Geneticists decode plant genome

BY JOHN OH

Following on the heels of Homo sapiens, Arabidopsis thaliana, commonly known as the thale cress, joins the elite club of organisms whose genomes have been sequenced. A team of international scientists announced in the December 14th issue of the journal Nature the completion of sequencing of Arabidopsis.

While scientists have already sequenced a few animals, such as the nematode worm and the fruit fly, Arabidopsis is the first multicellular plant to be sequenced. The first cloning and sequencing of the plant took place here at Caltech, in the lab of Geneticist Dr. Elliot Meyerowitz. Meyerowitz, who is the division chair for the biology department, concentrates his work in three areas: the origin of developmental patterns in flowers, the control of cell division and an equally wide range of states and universities. Disciplines include neuroscience, international development, bioengineering, aerospace engineering, and the classics.

The Marshall Scholarships were established in 1953 as a British gesture of thanks to the people of the United States for the assistance received after the Second World War under the Marshall Plan. The scholarships, financed by the British Government, provide an opportunity for American students to study in the United Kingdom. I wish them all the best, I am sure that they will enjoy their time in the UK and, as they rise to leader positions in their chosen fields, go on to enhance relations between our two countries."

Eric Tuttle, born in Long Beach, CA, is currently studying Applied Physics at Caltech. He plans to study Computational Neuroscience at the University of London, England.

This year’s recipients of the scholarship, worth approximately $50,000 over two years, come from a wide range of background.

Hydrogen study gives answers

BY JONATHAN FOSTER

The history of planet formation has a new chapter. A study published in the January 4 issue of Nature finds that massive amounts of hydrogen remain in planetary disks for much longer than had been thought—a result which lends some hope to the old standard model of planetary formation which had recently been severely undermined by the unexpected discovery of large gas giants in close orbits around nearby stars.

The majority of the work was done by Ewine van Dishoeck and Win-Fai Thi of Leiden University in the Netherlands, but two Caltech professors contributed: Geoffrey Blake, one of the leading authors and professor of cosmochemistry, and Annelisa Sargent, professor of astronomy.

"Theorists have a difficult time getting Jupiters," said Blake. "The difficulty arises from the amount of mass necessary to trap hydrogen."

"If you drill down on Earth and find natural gas you’ll release some hydrogen, but it will just escape through the atmosphere, you need more mass to hold it," Blake explained.

The standard model, in which planets formed slowly as dust grains collided and gradually formed a proto-planet large enough to trap hydrogen, required hydrogen to survive in planetary disks for longer than is currently known, since nearby stars are usually too young to have large amounts of hydrogen left over.

The implications of the study are not yet fully known. The three stars looked at in the study were able to directly search for hydrogen around three nearby, relatively old stars (all 10 to 20 million years old). They found molecular hydrogen, and plenty of it, from one fifth of Jupiter’s mass to nearly six times the mass of Jupiter around a star called HD153544.

This is surprising because dust and CO are known to dissipate in about 1-3 million years, and it was assumed that the same was also true for molecular hydrogen.

"You can’t regenerate enough hydrogen to explain this," asserted Blake, referring to the fact that small amounts of dust and gas can be produced by collisions. "The hydrogen must be left over".

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Battling Beavers invade gym as CIT faces MIT

BY DANA SADINA

It’s the battle of the beavers. Tonight at 5:30pm in Braun gym, women’s basketball teams from Caltech and MIT will engage in athletic competition for the first time.

"Caltech actually matches up pretty well with a lot of schools on the East coast," said Coach Rachel Madsen, who arranged the game with MIT’s coach through a mutual friend.

"We compare ourselves with MIT in every other respect, so it’s interesting to see how we compare athletically," she said. Even though the two schools are long-time institutional rivals, the coaches frequently discuss strategies and techniques as it is difficult to build competitive athletic teams in schools that are strongly emphasized in the sciences.

Madsen has arranged that women’s basketball teams will compete against each other annually, taking turns travelling. MIT played Whittier College earlier in the week.

Co-captains Laurie Gagne and Sarah Hunyadi led the team this year.

