

MFDP K-12 Newsletter

Published by the Minority Faculty Development Program of Harvard Medical School ☐ Fall 2001. Volume 2 Number 1.

Summers to Remember by April Inniss

Never before have I experienced summers quite like the summers of 2000 and 2001. I can vividly remember the hazy, hot summer afternoons, riding home on the crowded, sticky #39 bus, perusing through a tattered edition of the *Annals of Internal Medicine* or the latest copy of the *Journal of Medical Informatics*, and feeling absolutely exhilarated.

Through Project Success I had the privilege of working with Qing Zeng, PhD and Sandra Kogan of the Decision Systems Group (DSG) of Brigham & Women's Hospital (BWH) during the summer of 2000. My research was on a project entitled *Bridging the Gap: Facilitating Patient Information Retrieval from Hospital Web Sites*. My goal was to help break down, through statistical analysis, the vocabulary barrier that prevents the general public from accessing hospital Web site resources. In addition to spending time learning to master sophisticated statistical analysis software, I spent time in the operating room witnessing two Caesarian sections. I was incredibly impressed by both the precision of the doctor's hands during such delicate surgeries, and by the complex models and programs developed by my colleagues at DSG. At the end of those fast-paced and exciting eight weeks, I had completed work that DSG sited in a paper that they will present at an international conference in London.

This past summer by no means fell short of the inspirational and eye-opening experience of last year. My research project consisted of working under the guidance of Thomas O. Stair, MD and Christopher Kabrhel, MD on a pilot study on the *Validation of a Clinical Score for Pulmonary Embolus*. Over the course of the summer, I examined the efficacy of a new clinical scoring system that would safely and noninvasively identify patients with potentially dangerous blood clots in their lungs. The unpredictability of working in the Emergency Department was very appealing to me. I crunched numbers on the computer one day, and rode along with EMS workers in their ambulance on another.

I came away from the Project Success experience knowing that I had put a tiny, though significant wrinkle in the ever-expanding realm of science. I know that I assisted in research that will ultimately benefit the health and quality of life of *real* people. I will never forget my time in the labs, and the Friday afternoons listening to panels of medical professionals share stories about their unique paths to the field of biomedicine. I will never forget spending days revising my research paper, or wiping my sweaty palms on my blue taffeta skirt before presenting my work.



2001 Project Success Participants

Finally, I will never forget the way in which Project Success stimulated the curious scientist in me, and influenced my perception of the biomedical field. In closing, I have two words that sum everything up: *thank you*.

Project Success: Summer 2002

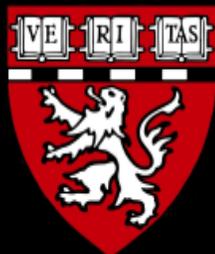
Project Success targets Boston and Cambridge minority high school students who participate in mentored summer research internships at Harvard Medical School and its affiliated institutions. Applications due March 1, 2002. For more information on K-12 student programs, please contact Faye Holmes, Project Coordinator, at 617-432-4697 or faye_holmes@hms.harvard.edu.



Project Success Alumna,
April Inniss

Harvard Medical School
MFDP, K-12 Programs
164 Longwood Avenue
2nd Floor
Boston, MA 02115-5818

Tel: 617-432-4634
Fax: 617-432-3834
fdd_mfdp@hms.harvard.edu



Program for Research & Investigation in Science and Math (PRISM)

Medical students and public school teachers make good teammates! This summer Kevin Friedman, a second-year student at Harvard Medical School, and Berinda Malden, an eighth grade science teacher at the Martin Luther King, Jr. Middle School, teamed up to teach in the Program for Research & Investigation in Science and Math (PRISM). For three weeks Friedman and Malden worked with rising ninth graders from John D. O'Bryant School of Mathematics and Science, the Henry Dearborn Middle School, and the Martin Luther King, Jr. Middle School on science and key math concepts that the students will be using frequently in the ninth grade.



