Professor Emeritus Robert Tjian
Department of Molecular and Cell Biology

“Stem Cell Research”
Saturday, May 6, 2006

In his appearance at the Annual Meeting of the Emeriti Association, Professor Robert Tjian will address “Stem Cell Research,” with a view on how the human genome (DNA) is decoded and “expressed.”

Born in Hong Kong, Professor Tjian received his B.S. in Biochemistry at the University of California, Berkeley, and his Ph.D. at Harvard University. He began his Postdoctoral research at Cold Springs Harbour, New York with James D. Watson. In 1979 Professor Tjian returned to Berkeley where he became one of the pioneers in the field of transcriptional regulation in higher organisms. Starting with how protein factors work to regulate gene expression, and how genes are governed by a highly elaborate and integrated bio-molecular engine that precisely controls how and when a given protein is made, Tjian’s research led to the development of powerful new drug strategies. In addition, studies of gene control have transformed our understanding in many other areas of biology.

Professor Tjian was named the California Scientist of the Year (1994), and is the recipient of the Passano Award for Biological Sciences, the Rosenstiel Award for Distinguished Work in Basic Medical Sciences (both 1995), the Alfred P. Sloan, Jr. Award in Basic Cancer, and Louise Gross Horwitz Prize (both 1999). He is a member of the Academia Sinica (China), the National Academy of Sciences, and the American Academy of Arts and Sciences.

As Chair of the Chancellor’s Advisory Council on Biology at Berkeley he helped build the Biological Sciences programs into one of the top two or three in the nation. In his spare time Professor Tjian enjoys fly fishing.

UCBEA Presents a Special Event
Building Better Bones: Dr. Antoni Tomsia, Senior Staff Scientist, LBNL
The Faculty Club, Howard Room - Friday, April 21, 2006, from 4 pm - 5:30pm

This talk is not about exercise... and it is not about diet. It is about new lifelike biomaterials that have the potential to revolutionize surgical procedures in both medicine and dentistry. Refreshments will be served for a modest fee of $5. If you have not registered, call Hope at the Faculty Club (510/540-5678, ext. 224).
Great Astronomy, Failed Papal Politics

“Astronomy and Politics in a Roman Bath and Basilica” was the title of Professor Emeritus John Heilbron’s talk at the UCBEA luncheon on March 11, 2006. From inlaid stones and medallions in the floor of the basilica of Santa Maria degli Angeli in Rome he unfolded a remarkable account of astute astronomical observation and frustrated papal ambitions.

The basilica, designed by Michelangelo, was used as an observatory to obtain an exact measurement of the year’s length, an important objective of the pope for improving the calendar and setting the date for Easter. To do this, Francesco Bianchini (b. 1663), a versatile polymath described by an admirer as, “The greatest man who ever lived,” laid a stone line in the floor of the basilica exactly tracing the meridian of that location. A meridian is a great circle passing through the location and both poles of the earth, so that it runs exactly north-south. A small opening in the wall of the church admitted a beam of sunlight that precisely at midday impinged on the stone meridian, and as the seasons progressed, the noontime position of the bright spot moved along the meridian, reversing its direction at the solstices. Labeled medallions and stones along the meridian marked the signs of the zodiac, while others commemorated the dates of visits of the pope and other important visitors.

The site of the basilica/observatory was sagaciously chosen for both religious and practical reasons. A basilica on the site of baths built by the Roman emperor Diocletian (ca. 300 A.D.) symbolized the triumph of Christianity over paganism. The great weight of the former Roman structure had, over the course of many centuries, consolidated the underlying soil making a stable base for astronomical purposes.

Bianchini was an outstanding astronomer who, through family connections, acquired the patronage of Pope Alexander VIII and later of Clement XI. The latter, in dealing with the War of Spanish Succession, sent Bianchini on diplomatic missions to France and England. The purpose of the London visit, Professor Heilbron believes, was to scout out the prospects of Stuart restoration to the English throne in the person of James III.

