Health Sciences and Technology

Newsletter

Fall/Winter 1996-7

Directors' Notes:

Much of the news this fall emanates from HMS. A successor to Dean **Daniel C. Tosteson** has been named. **Joseph B. Martin, M.D., Ph.D.,** currently Chancellor of the University of California-San Francisco, will be the new Dean at the end of June 1997 (see below). Another major new alliance in the Harvard-affiliated teaching hospitals occurred October 1, 1996. The Beth Israel Hospital and the New England Deaconess Hospital merged to form the Beth Israel Deaconess Medical Center. The new Hospital, together with Mount Auburn Hospital, has formed a joint venture Institute for Education and Research with HMS. The new Institute has one of its objectives shifting clinical education more and more to the ambulatory setting. Along these lines, a new core clinical curriculum was established in the M.D. Program which includes more ambulatory experience, a longitudinal primary core clerkship, and a "clinical commons." **Michael Rosenblatt** has been appointed Executive Director of the new Institute and Faculty Dean for Academic Programs at Beth Israel Deaconess Medical Center for the Harvard Medical School.

Joseph Martin HMS Dean Designate

Joseph B. Martin, M.D., Ph.D., will become the next Dean of the Faculty of Medicine at Harvard at the beginning of the next academic year. President **Neil L. Rudenstine** praised him as "a distinguished neurologist...he is also a dedicated and insightful educator, with a deep commitment to both basic and clinical research. As UCSF Chancellor since 1993, and previously as Dean of the UCSF School of Medicine from 1989 to 1993, he has earned broad recognition for his thoughtful, collegial, and successful leadership of a large and complex medical center. He has had an extensive opportunity to consider the ways in which far-reaching changes in health-care delivery systems are transforming the environment for academic medicine, and he has addressed those changes with foresight, energy, and skill." From 1978 until 1989, Martin was a professor of neurology at HMS and chief of the neurology service at the MGH.

David Ho is TIME's "Man of the Year"

David Ho, M.D. '78, Scientific Director and CEO of the Aaron Diamond Aids Research Center and Professor of Medicine and Microbiology at New York University School of Medicine, was named "Man of the Year" by TIME Magazine (December 30 issue). His pioneering work with combining several drugs in the treatment of AIDS led to the demonstration in 1996 that AIDS patients taking combinations of protease inhibitors with antiviral drugs, such as AZT, manifested significant decreases in viral loads and increases in T-cell counts, associated with remarkable clinical recoveries. In 36 pages, the reports in the December 30 issue of TIME provide an excellent overview not only of Ho's career, but also of the history and present status of the AIDS epidemic.

Taplin Awards to Begin in 1997

John F. (1935) and Virginia B. Taplin have established an awards program to recognize and support the work of HST faculty and students in the fields of biomedical engineering, physics, and chemistry. Four $50,000 Taplin Awards will be given annually. Faculty awardees will be known as the John F. and Virginia B. Taplin Faculty Fellows in HST, and Ph.D. students training in their laboratories who benefit from the award will be Taplin Student Fellows. The Taplins' generous gift will enhance the effectiveness of HST's efforts to contribute to an understanding of the causes of disease, their prevention, treatment, and cure. We thank them for this tremendous new resource to advance research, study, and training in HST.

Elazer Edelman Named to Cabot Chair

We are delighted to announce that Prof. **Elazer R. Edelman, M.D., Ph.D. '84,** has been appointed to the Thomas D. and Virginia W. Cabot Associate Professorship of Health Sciences and Technology. Mr. Cabot was a long-term supporter of HST, and we are proud that an HST graduate and primary faculty member has been selected to hold this important professorship. Our congratulations also to Elazer and his wife on the birth of a new son, on January 13, 1997, at 9 lbs. 12 oz.

In Memoriam:
Paul M. Gallop

Dr. Paul M. Gallop, director of the Laboratory of Human Biochemistry at Children's Hospital, died on August 20. Dr. Gallop was a renowned biochemist who did much of the fundamental work in the understanding of collagen. He was a strong supporter of the HST program over two decades, and taught HST 140 with great enthusiasm. We were honored that his family choose to remember him by establishing the Dr. Paul M. Gallop Fund at MIT.

