**STEM CELLS RESEARCH COULD EFFECT CURES**

By Tech Staff

Beckman Auditorium filled early Wednesday night as an audience that included many senior citizens came to hear Caltech Neurobiologist David Anderson discuss the status of his ongoing research involving stem cells from the neural crest and the possibility of using "cells rather than drugs to treat diseases." Stem cells, undifferentiated cells that researchers generally culture from animal blastocysts but are also found in pristine state in adult organisms, are capable not only of self-renewal but also of differentiation into one or more cell types. Some stem cells, dubbed totipotent, can differentiate into any and all tissues that exist within and outside of the embryonic environment when signaled by the right extracellular factors or master genes.

In spite of this fascinating potential, stem cell research has been a contentious topic in political-scientific forums, and it is now illegal to use government funds to form research using any cells, stem or otherwise, from human embryonic tissue. Sweden has no such ban, and Anderson noted that there has been growing interest in using fetal foreskins and other human embryonic tissue applied in a clinical setting. Anderson does not use any human embryonic cells in his lab, nor is he in any way involved with nuclear transfer or organinal cloning technologies.

Anderson, a Research Fellow of the Howard Hughes Medical Institute, has focused his recent research on identifying the extracellular factors that send neural crest stem cells down the path of differentiation into neurons and glial cells. Researchers have speculated that if they could direct the proper factors or stimulate the appropriate gene activation in physiological sites affected by some disorder, they might be able to regenerate damaged tissue or restore degenerated function.

In the question and answer session, Anderson noted that recent research has discovered multipotent stem cells in the human brain, reversing decades of thought holding that once brain cells die, they cannot be replaced. To most Techers' chagrin, Anderson also noted that stress seems to be the foremost killer of brain cells.

**Earthquake causes a whole lotta shakin’**

By Justin Kao

At 2:46 last Saturday morning, Southern California was shaken up by a 7.1 earthquake, centered approximately 30 miles north of Joshua Tree and caused by the formerly "inactive" Lavin Lake fault. Although it is the third largest quake in California in the last century, the Hector Mine quake caused very little damage and only one death, as its epicenter was far from LA and other large cities. Described by one student as "like being on a ship," the shaking caused by the Hector Mine quake was only a smooth rolling motion by the time it reached Pasadena.

Despite the minimal damage caused by the quake, it has nonetheless shaken things up here at Caltech. The Caltech Seismology Lab, in conjunction with the United States Geological Survey office across Wilson, is well known for its work on earthquakes. As native Southern Californians already know, reporters from all over the LA area descended on Caltech after every major earthquake, and this quake was no exception. One person in Geology and Physical Sciences commented, "they pretty much automatically come - you joke that you know how large the quake is by how many news vans show up." Researcher Steve Nettleton on identifying the extracellular factors that regulate the status of his ongoing research in embryonic tissue applied in any clinical setting. Sweden has no such ban, and Anderson noted that there has been growing interest in using fetal foreskins and other human embryonic tissue applied in a clinical setting. Anderson does not use any human embryonic cells in his lab, nor is he in any way involved with nuclear transfer or organinal cloning technologies.

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**CS vision revealed by Epstein, Chandy**

By Vignam Divakar

CS1 is among the most populated classes on campus. I can bet there are at least a few freshmen who are tapping away into J1 at this moment. There are many loveable stories related to the course, and especially J1. The Tech felt that it would be a good cause to approach the CS department to take a look at their side of the equation, and try to complete the picture.

So I accessed (well, actually I took an appointment) Dr. David Epstein and Dr. Mani Chandy. Epstein is known to have undergrad enrolled in CS1 as the professor and Chandy is one of the senior most professors in the CS department.

Despite that there seems to be a change in the way CS1 is taught this term from last year, Chandy said that the curriculum was essentially the same - C is still taught, but the major change was in how to teach C or C++ or Java for that matter. The department felt that the critical question of computer science is how to teach programming which is much more important than teaching CS. So they recruited the person who has made it his mission in life to teach programming well.

