in the brain, nestin, regulates herpes simplex virus thymidine kinase (HSV-tk). HSV-tk serves as a suicide gene when exposed to ganciclovir, creating a model for conditional and selective ablation of adult-born neurons. We verified the ablation of adult neurogenesis in nestin-tk mice by immunohistochemistry. We also refined ganciclovir administration, experimenting with different doses and routes, including continuous intracerebroventricular delivery. We then demonstrated diminished hippocampal learning after suppressed neurogenesis by testing nestin-tk mice with fear conditioning. Lastly, we initiated the application of our model to olfactory function, in addition to stroke by transient middle cerebral artery occlusion and epilepsy after kainate-induced status epilepticus. I benefited greatly from this year, and, as a neurologist, I hope to remake a static, vulnerable brain as one that adapts and may be restored.



Animesh Tandon M4
SBRP-NIH 2004
2006 - HHMI Cloister Program

My research this year was supported by the HHMI-NIH Research Scholars (Cloister) Program. I am currently performing basic science research in Dr. Kurt Fischbeck's lab in the Neurogenetics Branch of the National Institute for Neurological Disorders and Stroke, NIH. My work is focused on spinal muscular atrophy (SMA). Spinal muscular atrophy (SMA) is a hereditary neurodegenerative disease characterized by loss of α -motor neurons in the anterior horn of the spinal cord. SMA is caused by deletions or other mutations in the survival of motor neurons 1 (SMN1) gene, which results in decreased levels of SMN protein. Humans have a second gene, SMN2, which produces mostly truncated SMN protein due to alternative splicing of the SMN2 transcript. Current therapeutic approaches involve increasing SMN protein levels by upregulating SMN2 transcription or correcting SMN2 transcript splicing. We are currently analyzing alternative therapeutic approaches, one of which involves microRNA technology. MicroRNAs are endogenous double-stranded RNAs (dsRNAs) that cause degradation or translational repression of target mRNAs. We are using RNA interference (RNAi) to knock down Dicer, a protein essential to forming microRNAs, in order to reduce endogenous microRNA levels, and then using quantitative real-time PCR (qRT-PCR) and Western blots to determine whether microRNAs affect SMN mRNA and protein levels.

My **SBRP** experience definitely played a role in my decision to participate in a year-long research program. My research in the **SBRP** program showed me that biomedical research can be an effective way of helping patients, albeit in a non-direct way. The research can help elucidate basic mechanisms of both physiologic and pathologic conditions, which can then lead to a better understanding of disease and therapeutics. I believe that the **SBRP** exposed me to this idea, which the Cloister program has helped cement.



Sanjiv Baxi M3
SBRP-NIH 2005
2007 – MCRiT Program

Starting in September of 2007, I will begin a year long clinical research program while pursuing a masters in clinical research. The program is partially funded by a NIH grant aimed to educate individuals seeking to be leaders in changing medicine for the better by implementing change based on sound scientific principles and data. The essential foundation to such endeavors is a strong background in the tools required to perform clinical research. Understanding how to ask the right questions is a very large part of this, but being able to utilize a seemingly endless plethora of resources available today will allow one to develop means of understanding better ways to practice medicine. Fundamentally this leads to better patient care - the essence of medical practice. My interest in medical research began during my undergraduate studies when I, in the lab of a terrific mentor, explored the mechanism by which lithium works. This was followed by my fortunate acceptance in the **SBRP** program at the University of Michigan after my first year of medical school. I was able to work in a high intensity lab that was committed to academic, professional and medical excellence. I decided to continue my interest in research, this time clinical in nature, and will embark on this voyage in the coming months.



Ben Bryner M3
SBRP 2005
2007 - MCRiT Program

The MCRiT (Multidisciplinary Clinical Researchers in Training) Program consists of three components. First: a Core Didactic and Practical Curriculum, which all trainees take. It includes subjects such as biostatistical methods and techniques, epidemiology, study design, and data quality, leadership training, ethics, regulation, and the responsible conduct of research. Second: personalized course electives, each of which focuses on a different type of clinical research and serves to complement trainees' research training and discuss research in areas in which they do not have firsthand experience. Third: the Core Practical Curriculum, consisting of clinical research conducted under the mentorship of University of Michigan faculty. I am planning on doing clinical research in the division of Pediatric Surgery. Trainees who complete all of three components receive a Master of Science in Clinical Research from the School of Public Health and Rackham Graduate School.

The **SBRP** program certainly increased my interest in taking a year off for research. It gave me valuable experience designing a research project and applying for funding, as well as for presenting and writing up my findings. I enjoyed research, and while this was not my first experience with research (I did a fair amount in college) this was a good experience in that it was independent and I learned more about developing a research project.



Amanda Elliott M2
SBRP 2006
2007 - Sarnoff Program

The Sarnoff Fellowship is a life-long program for students interested in cardiovascular research. As a junior fellow, the student is given funding to conduct a year of cardiovascular research at a laboratory outside their home institution. This includes a stipend as well as funds for traveling to interview with laboratories across the country, for moving expenses, for health insurance and computer equipment, and for financial support to attend meetings and conferences. The organization gives each junior fellow an established cardiovascular researcher to be their mentor. Mentors help students select and integrate into an appropriate lab; they will also monitor the student's research experience during the fellowship year. After completion of the research year, the student becomes a Senior Fellow and is funded to attend the Annual Scientific Meeting for the duration of their life. Career guidance and research mentorship continues to be available from the student's Sarnoff mentor, the Sarnoff scientific board and the greater Sarnoff Community. Additional research funding through the Scholars Program is available to Senior Fellows. Sarnoff Fellowships are awarded based upon the student's research interests and research proposal. Although many applicants have had a wide array of research experiences, the fellowship program is also interested in fostering students who have had none but who are interested in cardiovascular research.