Benjamin M. Hammond

Benjamin M. Hammond, a student in the HST Speech and Hearing Sciences program, died on October 29. His research at the Massachusetts Eye and Ear Infirmary explored how the fibers of the auditory nerve convey speech patterns from the cochlea to the brain. After graduating from Harvard in 1989, he toured with his rock band Men of Clay for three years and then worked with Kirkegaard and Associates, an acoustics firm. He designed the outdoor sound systems for the Seiji Ozawa Hall at Tanglewood, and he also worked on the acoustics of Jordan Hall at the New England Conservatory. Benjamin was a student who had extraordinary energy and talent and whose work epitomized the goals of the SHS program. A memorial fund has been established in his name at MIT.

Rosalie H. Levine

Rosalie H. Levine, wife of the late movie producer Joseph E. Levine, died on July 24. Mrs. Levine, who grew up in Malden, began sponsoring an HST scholarship in 1981. Her excitement about HST students was great, and she continued her support, helping **Michael Koren, Ming Wang, Henry Zhu, ChenWei Lee,** and **Michelle Bush** with their training. She gave a great start to our Jubilee year, hosting a dinner party in her home in Greenwich, CT, for the HST Directors and local alumni/ae.

Alexander E. Racolin

Alexander E. Racolin, a lawyer and theater producer, died on June 6. Involved in all aspects of the arts, Mr. Racolin was also a publisher of fine art books and was named in Martha Graham's will as among those to be consulted on artistic matters. He served on the board of the Martha Graham Foundation. Mr. Racolin was interested in Alzheimer's disease and supported the Racolin Scholarships and Racolin Research Assistantships which were awarded to HST graduates and students **Jaffa Weaver, Steven Frucht, John Reppas, Paul Borghesani, Marcus Ware, Vincent Li, Rebecca Hung, John Keltner, Steven Bowman, Alexander Guimaraes,** and **Udaya Liyanage**.

Steven Weinberger, M.D. received the HMS/HSDM Class of '96 Faculty Award for best preclinical teacher. Kudos to **Patricia A. Cunningham,** who received a Special Recognition Award as a Society Program Officer.

Research Report:

A major cause of familial hypercholesterolemia identified. **Stephen C. Blacklow, M.D., Ph.D. '91,** of the Department of Pathology at Brigham and Women's Hospital, and MIT Professor of Biology **Peter Kim** at the Whitehead Institute report on their studies of the low density lipoprotein receptor (LDLR) in patients with familial hypercholesterolemia. They demonstrated a protein folding defect in nine point mutants of LR5 in the ligand binding domain of the LDLR. This folding defect appeared to be coupled to a deficiency in calcium binding. (*Nature Structural Biology, September 1996*)

Tissue engineering experiment aboard Mir space station. **Lisa E. Freed, M.D., Ph.D.** '88, HST research scientist and colleague **Gordana Vunjak-Novakovic** have been studying bovine cartilage cells growing on polymer scaffolding for some time. Supported by a microgravity tissue engineering grant from NASA, Dr. Freed and her associates are using this model system to study tissue growth in space. On September 16, her bovine cartilage tissue cultures were shuttled to the Russian Mir space station where they will remain for five months. The main aim of this experiment is to determine if this system has potential for studies of tissue engineering in space. (For further details, see *MIT Tech Talk, October 23, 1996.*)

New breed of mouse aids Alzheimer's work. **Karen Hsiao, M.D., Ph.D. '82,** and her team at the University of Minnesota, have developed a genetically engineered mouse that suffers memory loss like that found in people with Alzheimer's disease. The human gene that manufactures amyloid precursor protein linked to Alzheimer's brain cell damage was inserted into a mouse embryo to generate this animal. The mouse brain develops beta amyloid plaques. This is the first time that an engineered mouse shows an association between plaques and a functional loss of learning memory, and provides a new method to test drugs against the disorder. (*NY Times* and *Science, October 4, 1996*)

Mapping of a gene for Parkinson's Disease. **Mihael H. Polymeropoulos** of **Robert L. Nussbaum, M.D. '75**'s Laboratory of Genetic Disease Research, National Center for Human Genome Research, NIH, reports the mapping of a gene for Parkinson's Disease (PD) to chromosome 4q21-q23. PD affects about one percent of the population over age 50 and has been known to be familial in some cases, often with an autosomal dominant pattern. This work constitutes a significant step toward the identification of the gene and the elucidation of PD. (*Science, November 15, 1996*)