Dr. Epstein. His methods differ from last fall’s class, mainly in that J1 is used as an introductory programing language. It is fully the intention of the department to teach C in this term; C++ and Java in CS2. J1 was developed by Dr. Epstein as a programming language directed at teaching programming fundamentals. Although another popular name for it among students is Java Junior, Epstein felt that it was better called J1.

The first step in this learning process is to learn instructions in J1 that translate into C or Fortran 90 instead from Java. So, it could just as well be called C1 or FJ. The advantage of using a language designed to teach these concepts is that the error messages are designed for people that are learning, whereas languages that expect professional programmers as users provide cryptic error messages. As the user to understand the compiler's intent, J1 scores over other languages used to learn programming in that it gives specific replies when you make a mistake. According to David, C is a tough beginning language in that it reports very few errors while compiling and more errors while running the output, which makes it a pain to debug the code.

Epstein also explained where J1's usability would end. Inheritance is where J1 stops, and object oriented programming starts off...
Rotation secrets must be unveiled

Bravo Jason Meltzer! [Inservice, October 15, 1999] I fully agree that most of the Rotation Rules are a ridiculous perversion. As Jason points out, science is about sharing information and open inquiry; I would venture to add that these are fundamental principles that college should convey.

But at Caltech, one of the first things freshmen encounter are the secretive Rotation Rules. I am particularly concerned about the secrecy of the picks procedure. The only remotely transparent process during the entire preparatory period is one that would sentence someone to death. But as Dean Revel has recently pointed out, the Honor Code is how we are supposed to behave, not necessarily how we do behave. Therefore, even at Caltech, we must remember Lord Acton's admonition: "Absolute power corrupts absolutely." And the appearances that Clandestine meetings with students may not be menacing indeed. Of which one is not allowed to inquire castigated? Read Y.3e—any punishment the procedure is flawed and a farce. If we are eroding the system under the rotation rules, should it be open to alcohol or transportation when they first arrive, and so any house which supplied one of these would be offering a valuable gift indeed. To follow Jason's own example, just as it would be "out of line for a House to buy a fresh a sports car," it would be equally out of line for a House to provide a free taxi service or leisure beer supply. Perhaps in this way the rules are redundant, but I think the purpose of this redundancy is to further mislead students and that kind of favors that should be disallowed.

The more dangerous argument in the column, perhaps, is the one that the IHC picking rules are arbitrary and confusing, inhibiting the dissemination of useful information. However, I found the attacks on other rules in this column to be less convincing. Oddly, Jason rails against the alcohol and driving rules, and then goes on to voice his support for the rule barring extraordinary gifts. These rules are all part of the same overarching principle: to keep the Houses from going to excessive lengths to recruit particular freshmen. Hopefully, the two rules together would provide some value to the freshmen who first encounter them. But as meekly as he states that these are fundamental principles that college should convey, Jason son points out, if that is so then the procedure used to place them in a house, it is something of a gamble to stray from his sincere preferences on the ranking sheet to a ranking that he thought would make him more likely to get in to his top choice. However, if he knew exactly what the rules were, the risk would evaporate as he would know just how his chances depend on his rankings.

Jason has anticipated this argument. "Will they provide such insight into Rotation that people can "play the system" to get into a particular House? If they would, maybe the system should really be changed?" Certainly I agree that we had a picking system for which the optimal strategy was the sincere ranking of preferences, there would be no need to keep the procedure secret. However, it is a consequence of Arrow's Theorem in political science that the only such system is a dictator. I suppose we could toss the whole ranking sheet idea and have the IHC chair assign fresh to houses by himself, and it would be perfectly safe to open the rotation rules. However, if we don't contain information about the character of each house, the only possible information that could be gleaned from the rules is information about manipulating the system to get to a particular house. If the fresh does not know the procedure used to place him in a house, it is some-thing of a gamble to stray from his sincere preferences on the ranking sheet to a ranking that he thought would make him more likely to get in to his top choice. Therefore, even at Caltech, if the rules were, the ranking sheet to a ranking that he thought would make him more likely to get in to his top choice. Therefore, even at Caltech, if the rules were, the system to get into a particular House, the IHC is to emphasize the kind of favors that should be disallowed.