"We’re really looking forward to it, especially because we will be playing against girls who share the same academic goals and career objectives as we do," said Hunyadi.

Eric Turtle '01 receives Marshall Scholarship

BY LAUREN STOLPER

British Ambassador Sir Christopher Meyer announced today the list of 40 American students who have been chosen to receive Marshall scholarships. Over 1200 students apply for the Marshall each year.

Sir Christopher said, “Once again we have selected an exceptional group of American students to study as Marshall scholars at universities across the United Kingdom. I wish them all the best, I am sure that they will enjoy their time in the UK and, as they rise to leader positions in their chosen fields, go on to enhance relations between our two countries.”

Eric Tuttle, born in Long Beach, CA, is currently studying Applied Physics at Caltech. He plans to study Computational Neuroscience at the University of London, England.

This year’s recipients of the scholarship, worth approximately $50,000 over two years, come from a wide range of background.
LETTERS TO THE EDITOR

Community Service at Caltech

We all have the desire to make a difference in the world we live in. Some might claim success in finding a cult status, reflecting positive change than others, but everyone has its own power to do so, in ways however small - or in ways for one to make an impact while serving time as a student at Caltech, and I would like to throw out the idea of community service as a way to enrich the lives of not only the people you are helping, but yourself as well.

I was an undergrad once upon a time, and though the idea of volunteering popped into my mind from time to time, there seemed to be so many reasons I couldn't do it. But, hadn't I also decided that I couldn't participate in community service projects. First, I thought I didn't have the time for them, especially considering I felt I needed to do better academically (and I think just about everyone at Caltech may feel this). Looking back at those years, however, I realize that even though there was definitely room for personal academic improvement, I ended up spending a lot of time stressing out on my own without getting much more academic work done, a pattern that I have observed in many other fellow undergrads. Given my experience in volunteering my time once a week for the past year, I feel I am definitely as productive, if not more, as a result of contributing to a worthwhile cause. I have found the experience as a volunteer for the past year later. For now, I just want to throw out the idea that everyone at Caltech has a role to contribute to at least one worthwhile community project during one's tenure at Caltech. Spending two hours a week every week may seem like an imposition at first, and your service can do a lifetime of good for someone else.

I wanted to do something on a weekly basis, but I thought doing so wouldn't be financially viable. However, this is now a moot point for those who have federal work-study money because the per hour rate for community service projects is organized or supervised through the Caltech Y pays $15 an hour. The rate is definitely competitive with most other jobs one can find on campus. Ideally, one shouldn't do community service project solely for the money, but at least people have no longer been penalized financially for choosing to work in the area of community service. If one doesn't have federal work-study, and money is still an issue, I would like to point out that a few hours a week may be infeasible for some, but everyone has at least a few hours a term.

I have been convinced that you do have the time if you think it is important enough to partake in a worthwhile community service project. There are still many outstanding issues. Is it possible to identify the community service projects that are around the Pasadena area? How does one get to the place that one wants to volunteer? The person to go to for answers is Kristin Abbott, the Community Service Programs Coordinator at the Caltech Y. Her email address is kabbott@caltech.edu and her extension is x3180. Not only can she provide you with a list of agencies that the Caltech Y has worked with, she can also point you in the right direction if the Caltech Y doesn’t have relationships with the projects or agencies that you want to work with. She can also facilitate the process of finding transportation for you.

I have been volunteering about once for two hours in the past year at a group home in the Altadena region as an academic tutor. Working with disadvantaged and at-risk youth has been always been something that I found important personally, thus the decision to work at the group home was fairly obvious. In the beginning, I had my own expectations about the role that I would play, and I am somewhat embarrassed to say that I thought I was going to be like Jaime Escalante - the math teacher played by Ed­ward James Olmos in the movie “Stand and Deliver” - teaching kids about calculus and the won­ders of science. It didn’t take me long to realize that what I was most needed for wasn’t my brain, but rather my heart.