Genetic defect a cause of male infertility. **David Page, M.D., '84,** Associate Professor of Biology at MIT and Associate Director of the Whitehead/MIT Center for Genome Research, and his collaborators studied the Y chromosome of 35 men with extremely low sperm counts (oligozoospermia). Two of these men lacked a fragment of the long arm of the Y chromosome, which was present in their fathers. A similar mutation in men with azoospermia had been reported by this group previously. This study has significant clinical implications: intracytoplasmic sperm injections (ICSI) -- increasingly used to circumvent oligozoospermia -- may result in sons of some oligospermic men inheriting infertility. *(Lancet, May 11, 1996)*

Discovery of a new parasite. A 44 year old accountant with known AIDS developed an illness comprising fever, night sweats, loss of weight and abdominal pain. Laparotomy and biopsy of a rapidly enlarging abdominal mass revealed an unknown type of histopathology, characterized by cells too small to be human. Well after the man's death two months later, **David Relman, M.D. '82**, Assistant Professor of Medicine at Stanford University, was asked to help identify the origin of the unfamiliar cells. Using the technique of polymerase chain reaction (PCR), Dr. Relman found sequences distinct from human DNA, but resembling those of cestodes, the class of parasites to which tapeworms belong. Dr. Relman may well have found a new pathogenic organism. (*Lancet, June 29, 1996*)

First demonstration of the mechanism of imprinting a topographic visual map upon the brain. **Cliff H. Yoon,** MD/PhD candidate in the HST Division, is a member of the Department of Cell Biology team, directed by **Dr. John G. Flanagan**, who report that a specific protein molecule guides the topographic neuronal connections in the embryonic visual system. The molecule ELF-1, found in mouse midbrain and cloned previously in this laboratory, was shown to bind to Mek 4, a corresponding molecule on retinal neurons and to guide incoming axons from retinal neurons. ELF-1 thus is responsible for the formation of visual maps in the midbrain. This first demonstration of a specific topographic effect of a specific molecule confirms Descartes' postulation that retinal nerve fibers carry accurate images to the brain. (*Cell, September 6, 1996*)

Student News:

Sangeeta Bhatia, a MEMP student in HST, was recently awarded the Whitaker Graduate Student Award by the Biomedical Engineering Society recognizing her excellence in academic achievement and research in bioengineering. Ms. Bhatia's research, performed in the laboratory of Dr. **Mehmet Toner '89** of the Center for Engineering in Medicine at MGH, focuses on developing new technologies for the *in vitro* micropatterning of hepatocytes for use in the development of a bioartificial liver device.

Subroto Paul, '98 was selected by the Angiogenesis Foundation in the second annual award of summer fellowships supporting medical students conducting basic science or clinical investigations. Mr. Paul is working at Children's Hospital with Dr. **Michael Klagsbrun**, Harvard Professor of Surgery and Pathology, on a newly described growth factor HB-EGF. The Angiogenesis Foundation, established in 1994, is a non-profit organization dedicated to accelerating the development of angiogenesis therapies. For 1997 fellowship application information, contact the Angiogenesis Foundation after January 1, 1997 at P.O. Box 383011, Cambridge, MA 02238.

David A. Shaywitz, M.D., Ph.D. candidate, conveyed his excitement at the constant emergence of new, unanticipated questions in basic biological research in the Public Forum column of the *Boston Globe* on November 19, 1996, titled, "Nowhere Near the End of Science".

Here's the post-olympics run down of the FIRST EVER HST victory at the HMS Society Olympics. (FYI, the prize of the olympics is a pink lawn flamingo, just to explain "the bird" references.)

Subject: "Winning isn't everything . . .it's the only thing."
Vince Lombardi & HST

In an upset that will be remembered with the 1980 U.S. Olympic hockey victory, the scrappy HST defeated the villains from New Pathways and brought home the flamingo. For those of you who could only be with us in spirit, I have included a brief summary of the performance below. It was truly an amazing team effort. From the T-shirt to the HST banner, the watermelon to the tug-of-war for the title - time and time again, different HSTers, MEMPs and MDers alike, came through in the clutch to contribute to the win. If you thought HST was intense studying, you should have seen us running obstacle courses, passing lifesavers on toothpicks, and cheering for each other. Every ounce of effort to get the bird.