The 2006 **SBRP** program was a large influence on my decision to pursue a year of research as a Sarnoff Fellow. My summer with **SBRP** allowed me to pursue cardiovascular research during M1/M2 years at the University of Michigan. I used many of the skills I had learned in **SBRP** to create the research proposal for my fellowship and my **SBRP** experience was a large factor in my selection of which research grant to pursue. **SBRP** enhanced my ability to independently construct a research project and proposal which was essential to my being able to design my own project from the literature and to write my proposal in a professional and informative manner. Seminars in the **SBRP** experience taught me to review literature more critically which was also essential to the construction of my project. As a part of **SBRP** I was free to select my own research area, and gained experience in a cardiovascular lab using traditional techniques in molecular biology. I was strongly encouraged to pursue less traditional techniques such as bioinformatics, computational biology, and genomics in the future. **SBRP** redirected my research focus to emerging areas of medical research while the Sarnoff Fellowship that I subsequently pursued gave me the funds to look across the country for established laboratories in emerging fields and the mentorship necessary to selecting the laboratory that matched my interests and goals. My **SBRP** research experience encouraged me to step outside the traditional mold of medical school to learn how to be an MD researcher in academic medicine and to pursue research in emerging fields.



Lia Gracey M2
SBRP 2006
2007 – HHMI-NIH
Research Fellowship for Medical Students

Gene therapy is a promising field of study for the treatment of many diseases, but problems with the current technology prevents its use in the clinic. One of the major problems with nonviral gene transfer is that foreign transgenes are silenced after initial expression in a mammalian system. Nucleosome positioning is a key area of study for silencing mechanisms because nucleosomes can both promote transcription of DNA or block access to DNA from transcription machinery. While studies have been done on the role of DNA sequence and the molecules involved in chromatin modulation, there is little knowledge for what exactly controls where nucleosomes sit on DNA. In this fellowship, I propose to test how nucleosome positioning affects gene expression. I will design Factor IX genes, containing artificial introns with nucleosome positioning signals, based on sequence suggestions in the literature and current knowledge in the lab of Dr. Andrew Fire. The synthesized Factor IX gene will be delivered to various cell culture lines and mice using a nonviral vector. Some of the constructs will also be transfected along with the Sleeping Beauty transposase to integrate Factor IX in to the host genome. I will monitor the duration of Factor IX expression as well as follow the course of chromatin modulations by collecting cells at multiple timepoints and isolating nucleosome core DNAs by digestion with micrococcal nuclease. I will also use antibodies against acetylated histones as well as bisulfite treatment to examine modifications to molecules associated with nucleosomes. In the future, this work could improve gene therapy applications by supplying guidelines for how to position nucleosomes to sustain expression of a delivered gene.



Derek Narendra M3
SBRP-NIH 2005
2007 - HHMI Cloister Program

I have not yet started my year long research experience (through HHMI-NIH Cloister Program) and so do not entirely know what it will entail. From what I have been told and have gathered from current fellows, the program, which accepts thirty-two fellows, provides subsidized housing on the NIH campus and a stipend, which is calculated to give a debt neutral year of research. Before I start the program this summer, I will be assigned a mentor who is an investigator at the NIH in my area of interest (for me, neuroscience). That mentor will give me some ideas about which labs at the NIH I should look into further and will help me contact those labs. During my first two weeks on campus, I will interview with the various labs identified and chose one that is a good fit. I will spend the rest of the year in that lab.

In addition to my research, once a week there will be a lecture and dinner for fellows with HHMI and/or NIH investigators. During the dinner we will have a chance to hear about their research and ask them any questions we have regarding their work and career. There will be a second dinner each week which will allow us to get together and discuss the status of our research projects. At the end of the year, there is a poster session. The program will also fund one class per semester through the NIH and will fund travel to and attendance at one conference during the year. We will also have an opportunity to attend one of the HHMI quarterly meetings.

There is an opportunity to take a second year to finish a project, if desired. A few fellows stay on to do a third year, as part of a Ph.D. program. After graduating from the program we will be eligible for one of twenty young investigator grants offered yearly through the Howard Hughes foundation aimed at giving junior faculty members seed money for pilot projects before they apply for NIH training grants.

The **SBRP** helped me in several ways. I enjoyed doing research that summer (on analgesia, using PET imaging techniques) and started thinking more seriously about spending a year on a research project and making research a part of my career in part as a result of that good experience. From a practical standpoint, it introduced me to a research mentor, Jon-Kar Zubieta, who recommended me for the HHMI-NIH fellowship and others. In addition, though none of the fellowships requires prior research experience, having worked on a project helped my application considerably and was the primary basis of discussion during my interviews for the HHMI-NIH and CRTP fellowships.

Calendar of Events

May 2007

5/28 — Summer
Research Experience
Begins

June 2007

6/14
SBRP Research
Seminar

6/21

SBRP Research
Seminar

August 2007

8/03 — SBRP
Research Experience
Ends

October 2007

All final paperwork
to be turned in from
SBRP participants

Summer Research
Seminar

Year-Long Research
Seminar

November 2007

11/01 — Fall
Research
Forum