There are definitely days that I feel so tired and exhausted after the tutoring session, but even so, I always leave with a sense of peace about my own life in part because I felt good about having helped people that I cared about. In addition, the tutoring sessions also gave me a different perspective on my own life. Tutoring kids once a week may not be your thing, but it is fine, that there are plenty of worthwhile things to do to find the world. I do believe that regardless of what you work for, you will find the experience rewarding if it is some thing you care about.

The undergraduate life at Caltech can be hard for many people, for an entire spectrum of reasons. Life here can be difficult, and it is easy to get caught in a cycle of complaint and dis­content. But don’t let your “suffering” at the hands of the impersonal (a somewhat artificial) academic world, I suggest you recognize and exult in your immense personal power to improve the live of others in the world at large. As a scientist, you are at heart a public servant anyway. Participate in a community of people who are helping and helping others in general, ultimately is for us to transform our own suffering into something positive and share our joys with others.

John Lin

THE OUTSIDE WORLD

by Erik Dill

Washington, D.C. - The Federal Reserve lowered the Federal Funds rate by half a percent. This key interest rate was changed from 6.5 percent to curb a feared economic slowdown.

Rome, Italy - The Italian government asked NATO to investigate the deaths of six soldiers who had served in the Balkans. Italy believes that the deaths were caused by exposure to depleted uranium, found in anti-tank weapons and other munitions.

Atlanta, Georgia - Judge John H. West found that the Smithfield Packing Company, the world’s largest pork processing plant, had violated labor laws by systematically thwarting unionization attempts by its workers.

Bangkok, Cambodia - The National Assembly voted to create a tribunal to hear Khmer Rouge war-crimes cases. Over a million people died during the 1975-79 rule of the Khmer Rouge.

Cuijiang, Indonesia - An increase in the number of witch killings was tied to a syndicate which, for $100, engineers murders under the pretense of witchcraft. Witchcraft is legal in Indonesia and about 100 accused witches are typically killed in rural villages.

Fargo, North Dakota - A legally blind graduate student was issued a concealed weapons permit. Carey McWilliams, who can distinguish degrees of brightness, passed his shooting test on the second attempt.

Contact Kristin Abbott at kabbott@caltech.edu or x3180 for volunteer opportunities.
ASCIT President and Vice-President/BoC Chair election announcement

Nominations for the ASCIT offices of President and Vice-President / BoC Chair open at 8 a.m. this Wednesday, January 10th and close at 5 p.m. the following Tuesday, January 16th. A sheet will be posted on the door of SAC 33 during this time. Please sign up if you are interested. A brief description of these offices can be found below, and the ASCIT Bylaws provide the technical requirements in Article IV (for the complete text see your little note). Note that you must currently be a registered student, an ASCIT member, and on-track to be a Junior, Senior next fall in order to be eligible for office. Please contact Eric Tuttle (tuttle@its.caltech.edu) if you would like more information.

There is a vacancy in the office of Director for Social Activities:

This office must be filled temporarily until the newly-elected students take office in mid-February. As per the bylaws, the ASCIT Executive Committee will appoint someone to fulfill the duties of the Social Director during this time. The appointed student will sit on the Board of Directors, but will have no vote. The major tasks to be completed by the social director prior to the transition are to organize the transition dinner, prepare a final budget, and manage a by the social director prior to the transition dinner, prepare a final budget, and manage a final budget. All of your responsibilities delegated to members of the Board of Directors. He must be either a junior or senior in the fall term immediately following his election.

Here are some things you should know if you’re thinking of running for president:

This is a serious time commitment — probably 10 - 15 hours per week if you’re doing it right. A lot of people are interested. Some of it is driving to Far Foster’s at 7 am (you should have a car, by the way).

Your main job is to be ultimately responsible for everything that goes on in ASCIT. So you should be someone with an ability and desire to keep track of / juggle many things at once. You should hopefully have some sort of vision. It takes a lot of work and enthusiasm to always be on top of everything.

You have to be able to run meetings and manage projects. You should also know how to delegate and motivate. Just like Dilbert’s boss.