Damn proud to be in HST,
Bob O'Toole, '99 (captain of the HST team)
June 14, 1996 - Sunny, HMS quad

HST started the day by displaying our championship T-shirts and huge banner (thanks to **Sid Mukherjee, '99** and **Gisela Sandoval, '99!**) affixed to a tree. Although outnumbered by our foes by about 2:1, the HST team was loud and proud and headed into event number 1.

1. Balloon toss. HST wins the first event and launches itself into the lead. In the final toss, HST has two teams (team "Ben" - **Bens Ebert '99** and **Gewurz, '99**, and team "small balloon" - Bob O'Toole and **Sohail Tavazoie,** M.D. candidate) both of whom survive to start us out in the right direction.

2. The obstacle course. This test of common athletic abilities (chewing crackers and whistling, gum chewing and bubble blowing, and licking your way through whipped cream in pursuit of a life saver) was certainly one of the funniest events of the day. The HST highlight was probably when we messed up the order of the pie tins (although we claimed another society did it to us) and wound up licking through the wrong tin for a life saver that wasn't there anymore. Whoops.

3. Dental rinse. Chewing oreos and running with mouth wash has never been more of an art form. Another solid performance, especially by **Sam Katz '99**, keeps us in the lead.

4. "I'm too sexy" (Orange and lifesaver with toothpick relay). All 22 members of the HST team (including **Patty Cunningham**, anchor woman) really dominates this one

and crush the other societies. Did they ask us to do this in our entrance interviews or something?

5. CAGE Dizzy Bat Race. The CAGE questions are a series of questions you ask a person to determine if they have an alcohol problem. No one in HST has ever heard of them, but despite this large disadvantage and a few tough spills, we do well enough to maintain our lead.

6. Watermelon Fever. The ref'ing hurts us in this one. We get a 10 second penalty before starting for having a cracked watermelon and a really tough ref who keeps us from scoring too high even though we clearly ate the most melon. Some awe inspiring pictures to come from this one (go MEMPers, **Jen Stinn** and **Paula Ragan**)

7. Talent Show. Our final dominance starts to show. **David Mark, '99** starts the "Derivatives" performance with the line, "We've suffered for our art, now it's your turn." Sohail Tavazoie then blows his Persian pipe - the band tunes their instruments (including Sohail's drum) and the group launches into its world famous version of the D. Mark tune, "Litany 209". Lyrics, music and voice by David Mark, guitars by Ben Gewurz and David Mark, bass and harmony by **Jon Strasser, '99**, Sohail on drums. Solo interpretive dance by **Tony Chen, '99**, solo juggling by Ben Ebert. Direction by **Eric Liao, '99** and chorus by everyone else. We clearly outshone the other societies in this one and compliments about this were the most common thing I heard other than, "I've never seen that person before."

8. Tug-of-war. For all the marbles. We were in first place going in so we received a bye in the first round. Our first tug started off badly as we came within a few feet of a loss. We dug in, screamed a lot, used Grant's strategy and pulled their lazy, never-go-to-class, NP butts all the way across the quad and won the Olympics. Had we lost this tug we would have lost the Olympics. Special performances by MEMP student **Doug Daum**, and anchor man Bob O'Toole. Even though our first tug victory had already secured our win of the Olympics, we still crushed Castle in the final, causing one NP to say, "I've never lost a tug of war in my life, and I lost to those geeks." Victory (and the feel of some good cleats on your feet) has never been so sweet.

The participants unanimously selected Patty Cunningham to receive the glorious pink flamingo. She stood proudly displaying the flamingo on the school's steps for all the world to see HST's dominance. When you get the chance, stop by and see the bird. I think it will be happy in its new HST home, don't you?

1,2,3, - WE GOT THE BIRD !!!