In terms of the rotation rules, there are still some things that everyone can do, but I am particularly concerned about the secrecy of the picks. We'll never know, since the one that the IHC picking system for which the optimal strategy was the sincere ranking of preferences, there would be no need to keep the procedure secret. However, it is a consequence of Arrow's Theorem in political science that the only such system is a dictator.

The alternative is to use a system which can be manipulated, and in that case it should be kept secret for reasons which I have already discussed.

A system which allows everyone to have some choice in their own fates and that of their houses requires careful balancing to function successfully. This balance is manifest in the restrictions imposed by the rotation rules. Certainly some fine tuning is still needed with these rules. However they are not arbitrary and unnecessary as Jason believes.

Respectfully submitted,

Travis Hime

Send letters to:

The California Tech
caltech-40-58
Pasadena, CA 91125

or by electronic mail to:
editors@tech.caltech.edu

Deadline for submissions is Monday at 5 p.m. on the week of publication.
Present: BoD (Danny in at 22:41), Tim Crosby, George Zamanakos, Wren Montgomery, Marc Favata

Meeting called to order at 22:03.

Dealing with Guests

Tim requests a check for funding movies once approximately every two weeks this term so we tell him to come back next week since Danny wasn't there yet. George presents a budget from the ASCIT/GSC End-of-Rotation party second term. The BoD agrees they should be cancelled.

Dealing withASCIT copier - Derek has contacted Rachel Delgadillo at graphic arts about fixing copier so it should be fixed soon.

Project Reports

Coffeehouse - Baldeep says it will be opening next Monday. Really.

ASCIT copier - Derek has contacted Rachel Delgadillo at graphic arts about fixing copier so it should be fixed soon.

Rotation Survey - The IHC will be meeting tomorrow night at 8pm to discuss what to be put in the rotation survey which should come in the mail soon.

Open IHC meeting - This will be held sometime in the future, specifically to discuss rotation.

ISO - The IHC will meet with Parande K. Kim, the director of international students to discuss international students and the house system.

At this point Danny arrives and there is a flurry of check-writing and receipts exchanged.

Marc says "The ASCIT movies suck and they should be cancelled."

Baldeep requests approval of funds to buy a scanner for ASCIT in order to make records from ASCIT less paper based and more web-based. The BoD approves this expenditure.

Meeting adjourned at 22:53.

Respectfully submitted,

Hanae Kim
ASCIT Secretary

The Athenaeum
Thursday, November 4, 1999
6:30 - 7:00pm Registration for Giveaways
7:00 - 8:00pm Presentation

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October 22, 1999

Y ASCIT? News
by Elisa Chiang

The Caltech Y is an organization that gets involved in student activities. When there's a need by the students of Caltech, we try to do what we can. We hold many events throughout the year that cover a broad spectrum of interests. Last Sunday, we sponsored Tea at Huntington Gardens to encourage undergraduate faculty/alumni staff integration. The event was a great success with 88 participants. We plan many community service activities like Project Angel Food where we deliver food to HIV patients and Beach Clean-ups. (More info later.) We also do cultural events like International week and trips to the Getty Museum. Each year, we sponsor the Y Hike, a week of backpacking before school starts. We also hold other outdoor events like this Sunday's Day Hike. Decompression is a big event we have every term the weekend before finals where we have lots of food and entertainment. This year, we also held the event Compression before the event Decompression in the year. We held the event Compression before school started to get ready for the new year. The Y also helps fund events for other clubs and organizations. We also rent camping equipment and have discounted tickets to movie theaters and theme parks.

THIS WEEK:

Anyone interested in Angel Food, please email Ying at ying@cco.caltech.edu. Food is delivered during the lunch hour on Fridays and takes about 1 hour. This week, we will meet at Steele House at 11:50. You don't need a car, we have transportation.