You’ll have to work with a wide variety of people: students, advisors, faculty, seniors, professors, alumni, etc. You should have good people-skills and be able to maintain a good relationship with them all (things go a lot smoother that way). But, of course, you need to be able to negotiate, argue professionally, etc. when necessary. It isn’t all-ass-kissing. As far as students go, you should feel like you could walk into any house and be comfortable having dinner there (except maybe Page; who’d want to eat there?).

ASCIT is one of the few places where students try to stay above house divisions.

Is it worth it? I think so. You won’t exactly get the esteem and respect of your fellow students, but you will get to be a part of the inner-workings of campus. When the administration needs student input (or when you think something is wrong with a mull’s yellow), I’d like you to give it to them. You’ll know what’s going on, from the faculty board, to the administration, to the Taiwanese Student Association. And much of what you’ll be doing is interesting, if you like this sort of stuff. It feels a lot more real-world than all those stupid classes you’ll be taking. It’s a great feeling to be able to get so much done.

Best of luck in the election!

Eric

Office of the Vice-President and Board of Control Chairman:

Article IV: SECTION 4. Office of the Vice-President: The Vice-President shall, during absences of the President, assume the duties of that office. He shall act as chairman of the Board of Control. He shall assist the President in coordinating the policies and activities of the Associated Students. His primary responsibility shall be to insure the continual operation of the Honor System among the students. He must be either a junior or a senior in the fall term immediately following his election.

Basically, the ASCIT VP/BoC Chair runs the BoC. This involves working with the secretary to investigate possible honor system violations, and also running full board hearings. This involves working with both faculty and other students. The BoC Chair shall be on the Rout- ing Group and thus helps decide how to deal with a wide variety of disciplinary issues on campus.

- Laura Brogoch

Question of the Week:

Describe your most interesting Christmas or New Year’s experience.

“It all started out innocently when a friend and I went driving down Colorado Blvd. looking for dinner. When we found out they were being deliberately thrown by little kids along the parade route, we decided that we needed to layeth the smacketh down! In a fit of anger, I drove back to Caltech to get a larger group and some ammunition (mostly grapes and silly string).” This time as we drove down Colorado, we were really asking for it. They totally trashed my car, throwing anything they could get their hands on, including, most ingeniously, tortillas topped with shaving cream. Since my car is a lease, I didn’t care about it. We took our time pissing them off, opening our windows to entice them, and of course throwing our own fair share of crap back at them. We’ve decided to make this our little tradition. Then I wept for the future of America’s youth.”

- Kevin Tse

“Two Christmas’ ago, I got engaged. I bought her a ring and I had a star named after her. I took her out star-gazing on Casper Mountain, Wyoming, pointed out the star, and proposed to her. She was shocked beyond words and flabbergasted, but she said yes.”

-- BJ Horn

“New Year’s Eve, not knowing of course the tradition for people on the parade route, who were drunk or bored, to use passing cars as target practice. We were outside the McDonalds when we were suddenly ambushed by marauding yobs. I’ll have to give it to them. You’ll know what’s going on, from the faculty board, to the Alumni Board, to the Taiwanese Student Association. And much of what you’ll be doing is interesting, if you like this sort of stuff. It feels a lot more real-world than all those stupid classes you’ll be taking. It’s a great feeling to be able to get so much done.

Best of luck in the election!

-Arthur"
Ticket Stub

by Justin Ho

Hollywood movie-fare didn't prove nearly the powerhouse this holiday season that it has been previously. While in past years, larger blockbuster films may have overshadowed independent, art-house flicks both in box office revenue and quality, a few foreign films have recently been deservedly more magnanimous. Enclosed are a sampling of films you may wish to entertain yourselves with in the early idleness of second term.