Alumni/ae Affairs:

We have been accused of giving credit only to those of our alumni/ae who have entered the hallowed halls of academia. This impression has been enhanced by the reports of our follow-up studies and statistics on engagement and accomplishments in research. This emphasis, in part, is due to the dominance of what can be measured and expressed in numbers (quantitative!) However, since its foundation, education for leadership has been a key goal of the HST Program. Expressed in another way, we want to educate people who will make a difference. One of our graduates we are very proud of is the Reverend Ray A. Hammond, M.D. '75, who, with his spouse Gloria Hammond, M.D., recently spoke in the Cabot Primary Care Series on the topic, "Outreach to the Overlooked: Changes Ahead in Boston's Underserved Communities".

Alumni/ae News:

Michael D. Buschmann, Ph.D. '92, and Professor **Alan Grodzinsky** have received the 1995/96 Best Paper Award of the Bioengineering Division of the American Society of Mechanical Engineers (ASME). Entitled "A Molecular Model of Proteoglycan-Associated Electrostatic Forces in Cartilage Mechanics", the paper was published in the May 1995 issue of the Journal of Biomechanical Engineering.

Cambridge Heart, Inc. made its initial public offering this summer. This new enterprise is engaged in the development and commercialization of products for the non-invasive diagnosis of cardiac disease. The CH 2000 stress test system utilizes proprietary disposable electrodes and signal processing techniques to measure T-wave alternans down to one-millionth of a volt. T-wave alternans has been associated with sudden cardiac death and life threatening heart rhythm disturbances. Our congratulations to **Richard J. Cohen, M.D., Ph.D. '76,** a founder and director! Check the Nasdaq under the symbol "CAMH".

Merit Cudkowicz, M.D. '90 and her husband Eugene Sorets announce the birth of Alexander Gustavo, 8 lbs. 7 oz., 21 inches, December 2, 1996, born at the BI-Deaconess Medical Center.

Evan B. Dreyer, M.D., Ph.D. '84, HMS associate prof. of ophthalmology at the MEEI, is one of two recipients of the New York Academy of Medicine 1996 Lewis Rudin Glaucoma Prize for a paper on glycoprotein Thy-1 that may play a role in optic nerve regeneration in patients with glaucoma.

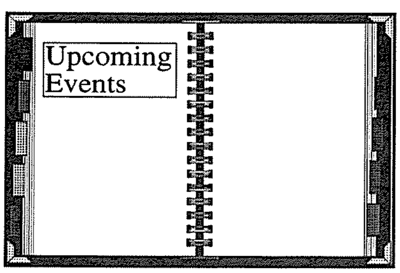
Stuart Forman, M.D., Ph.D. '89 wrote that he has been "now 4 years at MGH anesthesia department. A K21 grant from NIAAA is providing 80% lab effort...have found molecular evidence that anesthetics and alcohols interact directly with ion channel proteins in excitable tissue."

Gilad S. Gordon, M.D. '83, (M.B.A. U. Wash.) won the 1996 Cecile Lehman Mayer Research Award of the American College of Chest Physicians for the best research paper, "Validation of the Therapeutic Recommendations of the American Thoracic Society Guidelines for Community

Acquired Pneumonia (CAP) in Hospitalized Patients." The coauthors included **Michael Niederman, Diane Throop, Laura Berberian, John Bass, Demissie Alemayehu,** and **Scott Mellis**. Dr. Gordon has joined Bolder Heuristics as vice-president. The company develops large custom software for clients in the healthcare and telecommunications fields. Dr. Gordon is also serving as an assistant professor at the University of Colorado Health Sciences Center and attends at the Denver VA Medical Center.

Scot Graham, M.D. '92, has "started private practice in Littleton, CO in August...will begin volunteering time at the University of Colorado department of OB/Gyn in the spring...loving the Rocky Mountain High!!!"

Debra R. Judelson, M.D. '76, an internist/cardiologist senior partner with the Cardiovascular Medical Group of Southern California, has been named President of the American Medical Women's Association (AMWA). She will serve from November 1996 to November 1997. As President-elect, Dr. Judelson was instrumental in developing AMWA"s website (http://www.amwa-doc.org). Founded in 1915, AMWA is a national organization of more than 11,000 women physicians, medical students, and residents, dedicated to improving the personal and professional well-being of its members, increasing the influence of women in all aspects of the medical profession, and promoting women's health. Dr. Judelson was inaugurated at the AMWA Annual Meeting held in Boston on November 2. She presented the President's Recognition Awards to Professor **Martha L. Gray, Ph.D. '86** for her service as HST interim co-director and for her distinguished teaching and research, and to Dean **Eleanor G. Shore** for her efforts to increase faculty diversity and the number of women in high ranking faculty positions at Harvard Medical School.