The first Beach Clean-up of the year will be held this Saturday, Oct 23. We will meet at 9:00 in front of the Red Door Cafe and return around 3:00. We have a budget to provide lunch but you probably want to bring some money. (Depending on how many people go, you may or may not have to pay anything for lunch.) You may want to bring a water bottle. If you want to swim, bring a swimsuit, towel, etc. We will be going to Venice Beach. Transportation is provided. If you would like to come or want to know more information, please email polaris@cco.caltech.edu. (NOTE: you do not have to RSVP, but it would be nice.)

For all people who have FEDERAL WORK STUDY, we can pay you $12 an hour for any community service work. Sorry, frosch can't work until 2nd term. Sign up at the Caltech Y or call x163 for more information.

Other Y events for this week include a Day Hike to Mt. Baden-Powell on Sunday Oct 24th. Escape the stress of midterms with a hike to the 3939 summit of Mount Baden-Powell in the Sheep Mountain Wilderness. The 9 mile hike will take us on a loop including Theoprop Peak and Mt. Burnham. From the top of Baden-Powell, we'll have one of the best views in the Angeles: a 360 degree panorama encompassing mountains, desert, and the ocean. Bring a day pack, lunch, at least 2 quarts of water, trail snacks, hat, sunscreen, sturdy shoes, and a jacket. We will meet Sunday morning at 7:30 am in front of the Red Door Cafe. Transportation will be provided. If you're interested, please email Erin and elynch@its.caltech.edu by noon on October 22nd.

The Y is also sponsoring a noon concert this Friday. The Zookkners will be playing at the Wmintet Patio from noon until 1:00 pm. To find out more information about the band, their website is www.thezookkners.com. Be on the lookout for more Y events. The Caltech Y is located at Steele House. Our meetings are every Monday at 12:15. We welcome anyone who is interested in learning what the Y does or who wants to get involved to come. Bring your ideas, your friends, and your lunch.

If you would like to get emails about Y events, Y-outdoor events, or Y-community service events, please email Elisa at polaris@cco.caltech.edu with what time of email list you would like to be placed on.

The California Tech

We're transforming business into e-business. Need proof? Check this out:

- Only company to offer complete software suites for Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM)
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American Beauty (A-) rated R: for depictions of self-gratification, descent into decadence, catharsis in the midst of a mid-life rejuvenation that is violently cut short.

No other movies come to my memory that match “American Beauty” in cinematic elegance, with the exception of certain black-and-white movies which hold a special significance for nostalgia. Playing an anonymous suburban and the middle class ordinary as both functional family psychotherapy, of the discrepancy between seeming and reality is the symbol of the rose—as a motif for the seductive and wicked Lolita-esque cheerleader, as a representation of a suburban lifestyle which abounds with materialist abundance but is likewise saturated with thorny resentment. What Lester Burnham delineates is how progressively many have become in subjugating emotion. The middle-life crisis is a typical staple in our culture, but it isn’t only a realization of individual morality which fuels the impulse to degenerate to behaviors past. The need for an emotional surge doesn’t come arbitrarily without a rejection of the torpid state, a condition which the middle-age nevertheless finds him/her-self and for which he/she can cast no blame except oneself. Except in Burnham’s case, his apathetic interaction with life itself is also engendered by a suffocating family atmosphere.

The tension among Lester, his Martha-Stewart-on-crack wife Carolyn (Annette Bening), and goth-reminding daughter Jane (Thora Birch) is apparent from the very minutes of the family’s morning ritual. The frantic movement lacking any courtesy for other members, the non-existent conversation in the morning commute, and of course Lester’s sardonic criticisms of the two vessels he lives with implicates a lot of teenage angst, Carolyn’s torment by the regional superior rival, though taking precaution to separate the bubble of an impeccable family life with sordid pleasures. Nonetheless, her fragile condition is never amended. In the final moments of the film, Lester’s catharsis finally implies a rejection of both paths he has taken with a poignant flash of nostalgia. The moments since his happiness, and equivalently his happiness in the past, are irreclaimable, and the ending is somewhat appropriate in so much as highlighting the fall from grace as unforgivable. But the means of attaining the ending are a bit too contrived. In addition, though the portrayal of the stereotypical army sergeant as a patriarch is a departure from more genteel representation and cleverly acted it is an odd piece in the puzzle. Though the military family offers an occasional foil to the Burnham family, the elements of the second family do nothing else if only to otherwise illustrate the heterogeneity of suburbia. Nonetheless, the movie is supported by an excellent cast led by Kevin Spacey and Annette Bening. The rest is lovely.
CS1

CONTINUED FROM PAGE 1

by using the advanced languages of C, C++, and Java. Chandy added that, after about the first six weeks into this term, JJ would give way to C and that if one is able to write good programs in JJ, they should be able to do so in C without much of a problem. It would also serve as a base for the Object Oriented programming that is the core concept for the second term.