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Susquehanna International Group (SIG) is a leading derivatives trading firm active in global markets. We seek individuals to join our trading and technology teams. We offer a comprehensive educational program for entry-level candidates who possess exceptional quantitative and analytical skills, strong computer skills, and an interest in financial markets. We retain talented professionals by offering a competitive compensation package with excellent benefits.
The muted joy of keeping a secret, the subtle embarrassment of being mastered by the id, are resplendent examples of moments that bathe the audience in pathos. However, strong dramas necessitate conflict, which is easily engendered between characters with such contrasting perspectives. Above all, the film’s old son, is nurtured by ambivalent parental influences: Sammy’s penchant for preserving Rudy’s bubble of happiness, at the cost of burst points to a few returns back and forth, but the women’s game has reduced those of the foes, so that a string of mounting misdeeds pass those of the foes, so that a string of mounting misdeeds and the origins of one of the most dramatic and suspenseful of war. Still, the Attorney General says that evident weapon to weapon, revolutionary, beyond the spectacle of hand to hand does she learn that actions are anathema. Her family’s power constrains her to a false sense of war as a just vigilante of sorts, Mu Bai abdicates his legendary role. Fortune and the inherited power of the men’s game is used out of necessity or desperation, rather than allowing her to indulge in her desires, are anathema. Her family’s power constrains her to certain civic duties and places a ceiling on her personal freedom. It is not the life she would like to lead, and she aspires rather to be a vigilante. However, she mistakes nobility and warfare for complacency and personal triumph. Reckless and comfortable, having found a weapon which can compensate for her shortcomings, she voices challenges to friends, foes, and strangers alike. She displays a ruthlessness unbecoming of her youth and beauty. Only after tragedy strikes with its heavy hand does she learn that actions have consequences, but at that point she has forsaken love and family and ostracized herself from the community safety net. It’s an interesting character study for anyone wishing to pursue the film on yet another level, beyond the spectacle of hand to hand, weapon to weapon, revolutionary to revolutionary combat.
programs are getting pretty good. (The first draft of this column was written using one.) The space architecture envisaged by the film makers wildly surpasses reality. We don't yet have as breath-taking a space hotel. There was the little problem of getting the guests to the hotel, but surely NASA would oblige by building a second generation space shuttle which would carry 100 or so passengers. And if NASA declined, I read in the LA Times on Dec 29, 2000 (p.A5) that a German firm “has purchased exclusive rights to commercial 'taxi rides' for civilians aboard Soyuz rockets.” Enjoying the space hotel should be easier than ever, now that the zero gravity toilets, which seemed such a hassle in '68, have been more or less conquered. (See instructions for the zero gravity toilets, which are pictured in the LA Times on Dec 29, 2000 (p.A5).)

The tech: how 'bout it?

Jean-Paul Revel
Dean of Students

The Hilton chain is thinking about a space hotel built of shuttle fuel tanks. BBC commentors assured their listeners in 1999 that there were no technical reasons why this couldn't be done at a fraction of the cost of the international space station. There was the enticing environment as conducive to contemplation as that imagined by Kubrick.

There are rumors, of course, that this might change. The Hilton chain is said to be thinking about a space hotel built of shuttle fuel tanks. BBC commentators assured their listeners in 1999 that there were no technical reasons why this couldn't be done at a fraction of the cost of the international space station. There was the enticing environment as conducive to contemplation as that imagined by Kubrick.

Yankie really likes your new chess set, Dad.

Dean of Students

CONFRONT DING

David W. Risten

Laemmle Theatres

PLAYHOUSE 7

CHOCOLATE
Mon - Fri. [11:30] 644 715 965
STATE AND MAIN
Mon - Fri. [11:30] 644 715 965
SHADOW OF THE VAMPIRE
Mon - Fri. [11:30] 644 715 965

1070

QUILL'S
Mon - Fri. [11:30] 644 715 965
THE HOUSE OF MURTH
Mon - Fri. [11:30] 644 715 965
O BROTHER, WHERE ART THOU?
Mon - Fri. [11:30] 644 715 965
BEFORE NIGHT FALLS
Mon - Fri. [11:30] 644 715 965