2001 PRISM Participants

At the center of the PRISM curriculum are two case studies developed by the Minority Faculty Development Program. The first case, "Cecilia's Story", tells the story of a woman with a vestibular disorder. As they worked their way through the problems encountered by Cecilia, the students spent a full day at the Massachusetts Ear and Eye Infirmary's Jenks Vestibular Lab. At the Jenks Lab, several physicians spoke to them about the inner ear, and students were able to see how physicians test vestibular function in the laboratory setting.

The second case, "What's Up With Jose?", concerns sleep disorders. As part of this case, students visited the sleep lab at the Brigham and Women's Hospital. Dr. Ken Wright, one of the authors of "What's Up With Jose?", gave the students a tour of the sleep lab and explained to them the types of studies that are done there. Other field trips included the Harvard Museum of Natural History, the MIT Museum, and The Beth Israel/Deaconess Radiology Department. The students also gained hands-on laboratory experience at the Cepko/Tabin and Weitz labs here at HMS.

For more information on how HMS students and BPS teachers can collaborate, please call Sandra Sims, Director of K12 Programs at 617-432-4634.

Choosing a Science Fair Project

It's never too early to start on your science fair project! Find a topic that interests you, and pick a question to investigate. Check out the Web sites listed below for project ideas and for tips on how to create a great science fair project.

General information on creating a project:

<http://www.isd77.k12.mn.us/resources/cf/SciProjIntro.html>
<http://school.discovery.com/sciencefaircentral/scifairstudio>

Lists of questions and project ideas:

<http://www.stemnet.nf.ca/sciencefairs/>
http://othello.mech.nwu.edu/~peshkin/scifair/chias_ideas.html
<http://www.halcyon.com/sciclub/cgi-pvt/scifair/guestbook.html>
<http://youth.net/nsrc/sci/sci.index.html>

(a very large database of ideas)

Links to Web resources related to science fair projects:

<http://www.ipl.org/youth/projectguide/>

Sharpen Your Pencils! Can You Answer this Question?

OBSTACLE : STRIVE

- A) school : graduate
- B) exercise : atrophy
- C) examination : abhor
- D) challenge : persevere
- E) morality : pacify

Does the thought of a three-hour exam testing your verbal reasoning, critical reading, and math problem solving skills make you nervous? You're not alone--about two million students take the Scholastic Aptitude Test (SAT) each year.

To help students improve their test-taking skills, K-12 Programs offered a free SAT course over the summer. Twice a week for six weeks, high school students of all ages met to practice problems, learn strategies, and get some tips. Each class had time devoted to learning about both the Verbal and the Math sections of the SAT. The students were also given Kaplan SAT books to work on at home. The students even came in one Saturday morning to take a full-length, practice SAT. One of the tutors explained, "The SAT measures a very specific kind of intelligence-plus, it's really predictable. The kinds of questions on the test never change, so you have to take advantage of that. There are loads of strategies to help you, and a little practice goes a long way."

Juna Konomi, a high school senior who took the SAT class, advises, "Start practicing as soon as possible. It's never too early, even if you're a freshman." Erna Bele, another senior, agreed: "Take it very seriously. Do as many vocabulary and math problems as you can possibly do. Take many practice SATs because they really do help. Also, don't be afraid of the SATs because it's not that hard once you've practiced."

The answer is C--just as you strive to overcome an obstacle, you persevere to overcome a challenge.

Questions and Answers for Parents about Preparing Your Child for the SAT

How important are the SATs for getting into college?

The SATs are an important part of the college application, but you should be careful not to put too much emphasis on it. Your child's Grade Point Average, extra-curricular activities, personal essay, and interviewing skills are heavy factors in college admission as well. A great SAT score by itself is no guarantee of being accepted, and a lower SAT score does not automatically shut the door.

How early should my child start preparing for the SAT? How many times should s/he take it?