Regarding the initial complaints that students had about the JJ programming environment, Epstein said that these problems seemed to have been solved on their own. The error messages, incompatibility with browsers, etc., are not problems anymore probably because the students have learnt to use the optimum environment required for JJ, and also because there is a command line version of JJ available.

When asked about the course load in CS1, and about how difficult the course is, Epstein replied that there were students who spent a lot of time basically because they were beginners. Those who have programmed before seem to do it much faster. Chandy felt that this observation should be seen in the perspective that we are looking at progress at the end of just four weeks. He felt that at the end of six weeks, the course won't be as rocky, and most of the students would have caught up.

Fielding a direct question on how the department and professors know if a course has satisfied its objectives, Chandy responded that they have different ways of getting feedback. It comes from other instructors whose classes these students go on into, from other faculty on campus who use these students for research, and most importantly from the students themselves as they graduate. He cited what a group of six recently graduated students told him about what they learnt here. They had felt that the emphasis on 'Careful design' that Caltech CS department places helps the school create some of the best, and most dependable programmers in the country. This emphasis, they had felt, was what is helping create a industry standard in programming: 'Caltech level programming'.

Epstein felt that the course was progressing smoothly. When asked if he had a message to the students, he felt that since it is a pass/fail class, students would not have too much to worry if they apply themselves to their work. Furthermore, he felt that the students should take the opportunity to say "Ok, I know am going to pass this class, but here is my opportunity to go a lot further. I have the support of a whole system: TAs, instructor and other students. I can really dive into programming, and not just do what the assignment says and stop."

On a sign off note, Chandy related his vision for the Caltech CS student. He hopes that the Caltech student would be synonymous with 'thinking programmers', programmers who think and create much more reliable, clean and robust programs than those who just hit the keyboard right away. He felt that every class in the department stresses the fact that careful design gives reliable and better performing programs, and this mindset is what would make the Caltech student stand out in the world. CS1 is where it all starts. But then again: last night while I was wearily typing out some LISP procedures for a CS assignment in UGCS the night was considerably brightened up by a smiling (and so pretty... young lady who walked in. What made the experience so much more interesting was the Tee she was wearing... the front simply said:

A SURF student explains his method and conclusions.

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Dean's Corner

Of Codes and CoDs!

by Jean-Paul Revel

Two members of the Board of Control and I have just returned from attending a conference organized by CAL, the Center for Academic Integrity, which is self-described as "a consortium of 200+ signed institutions." Other institutions are "encouraging campus conversations about Academic Integrity." This foray took us away from the dangers of an earthquake (glad it came as we were sitting on the floor, not off the wall) and into the teeth of a hurricane (fortunately a mild experience for the three of us).

More to the point, however, was that it provided an opportunity to think about our own Honor Code and compare it with that at other institutions, like Duke, Miami, Rice, and a large number of other state and private institutions.