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Dean's Corner

Of mice, flies, and men

by Jean-Paul Revel

There was much excitement when, a couple of years ago, a mutation was discovered by Seymour Benzer at Caltech, which he named Methuselah. The life of these mutant Caltech flies was lengthened by some 35 percent. But just last week there was even more astounding news. A paper by researchers at the University of Connecticut (Rogina et al. Science 290, pp. 2137-2140, 2000) reported the discovery of another family of mutations in fruit flies, this one actually doubling the life span of the little critters. This mutation has been nicknamed Indy, short for “I’m not dead yet.” The mutation was found to interfere with the uptake of key molecules, making the flies’ metabolism less efficient. Now, in mammals, the one way to extend life is caloric restriction. For example, mice allowed to feed only every other day live longer than controls which can feed at will. Indy mutations might be a genetic way of achieving the same thing. Don’t rush to try fasting alternate days. What works on mice and flies may not be that great for people. In fact, stricter metabolic restrictions, in flies anyway, decrease their life span. We just don’t know enough right now. But it is fascinating to imagine that, within the next 20 or 30 years, there might well become available “magic” pills which will prolong your lives further into the millennium. But all of that is for tomorrow.

Of course, yesterday’s tomorrow is today! And for my purposes yesterday will now be defined as 1968, when “2001,” the movie, was released. The year 2001 seemed so far in the future that writer Arthur C. Clarke and director Stan Kubrick could let their imaginations roam freely. They predicted that spaceships would be plying the heavens to Jupiter and that humans would routinely visit the moon. Reality has gone beyond fancy with JPL sending orbiters and rovers to Mars, where in just a few years we’ve proceeded from discovering that there are craters on that planet too, to arguing about the presence of water (sometime in the past, if not now). What with discovering planets around other stars and getting tantalizing suggestions of traces of life in meteorites, we slowly have to become more comfortable with the idea that there might be other living things in the universe. Kubrick and Clarke implicitly assumed that there would be other creatures. Their heroes went in search of who was responsible for mysterious radio signals from Jupiter. Of course, today we would think the who was a what, like the jovian thunderstorms studied by Professor of Planetary Science, Andy Ingersoll. But something (someone) must have devised the ominous slab of shiny black stuff unmooned in the movie. If our men on the moon have discovered an equally mysterious monument, it has been kept a very dark secret. Of course, the discovery of the slab in the movie was also kept secret, so nothing would be new under the sun.

I don’t know if you have seen the movie. The visual effects are fantastic, even if the plot gets to be more than a little incomprehensible. The limited conversation takes place mostly between Dave, one of the astronauts, and HAL, the sensitive, soft-spoken and murderous computer (you can eavesdrop on them at www.palantir.net/2001/sounds.html). Although today’s software allows off-the-shelf computers to speak (more or less) clearly, they are no match for HAL. And while you can’t buy RoboPens, which in the movie write out dictation on their own, voice recognition .
Introduction to modern business organizations. From both a legal and social-scientific points of view. First, all organizations have duties. Corporate opportunity, corporate liability for employees’ actions, and a brief introduction to the central problems can be raised using very simple exams.

The course will make use of a complete listing of scholarships and opportunities. The Biomedical Engineering Seminar Series will be open to the public on Tuesday with a discussion of the Winter Ten on Friday afternoons at 4:30 p.m. Room 25 Baxter Building. The Biomedical Engineering Seminar Series will be open to the public on Tuesday with a discussion of the winter term on Friday afternoons at 4:30 p.m. Room 25 Baxter Building.

For a complete list of lecture and abstracts is available at http://www.cce.caltech.edu/~kosinski/

GUITAR CLASSES AT CTI

Guitar classes for the Winter quarter will meet on Tuesdays in SAC Room 1, starting on January 9 as follows: Beginning Guitar Class 4:30 PM - 5:30 PM Intermediate Guitar Class 3:00 PM - 4:00 PM Advanced Guitar Class 5:30 PM - 6:30 PM. Classical and flamenco repertoires are explored, but techniques transfer to other styles of guitar. The beginning class includes a jazz/folk chord system. Classes are free to Caltech students and other individuals in the Caltech community (space permitting). Undergrads can receive 3 credits of the instructor, Daryl Denning, has an international background in performance teaching and recording (two of his CDs are available in the Bookstore). My Denning can be reached at (520) 650-0881 or dck@caltech.edu. The Guitar Home Page is at http://www.cce.caltech.edu/~musquipp/guitar.htm

Stressed?? Sign up for the Stress Management Workshop offered by the Student Counseling Center. This workshop will include a mixture of informal lecture and experiential exercises focusing primarily on basic relaxation techniques and stress management skills. The 4-hour workshop will meet on consecutive Tuesdays (January 16, 23, 30, February 6) from 12:00-1:00 PM in the Health Center lounge. Space is limited, so please call 626/395-8301 to reserve your place in the group.