1997 HST Forum: March 13, 1997

The 1997 HST Forum will be held at MIT (Building E25, 45 Carleton Street) on **Thursday, March 13.** This annual scientific meeting, introduced in 1987, has been an important venue for students to present their experimental data and interpretations. We will be altering the schedule, which we hope will allow more faculty, alumni/ae and students to attend. The Forum will begin with a poster session in the E25 atrium from 3:30-5:30 p.m., followed by a panel discussion featuring Drs. Richard Johns, John Parrish, and Arnold Relman, "The Roles of M.D. and Ph.D. Investigators in the Teaching Hospital of 2010," in E25-111 from 5:45- 7:30 p.m. All Forum participants are invited to the Forum Dinner at 7:45 p.m. at the Boston Marriott Cambridge, 2 Cambridge Center, in Kendall Square. We hope that many of you will be able to join us. For further details, please contact Barbara Jaskela, 617-253-1554, bjaskela@mit.edu

MIT Summer Session courses:

2.78s Medical Imaging Infrastructure: Diagnostics Information Delivery in Clinical Environments, **C. Forbes Dewey, Jr.** June 23- 27

15.03s Management of Drug Discovery and Development, **Stan Finkelstein, M.D. '76** June 16-17

15.04s Advances in Pharmaceutical Economics, Finance and Outcomes Assessment, **Stan Finkelstein, M.D. '75** June 18-19

20.02s Advances in Controlled Release Technology: Polymeric Delivery Systems for Pharmaceuticals, Proteins and Other Agents, **Robert S. Langer** July 14-18

HST0.90s Cardiovascular Pathophysiology for Engineers and Scientists, **Richard J. Cohen, M.D., Ph.D. '76** June 16-20

For further information: MIT Professional Institute, 8-201, Cambridge, MA 02139-4307 tel. 617-253-2101, fax 617-253-8042
e-mail: professional-institute@mit.edu
WWW: http://web.mit.edu/summer-programs/

Views on Diversity: Harvard and MIT

Following the recent events regarding diversity in higher education, both institutions have issued President's Reports on this issue. HST, as a jointly constituted division, echoes their commitments to diversity.

Excerpts from President Neil L. Rudenstine's Report to the Board of Overseers - (the complete text is posted at http://www.harvard.edu/presidents-office)

"During the past two years, we have seen a steady growth in controversy concerning issues of student diversity, university admissions, and affirmative action. Amid this national discussion and debate, specific proposals have been advanced in some quarters to eliminate factors such as race, ethnicity, and gender from consideration in university admissions...As we look ahead, I believe we need to examine not only current ideas and recommendations, but also the relevant past. We need to remind ourselves that student diversity has, for more than a century, been valued for its capacity to contribute powerfully to the process of learning and to the creation of an effective educational environment. It has also been seen as vital to the education of citizens -- and the development of leaders -- in heterogeneous democratic societies such as our own.

"Many nineteenth century educators tended to think of diversity in terms of ideas -- differences in opinions or views...An important variation on this theme emerged in the work of major thinkers during the 1840s and 1850s. John Stuart Mill stressed the value of bringing 'human beings in contact with persons dissimilar to themselves' [John] Newman envisioned colleges with a multitude of students -- 'the world on a small field'...For both Mill and Newman, these forms of diversity are not mere extras; they are integral to true learning at a profound level. They are not dispensable. They shape some of the fundamental ways in which knowledge itself is generated, tested, and transformed into understanding."

[At the turn of the century] "Struggles between differing religions, and between religion and science, particularly the ideas of Darwin, intensified. The movement of women's rights created greater tensions, even as it gathered strength. The social position of black Americans, following the Civil War and Reconstruction, was anything but resolved. Perhaps most significant, successive waves of 'new immigrants' had been arriving since the mid-1800s...This continuous influx of different peoples gave rise to considerable anxieties and fears...In the 1890s, a decision to enroll even a modest number of university students from some of these [immigrant] groups was not uncontroversial."