Our speaker made his audience the first to know his deduction that certain unmarked medallions along the meridian almost certainly commemorate the wedding of the would-be King James III to Maria Clementina Sobieski, granddaughter of the savior of Poland from the Turks, and goddaughter of Pope Clement. (Bianchini wrote a cantata celebrating the wedding!) It was the fervent hope of the pope that offspring of this marriage would keep alive the possibility of Stuart (Catholic) restoration. At one time there was a medallion bearing James’s name, but a later stone, marking the birth of their son Bonnie Prince Charlie, replaced it. Charlie’s failed bid for the throne ended all hopes for Stuart restoration.

With the patronage of the succeeding pope, Bianchini went on with astronomy. He published observations of Venus based on his mastery of a tricky-to-operate tubeless telescope whose objective lens was mounted on the end of a long mast. He reported features on the planet like those on the moon, features that most likely were reflections of his own retina since Venus is enveloped in a gaseous cloud. Professor Heilbron sees a parallel between this brilliant but flawed work and Bianchini’s efforts to advance the
**“College for Certain”**

Responding to an approach by the Bill and Melinda Gates Foundation and funding via the Woodrow Wilson National Fellowship Foundation, UC Berkeley has established a College Preparatory Academy for underserved students (CAL Prep). On February 24, 2006, those who attended our UCBEA special event heard a detailed presentation about this academy.

CAL Prep’s aim is to equip students for access to, and success in, higher education through an accelerated and aligned curriculum, coupled with college-based academic and social experiences that will prepare students for the transition to college.

It hopes to provide a model for other college preparatory programs throughout California, and a place where best practices in K-12 curriculum development and assessment can be tested. In a broad sense, it seeks to pioneer a “college for certain” culture in California’s public schools.

CAL Prep is essentially a charter school, operated in partnership with Aspire Public Schools, the State’s most respected not-for-profit charter management organization. It is unique in that UC Berkeley is actively involved in all phases of its operations—administratively through Berkeley’s School-University Partnership unit, and academically through several faculty liaison committees which work in consultation with the Lawrence Hall of Science, the Bay Area Writing Project, the Bay Area History and Social Science Project, and the Math Educators of the Graduate School of Education. Berkeley undergraduates also assist as role models and mentors.

CAL Prep opened on August 24, 2005, enrolling 85 6th and 7th graders, 70% of whom are from low-income families. Many are not up to grade level academically. Hence, the immediate plan is to spend two to three years bringing the students up to grade level employing double periods of math and language arts, before introducing the accelerated “Early College” curriculum in later grades.

**Great Astronomy, continued**

failed Stuart cause written in the floor of the basilica. However, Heilbron noted, recent probes closely approaching Venus reveal that it is not featureless!

The talk was not only wonderfully informative, but threw off tantalizing asides that many of his listeners would like to hear more about. For example—what had so favorably impressed the thoroughly anti-papist Isaac Newton with Bianchini that he “instantly” made him a fellow of the Royal Society on his London visit?

*Errol Mauchlan*

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**Annual Meeting**

The UCBEA May Luncheon serves as the annual meeting for the election of officers and board members. You will receive a slate ballot, which includes space for write-in candidates. Come! Vote!

Luncheon meetings for the 2006-2007 academic year are: September 30, November 11, January 27, March 17 and May 5.
Moving?

If you are planning a move, you might be interested in knowing about Smooth Moves, a planning/organizing/packing business based in Berkeley. Smooth Moves was started a few years ago by two UC alums, one of whom retired from Berkeley and did several major moves for UCB after retiring. Their purpose is to help with every aspect of a move (short of actually loading the truck and driving it away).

Specifically, they will do any or all of the following:

- Create a comprehensive timetable
- Help sort through your belongings and arrange donations or discards
- Pack everything carefully
- Oversee move day
- Unpack and help settle in to the new residence
- “De-stress” the entire process

Smooth Moves has managed large and small moves in Marin, Napa, Contra Costa, and Alameda counties. They are licensed and insured and can be reached at 510/527-8752. Feel free to ask for their packet of superb recommendation letters!