While we always knew that Caltech was special, we did not realize how truly unique is the degree of confidence that the Institute places in its students. None of the other schools seem to trust their students to the extent that we do. Of the schools represented at the conference, Rice comes closest perhaps. The Rice student "is permitted his own honor," "not to violate the trust placed in him in any way," ("On my Honor," the Rice Honor System booklet, approved May 1958, rev. April 1960). Rice does not insist that a proctor be present during exams, but the person in charge can remain in the room. It also allows students to leave the examination room unescorted. There is even a provision for self-scheduled tests, but they must be arranged for beforehand and must be taken in an assigned room. Rice has the most solid honor code. It's one of the reasons why so many smart people might make it to Medical or Graduate School, but who would want such people to be involved in the design of critical components, which, should they fail, might jeopardize the unwary user? It is rather scary to imagine someone who cheated his way through school as a surgeon in the operating room, or as a student designing airplane wings, or automobile tires. To come back to the conference, I must remark that most of the schools represented were mostly not our peers, in size and in selectivity and in overall excellence. Neither Harvard nor MIT were represented, in fact, no Ivy League school was. So I went to the web to see on my own what such schools were doing to enforce academic discipline. I found that Princeton and Stanford have "codes," lists of prescribed behaviors. Harvard has an Administrative Board with no student members, and a Judicial Board which includes students. It hears cases outside the purview of the Ad Board. MIT on the other hand, does not have a "code," although they have a COD (Committee on Discipline). A cheating scandal at MIT last year has raised the question as to whether they should adopt a code, perhaps modeled on ours, or that at Wellesley (http://wt.mit.edu/V112/N0/cheating.html). While checking out their site, I found another (http://www.cwru.edu/afliti/wwnetdocs/) which deals specifically with ethical problems in Engineering and Computer Sciences and might be of interest to readers of The California Tech. All in all it was a most enlightening week end, and does Caltech ever look good!.

A bientot...

Jean Paul Revel

Dean Revel

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1 Morningstar Inc. (2005): Firms & Funds of the Year Awards Matrix, 1986 to 2004. In 2005, TIAA-CREF and CREF received Morningstar’s Firms & Funds of the Year Award for Long-Term Investment Performance. Morningstar, Inc. is an independent investment research firm. Ratings do not reflect sales loads. Copyright 2005 Morningstar, Inc. All rights reserved. Morningstar’s ratings are subjective in nature and are not a guarantee of future results. Morningstar’s assessment of risk is included in the ratings. 2 Morningstar’s survey of the financial services industry, conducted in 2004, finds the average operating expenses of the 25 largest fund families that have 10 or more funds are 0.49% of assets. The average operating expenses of TIAA-CREF’s mutual funds are 0.25% of assets. 3 Dalbar, Inc. (2005): A Study of Investors, 1990 to 2004. In 2005, TIAA-CREF and CREF received Dalbar’s Company Service Survey Customer Satisfaction Award. Dalbar’s customer satisfaction survey is conducted annually, May-June, and includes individual and institutional services distributed by CREF and TIAA-CREF. Customers were surveyed by telephone and the results were validated against the TIAA-CREF External Database.
ANNOUNCEMENTS

The Gay/Lesbian/Bisexual Discussion Group: extends in­vitations to the Gay/Lesbian/Bi­sexual Discussion group, which meets on the first and third Tues­days of the month at 6:15 p.m. to 7:30 p.m. at the Health Center lounge. This is a confidential meeting and does not imply anything about a person’s sexual orientation. The group usually discusses a par­ticularly relevant topic and then moves on to the general discus­sion. Refreshments are served. For more information, call 83831.

The California College Re­publicans are currently expanding­-ing their trips to campuses in Los An­geles County. It is a volunteer organization that works to get Republican candidates elected, while focusing on issues and positions that are of in­terest to college students. If you would like to start a chapter at Caltech in time for the 2000 election, email Amanda Gre­gory, southern Vice Chair Cali­fornia College Republicans, at agregory@usc.edu, or call her at (562) 425-8509.

The Dean of Students needs tutors in all areas -- help is especially needed with the main Institute requirements, e.g., MA1, MA2, PH1, PH2, CH1, etc. The pay is $35 per hour. A strong understanding of the sub­ject matter, patience, and the ability to communicate well are the qualities needed as a tutor. If you are an upperclassman and would like to be a Dean’s tutor, please stop by the Dean’s Office to see Sandra located in 102 Par­sons-Gates.

To submit an event for the Mints, contact mints@tech.caltech.edu or mail your announcement to Caltech 40-58 Attn: Mints. Submissions should be brief and concise. The Mints reserves the right to edit and abridge all material. Dead­line is noon Wednesday. Unless specified, all mints will run for two weeks.