[On the 1978 Bakke case] "The rationale that Justice Powell found persuasive was based directly on educational grounds: the presence of minority students contributed -- along with the presence and contributions of other students -- to diversity, and therefore to the total educational environment of an institution, as well as to the education of all its members."

"There have clearly been increased opportunities for members of historically underrepresented groups in colleges and universities during the past quarter century. Positive steps of this kind, however, are very recent, and are far from secure. Twenty-five to thirty years of improved access to higher education is a very brief time span. It is scarcely one generation -- barely long enough for graduates of the late 1960s to have had children who are now reaching college age. Far from having reached a point where we can feel confident about the gains that have been made since the 1960s, we are still very much in the process of creating the conditions necessary for continuous long-range sustainability. The achievements to date are real, but they are also too recent, too fragile, and too incomplete for any relaxation of effort."

"As the admissions staff evaluates candidates, it looks carefully at letters of recommendation from teachers and others; at the actual quality of a student's academic work (not simply the grades); at evidence of character and commitment; at each student's written personal statement; and at assessments of the nature and quality of a student's contributions in specific extracurricular activities or employment situations. These and other factors -- including those characteristics that can enable individual students to contribute something distinctive to the diversity of the student body -- create the framework for admissions to Harvard College, and they provide a much sounder basis for informed decisions than reliance on any one or two indicators could conceivably supply."

"The primary purpose of diversity in university admissions is not the achievement of abstract goals, or an attempt to compensate for patterns of past societal discrimination. It represents now, as it has since the mid-nineteenth century, positive educational values that are fundamental to the basic mission of colleges and universities...The way to proceed in the future is not to introduce absolute prohibitions on the consideration of race (or other factors) in admissions, but to treat such characteristics with the same care and scrupulousness that we have historically given so many aspects of diversity...In selecting those students who will be offered places, the whole must be seen to be genuinely greater than the sum of the parts...The question is how to admit not only individuals, but also an entire entering class of students who -- in their collective variety -- are likely to have a strong capacity to teach and learn from one another."

President Charles M. Vest's Statement of Commitment
(for more discussion, see the Report of the President for academic year 1995-96 at http://web.mit.edu/president/communications/rpt95-96.html)

"These are times of rapid change in our society. We at MIT respond to change by generating or incorporating new ideas and new knowledge in our professional and scholarly lives. We must become equally adept at incorporating cultural and demographic change into our life as an academic community if we are to maintain our high quality and our relevance to the world. To do this, we must recognize and draw on the full range of talents brought to use by women and men from many different racial, cultural, economic, and ethnic backgrounds. Our greatest challenge in this regard is to reduce the underrepresentation and underutilization of women and minorities at MIT."

"This requires, first, that we work to create at MIT an atmosphere of civility, collegiality, and mutual respect that stimulates and supports all of our faculty, students, and staff."

"Second, we must take renewed, affirmative action to ensure equality of opportunity in education and employment at the Institute. Specifically, thoughtful and effective recruitment and career development of women and minorities for positions at all levels is necessary to ensure their greater and more effective participation in MIT"s workforce."

"MIT has always been a place where people with exceptional talents and intellect have gathered to work, to explore, to learn, and to teach. Success in these efforts will enable us not only to reflect the changing face of America, but to draw on the full range of talents needed to meet the challenges of a changing world."