The answer to this is truly different for each student. Some students begin as early as sophomore year when they take the PSAT, a shorter version of the SAT. Perhaps the most important part of preparation is to know the test thoroughly. Your child should be familiar with the types of questions on the SAT, the specific skills that are tested, and the structure of the test. The SAT should not be like a "pop quiz" to your child because the test has no surprises on it. According to Educational Testing Services, the author of the SAT, at least half of all students take the SAT twice--in the spring of the junior year and in the fall of the senior year.

How can my child get some assistance in studying for the SAT?

One common (but expensive) choice is a testing company like Princeton Review or Kaplan, where students attend weekly classes for a few months. Another good and less expensive option is to find a tutoring class at a community center or high school. The Higher Education Information Center at the Boston Public Library or a guidance counselor may be a good resource to find a class. Finally, purchasing an SAT textbook is an excellent way to prepare. *The Princeton Review* or *10 Real SATs* are good resources. The books are thick, but don't be intimidated--they're for practicing and some pointers, not for reading cover to cover.

How can I be supportive of my child in this whole process?

Some students may not take the SAT seriously--others will take it too seriously. Encourage your child to have a balanced view. If your child has no interest in any preparation, you may have to take that first step and buy a book! If your child is worried about scoring high enough, be encouraging. The college application process is very stressful, so your child needs your support during each step.

University Programs Collaborate for Teacher Education

Suzanne Panico participated in the Harvard Medical School's Teachers Institute Mini-Sabbatical in 1998. Then a science teacher at Fenway High School, she and other teachers worked for a week to solve "Mary's Mystery", a medical case that explores seizures, the effects of drugs on the brain, and other neurological concepts. The case worked so well in her own classroom that she attended the 2000 Mini-Sabbatical to explore a second case, "Tina's Tale".

Ms. Panico decided to share what she learned at Harvard with teachers from around the world when she became a Fellow at Tufts University's Wright Center for Science Education. This summer, the Wright Center and Harvard

Medical School's Teachers Institute co-sponsored a teacher workshop entitled, "Human Biology: The Case-Study Method of Learning about the Human Body". Twenty-five teachers from around the country and around the world were exposed to cutting-edge scientific knowledge and inquiry, and learned how to integrate case-based learning into their own classrooms.

The collaboration between the Teachers Institute and a Teachers Institute alumna, is evidence of the dedication and enthusiasm of educators for their students and their subjects. Teachers who share their knowledge with their peers can work together to improve science education.



"Human Biology: The Case-Study Method of Learning about the Human Body" Session

Teacher Fellows Participate in Case Writing Workshop



Workshop Participants

The Harvard Medical School's Teachers Institute has provided teachers with medical cases that they can use with their students for the past seven years. Many of the teachers who have participated in Teachers Institute workshops have found case-based learning to be so useful that they are interested in writing their own cases. To meet this need, the Teachers Institute sponsored a Case Writing Workshop for Teacher Fellows on August 30. This all-day workshop presented teachers with information about the qualities of a good case, and guided teachers through the case development process. The cases that teachers began to develop concerned such topics as Bipolar Disorder, West Nile Virus, and soil quality. Teachers were paired with a Case Writing Buddy to encourage further case writing efforts, and to provide on-going support and feedback. Teachers who have cases that they would like to share with their colleagues, or teachers who would be interested in using cases written by their peers, should contact Emily Rickards, Teachers Institute Coordinator at 617-432-1319.

Program to Watch!