The California Tech
Caltech 40-58
Pasadena, CA 91125

October 22, 1999

8 Mints

ACM programming mini­contest on Sat., Oct. 23 to de­termine the three teams Caltech is sending to the competition, will be held in UGUCS, if inter­ested send an e-mail to ugeus@vg.es.caltech.edu.

Caltech Division of Humani­ties and Social Sciences presents Political Science Colloquium. Edward Larson in “The Scopes Trial in History and Legend, at the Beck man Institute Auditori­um, Fri., Oct. 22, 4:00 p.m. For more information, contact Marion Lawrence at 626-395-4087 or marion@his.caltech.edu.

Opening reception for “Metonym Ocean Size” by Jermiah Day, Sat., Oct. 23 4:00-6:00 p.m., an exhibition of photographs and text which will explore the heart space located behind the Re­cording Chamber on Holliston Ave. Call 395-4248 or 395-6803.

The Emerson String Quartet will perform works by Shostakovitch, Zwilich, and Beethoven, Sun., Oct. 24, 3:30 p.m. For information call 395-4652.


The Jewish Free Loan As­sociation is offering interest-free student loans to qualified indi­viduals for tuition, books and sup­plies, and living expenses. Appli­cants must have completed a minimum of one year of under­graduate study and have a 2.5 GPA or above. For further in­formation, please contact the Jewish Free Loan Association at (213) 761-8830 or (818) 464-3331.

The John Glyes Educa­tion Fund is offering scholarship awards up to $3,000 for the 1999-2000 academic year. Applicants must be Canadian or U.S. Citi­zens, have a 2.7 GPA or above, and demonstrate financial need. Criteria other than strictly aca­demic standards for both GPA and financial need are considered in the selection process. To obtain an application, send a self-addressed, stamped envelope to: The John Glyes Educa­tion Fund, Attention: The Sec­retary, PO. Box 4806, 712 River­side Drive, Fredericksburg, Virginia 22405. Filing dates for mailing docu­ments in 1999 are April 1, June 1, and November 15.

The Measurement Science Conference (MSC) has established a fund to grant scholarships to students in an Engineering or Science or Quality Assurance de­gree program. The scholarship program places emphasis on pa­pers or projects that discuss the advancement of measure­ment science technology. Applicants must be U.S. Citizens, have a grade point average of 3.2 or higher, completed at least 24 units of upper division courses in En­gineering or Science degree or five courses in a Masters Degree Program in Quality Assurance. Current members of the MCS Committee are ineligible for this scholarship award. Also, appli­cants must be able to attend the Measurement Science Confer­ence luncheon held on January 20, 1999, at the Disneyland Conven­tion Center in Anaheim, Califor­nia. Applications are available in the Financial Aid Office. For fur­ther information you may contact: Rick Carevette, MSC scholar­ship Chairperson, Teledyne Elec­tronics Technologies, Marina del Rey, CA 90292. For in­formation or to receive an applica­tion, call 395-4248 or 395-6803. Entries must be submitted by November 26, 1999.

The National Academy for Nuclear Training is offering $2,500 scholarships to eligible students majoring in nuclear en­gineering, power generation, medical, electrical, or mechanical engineering with nuclear or power options. Applicants must be U.S. citizen or U.S. national, considering a career in the nuclear power indus­try, minimum GPA of 3.0 as of Jan. 1, 2000, at least one but no more than three academic years of study remaining to graduation, and free of post-collega obliga­tions or active military service. Applications are available in the Financial Aid Office. For further in­formation you may contact the National Academy for Nuclear Training Scholarship Program, 700 Galleria Parkway, Atlanta, GA 30339-5957 or via e-mail at nanci@nnapo.org. Entries must be submitted to the Financial Aid Office by Jan, 29, 2000.

Glumour Magazine’s 2000 top college of 5000 schools. Get the elec­tronic edition. The competition rec­ognizes the exceptional achieve­ments and academic excellence of female college juniors from across the country. It’s an ideal opportunity for talented students to be rewarded for their leadership roles on campus and in the greater community. Winners receive $1000, coverage in the October issue, and the opportunity to meet with top professionals in their field, usually during a few-day stay in the New York City. The competition is open to upperclassmen and even freshmen. The contest is open to women upperclassmen, in this case, current juniors regardless of major or GPA. All entries must be post­marked by Jan 31, 2000. Contact the Dean of Student Office, 102 Parsons-Gates, for the applica­tion.