HST Students admitted Fall 1996

M.D.	Institution	Major
Ibrahim Abdullah	Harvard College	Applied Mathematics
Siraj M. Ali	Johns Hopkins University	Biophysics
Patricia Bachiller	Princeton University	Chemistry
Hacho B. Bohossian	Colby College	Biochemistry/English
Eugene Y. Chan	Harvard College	Biochemistry
Rodney K. Chan	MIT	Biology
Sarah G. Coats	Iowa State University	Biochemistry
Jennifer L. Cook	University of Michigan	Mechanical Engineering
Quentin G. Eichbaum	University of Cape Town	Biochemistry
John C. Elfar	Johns Hopkins University	Biomedical Engineering/EE
Andrew E. Elia	Stanford University	Chemistry
Brendan D. Galvin	University of CA, San Diego	Biochemistry
Nicholas E. Houstis	Purdue University	Computer Science
Chao-Wei Hwang	Harvard College	Applied Mathematics
Timothy A. Jackson	Bowdoin/Harvard	Chemistry
Kumaran Kolandaivelu	MIT	Mechanical Engineering
Stephen M. Lobo	Indian Inst.Tech./U.Texas Austin	Electrical Engineering
Diego E. Marra	University of Texas, Austin	Molecular Biology
Andy O. Miller	Yale University	Biology
Gabriela Motyckova	Wellesley College	Biochemistry
Christopher B. Reid	West Point/Harvard	Neurobiology
Carolyn I. Rodriguez	Harvard	Computer Science
Arnold H. Seto	MIT	Biology
Kimiko Suzue	University of Illinois	Biochemistry
Thanh-Nga T. Tran	California Institute of Technology	Chemical Engineering/Biology
Emily J. Tsai	Harvard College	Engineering Sciences
Jacob W. Ulm	Duke University	Biochemistry
Jesse L. Wei	Washington University	Biology/Electrical Engineering
Joanna J. Wkrzykowska	Smith College	Biochemistry
Xun Zhou	Brandeis University	Biochemistry

MEMP

Tara Arthur	Carleton University	Engineering
Vadim Backman	St. Petersburg State Tech. U.	Physics
Emanuela Binello	MIT	Nuclear Engineering
Marc Burock	Boston University	Biomedical Engineering
Guohao Dai	Peking University	Biomechanics
Ngon Dong Dao	University of Texas	Mechanical Engineering
Christopher Hartemink	Calvin College	Mechanical Engineering/Physics
Vitaly Napadow	Cornell University	Mechanical Engineering
Mark Price	Northwestern University	Biomedical Engineering
Patrick Purdon	Harvard University	Engineering Sciences
Shunmugavela Sokka	Duke University	Biomedical Engineering
Trinh Tran Thanh-Nga	California Institute of Technology	Chemical Engineering

Speech and Hearing

Evan Chen	University of Illinois	Electrical Engineering
K. Domenika Karavitaki	Boston University	Biomedical Engineering
Courtney Lane	Rice University	Electrical Engineering
Kinu Masaki	MIT	Electrical Engineering
David O'Gorman	Purdue University	Physics
Michael Qin	Purdue University	Electrical Engineering
Jekwan Ryu	Seoul National University	Electronic Engineering
Irina Sigalovsky	Boston University	Biomedical Engineering

From the HST trading post: *****HST sweatshirts** are available in L and XL at $20.00, and XXL at $21.00 for a more comfortable fit. They are a deep burgundy cotton blend with white printing. Front: HMS and MIT seals, with "HST" below. Back: "Harvard-MIT Division of Health Sciences and Technology", in large letters (across shoulder blades). **Fashionable and warm, a great value!!!**

*****HST T-shirts** in L and XL at $11.00, XXL at $12.00, are short-sleeved in grey with burgundy printing, "Harvard-MIT Division of Health Sciences and Technology" with photos of the Building A columns and MIT's Great Dome.

We also have men's **HST ties** in navy and burgundy, available at $15.00.

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You can purchase HST items at the MIT-HST office, E25-510, or at the HMS-HST office, MEC-213. (We can arrange to have your purchase shipped to you, for the incremental cost of packaging and mailing. Please contact us regarding the exact amount that will be necessary in addition to the purchase price, Bernd Comjean at 258-7085 or by e-mail at bcomjean@mit.edu.)

Please help us to locate the following alumni (listed by year of graduation):

1975	David W. Kurtz	1989	Margaret Baer	1992	Stephen H. Grund
1977	Richard N. Gray		Arielle Bienenstock		Ben Lam Nguyen
	Asa W. Vicellio		Mike F. Janicek		Thomas Dee Wu
1980	Robert L. Redner	1990	Susan Canning-Lowy	1993	Christopher Leffler
1981	Charles R. Bridges		Adam F. Lowy		Peter Mark Li
	Jeffrey S. Dunham		Elena Taratuta	1994	Long H. Dang
1984	Richard S. Baker	1991	Malvina B. Eydelman		Philip Huang
1986	Mark Dixon		Edmundo Marroquin	1995	Richard S. Lee
1988	William Rogers		Leo Seung Paik	1996	Asa Abeliovich

Health Sciences and Technology

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