The Califomia Tech

Caltech 40-58 Pasadena, CA 91125

8 Mints

January 5, 2001

PHYSICS 133/Law 133 Business Law and Economics

In particular, we will examine the relationship between students and alumni. To be considered for scholarships, I urge you to explore all available options and discuss your interests with the specialist. The California Tech is an equal opportunity employer. Please contact Kristin Islami at ext. 8331.

The Biomedical Engineering Seminar Series will be held during the winter term on Fridays at 4:30 p.m. in Baxter Lecture Hall. Medical research and its applications today tell us how body systems work. Stress is a key ingredient in much of our modern life.

Attn: Mints. Submissions should be brief and concise. Email is preferred. The editors reserve the right to edit as they see fit. Deadline: postmarked by January 31, 2001. Contact the Dean of Student Office, in Pasadena, for the application.

To submit an entry for Mints, contact mints@alum.mit.edu or at the office of the Student Counseling Center. Deadline: February 15, 2001.

THE CALIFORNIA MAGAZINE’S 2000 TOP 20 SPONSORIZ­

ATION has begun. The competition opens to all full-time junior and seniors majoring in music. Entries must be postmarked by January 31, 2001. Contact the Dean of Student Office, in Pasadena, for the application.

The Financial Aid Office has applications and information regarding various fellowship and other undergraduate scholarship opportunities. All qualified students are encouraged to apply to these programs.

The American Electroplaters and Surface Finishers Society (AESFS) is offering scholarships to support our students and encourage undergraduate students who are interested in careers in the surface finishing field. Applicants must be full-time college students, pursuing a degree in electro­

ical engineering, environmental, engineering, environmental, civil engineering, materials science, metallurgy, or metal finishing. Applicants must submit an application form, a brief career objective, and three letters of recom­
mendation from teachers, employers, or professors. Applications are available in the Financial Aid Office. Please submit completed application materials to: AESFS Scholarship Committee, American Electroplaters and Surface Finishers Society, Central Academy & Research Center, 1264 Research Parkway, Orlando, FL 32826-3258. Entries must be submitted to the AESFS Scholarship Committee by April 15, 2001.

The National Academy for Nuclear Training is offering 25 scholarships to eligible students in nuclear engineering, nuclear technology, and nuclear power careers. Additional scholarships will be renewed for up to two years for Academy scholars who maintain their eligibility. For further information on the National Academy for Nuclear Training, please visit www.naei.org. Applications are available in the Financial Aid Office. Please send completed applications and supporting documents to:

THE CALIFORNIA TECH

The California Tech

Announcements

H&S Division offers the following in­

Materials: Quantum Mechanics in­

materials science, imaging, micro­

the California Tech

The California Tech

January 5, 2001

PHYSICS 133/Law 133 Business Law and Economics

Dr. Dorothy McKinnon, University Professor, Department of Sociology and School of Urban Studies. The University will discuss the Body as a Pro­

ctics, and a brief introduction to the central problems can be raised using very simple exams.

Dr. David Rowe, Professor of History of Science and Mathematics, Main University, Senior Fellow, Dibner Institute will discuss Einstein and the Danish Antirelativists, 1914-1920. Thursday, February 15, 2001 4:00 p.m. Room 25 Baxter Building.

In particular, we will examine the relationship between students and alumni. To be considered for scholarships, I urge you to explore all available options and discuss your interests with the specialist. The California Tech is an equal opportunity employer. Please contact Kristin Islami at ext. 8331.