SCHOLARSHIP

The Jewish Free Loan As­sociation is offering interest-free student loans to qualified indi­viduals for tuition, books and sup­plies, and living expenses. Appli­cants must have completed a minimum of one year of under­graduate study and have a 2.5 GPA or above. For further in­formation, please contact the Jewish Free Loan Association at (213) 761-8830 or (818) 464-3331.

Fullerton civic Light Opera Co., Inc. presents “Damm Yan­kees” to open Oct. 24 at 2:00 p.m and 7:00 p.m. and the Plummer Auditorium, 201 E. Capman Ave. in Fullerton, call 714-526-3832 for more in­formation.

The first movie to screen in the German Film Series for Fall 1999 term is Wir Koenen Auch Wir Wissen wie Sie ("You Don’t Know How to do it Differently"). (1993). It will show on Wed., Oct. 27, 1999 in Baxter Lecture Hall at 7:30 p.m. This film features En­glish subtitles. For more in­formation, call x3610.

Auditions for Shakespeare’s “Merchant of Venice” will be held at Dalney Lounge Fri., Oct. 25, 7:30-10:00 p.m.; Sat., Oct. 26, 1:00-3:00 p.m.; and Sun., Oct. 24, 1:00-5:00 p.m. If you cannot make one of these times, leave a message at the TACTIC office, x6259.

The California Tech
Caltech 40-58
Pasadena, CA 91126

To submit an event for the Mints, contact mints@tech.caltech.edu or mail your announcement to Caltech 40-58 Attn: Mints. Submissions should be brief and concise. The Mints reserves the right to edit and abridge all material. Dead­line is noon Wednesday. Unless specified, all mints will run for two weeks.

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ANNOUNCEMENTS

The Gay/Lesbian/Bisexual Discussion Group: extends in­vitations to the Gay/Lesbian/Bi­sexual Discussion group, which meets on the first and third Tues­days of the month at 6:15 p.m. to 7:30 p.m. at the Health Center lounge. This is a confidential meeting and does not imply anything about a person’s sexual orientation. The group usually discusses a par­ticularly relevant topic and then moves on to the general discus­sion. Refreshments are served. For more information, call 83831.

The California College Re­publicans are currently expanding­-ing their trips to campuses in Los An­geles County. It is a volunteer organization that works to get Republican candidates elected, while focusing on issues and positions that are of in­terest to college students. If you would like to start a chapter at Caltech in time for the 2000 election, email Amanda Gre­gory, southern Vice Chair Cali­fornia College Republicans, at agregory@usc.edu, or call her at (562) 425-8509.

The Dean of Students needs tutors in all areas -- help is especially needed with the main Institute requirements, e.g., MA1, MA2, PH1, PH2, CH1, etc. The pay is $35 per hour. A strong understanding of the sub­ject matter, patience, and the ability to communicate well are the qualities needed as a tutor. If you are an upperclassman and would like to be a Dean’s tutor, please stop by the Dean’s Office to see Sandra located in 102 Par­sons-Gates.

The Vice President for Student Affairs Office is looking for readers to assist a graduate student starting immediately. Computer Science or Engineer­ing majors are preferred. A ba­sic understanding of the subject matter, flexibility, and good communication skills are neces­sary. Hourly rate paid. Please call or e-mail Jerri Greene, x6321 jerrr@caltech.edu.

Attention safe crackers, South Lake Italian Kitchen will crack open their pizza ovens if you can crack open their floor safe. Safe is jammed and a creative solu­tion is needed -- only the contents need be intact. Call Donna at 626-792-5984, 524 S. Lake Ave.

Want to make money? Want the be at the cutting edge of Caltech’s happenings? Work for the Tech! Dave wants YOU to work for the Tech! Be all the you can be, work for the Tech! 