The Teacher Resource Connection is a program that seeks to strengthen the link between Boston teachers and Harvard Medical School resources. Through this program, teachers can access speakers, science fair judges, and the MFDP library of science texts, curriculum supplements, videos and other materials. For further information please contact Emily Rickards, Teachers Institute Coordinator at 617-432-1319 or emily_rickards@hms.harvard.edu

Creepy, Crawly, Up-close and Personal

Looking for a new way to integrate technology into your classroom? Perhaps Bugscope is for you. Bugscope is a program designed to introduce K-12 classrooms to scanning electron microscopy. Your class selects some bugs that they want to see at high magnification, and you send those precious bugs to Illinois where the microscope is located. At a selected time the folks in Illinois load the bugs on the microscope and the class remotely operates the microscope through a web browser linked to the Internet. The images collected during the session are automatically stored in a database, so the class can use them after the session is over. Explore the Bugscope Web site for more information:

<http://bugscope.beckman.uiuc.edu>

The Bugscope project is an educational outreach program offered by the Imaging Technology Group at the University of Illinois Urbana-Champaign and funded by the National Science Foundation.



Science in the News

Science in the News is a seminar series, sponsored by Harvard Medical School and taught by Harvard and MIT Biology PhD students, aimed at teaching members of the public some of the basic biology behind many of the hottest scientific topics currently covered by the media. No prior knowledge of biology is assumed or required. Attendees of all ages, backgrounds and occupations are welcome.

The seminars will be held on Thursday nights from 7:00-9:00 p.m. in Room 122 of the Goldenson Building. Parking is available (but not free) in the Children's Hospital parking lot. If you have further questions please call 617-432-2420 or visit the Web site at:

<http://axon.med.harvard.edu/~sitn/topics.html>

Oct. 18	Cloning and Stem Cells
Oct. 25	Cancer
Nov. 1	AIDS
Nov. 8	Gene Therapy
Nov. 15	Genetically Modified Food

See more **Upcoming Events** on the next page...

Upcoming Events



Explorations—November 29, 2001

Explorations is a one-day program in which Harvard faculty and research associates host fifty Boston Public Schools middle school students for a day of presentations, panel discussions about educational paths and partnering of individual students with researchers.

Howard Hughes Medical Institute Holiday Lectures: Live Webcast—November 29-30, 2001

The 2001 Holiday Lectures on Science will focus on sex determination—the molecular and genetic mechanisms that determine whether an organism will be male, female, or a hermaphrodite.

www.hhmi.org/grants/lectures/index.htm

Project Success Reunion Dinner—January 2, 2002

Biomedical Science Careers Student Conference—March 2, 2002

For Post-Docs, Medical, Graduate and College Students, High School Seniors and Juniors. Presentation of the H. Richard Nesson, M.D. Award as well as plenary sessions, keynote speakers, workshops, panel discussions, meetings with advisors, and networking. Contact Lise Kaye for more information at 617-432-0552.

Teachers Institute Mini-Sabbatical—March 14-16, 2002

The Mini-Sabbatical is a professional development opportunity for Boston Public Schools science teachers who are interested in using the case study method of learning with their students.

Junior Science and Humanities Symposium (JSHS)—April 5-6, 2002

JSHS provides a forum for high school to present their work during research symposium held at Harvard Medical School. Abstracts due January 8, 2002.

Please visit the *Community Outreach and Diversity Calendar* on MFDP's Web site www.mfdp.med.harvard.edu for more information on all these events.

MFDP K-12 Newsletter - Fall 2001, Volume 2, Number 1

Created and published by Harvard Medical School

Office of Faculty Development and Diversity (FDD), Minority Faculty Development Program (MFDP)

Joan Y. Reede, MD, MPH, MS, Associate Dean

K-12 Program Staff: Sandra T. Sims, Director of K-12 Programs; Faye Holmes, Project Coordinator K-12 Student Programs; Emily Rickards, Teacher Institute Coordinator; Paula Smith, PhD, Science Coordinator

Contributors and Editors: Kevin Friedman, April Inniss, Jennifer Park, Emily Rickards, Paula Smith

Layout and Design: Amy Griffin

Harvard Medical School
MFDP, K-12 Programs
164 Longwood Avenue
2nd Floor
Boston, MA 02115-5818

Tel: 617-432-4634
Fax: 617-432-3834
fdd_mfdp@hms.harvard.edu

