

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
MEETING AS A COMMITTEE OF THE WHOLE**

November 19, 1998

The Regents of the University of California met on the above date at Covell Commons, Los Angeles campus.

Present: Regents Atkinson, Bagley, Chandler, Connerly, Davies, Espinoza, Hotchkis, Johnson, Khachigian, Kozberg, Leach, Lee, Miura, Montoya, Nakashima, Ochoa, Parsky, Preuss, Sayles, and Willmon

In attendance: Regents-designate Taylor and Vining, Faculty Representatives Coleman and Dorr, Secretary Trivette, General Counsel Holst, Assistant Treasurer Stanton, Provost King, Senior Vice President Kennedy, Vice Presidents Broome, Darling, Gomes, Gurtner, and Hershman, Chancellors Berdahl, Bishop, Carnesale, Cicerone, Dynes, Orbach, Vanderhoef, and Yang, and Recording Secretary Nietfeld

The meeting convened at 8:35 a.m. with Chairman Davies presiding.

1. INTRODUCTION OF NOBEL LAUREATES LOUIS IGNARRO AND WALTER KOHN

President Atkinson recalled that when Alfred Nobel established the Nobel Prizes, his will indicated that they would be awarded to those who shall have conferred the greatest benefit on mankind. The first Nobel Prizes were given in 1901 in the fields of physics, chemistry, medicine/physiology, literature, and peace. The prize in economics was established in 1968. The first faculty member at the University of California to receive the Nobel Prize was E.O. Lawrence in 1939. In the interim period, forty members of the faculty have received the Nobel Prize. President Atkinson referred to an article in *The New Yorker* magazine which discussed the innovative nature of California's society. In the article, the author noted that "California has managed to make genius public property. By contrast, Massachusetts, the other great American academic enclave, has always kept genius locked away behind ivied walls. Is it any wonder that the Massachusetts miracle faded, while the University of California system was able to turn out the engineers and scientists necessary to fuel its high-tech industries?" The President then called upon Chancellor Carnesale to introduce Dr. Louis Ignarro.

Chancellor Carnesale informed the Committee that Dr. Ignarro, a Professor of Pharmacology in the UCLA School of Medicine, is one of three Americans to share the 1998 Nobel Prize for Physiology or Medicine. The Prize honors Dr. Ignarro's research on the role of nitric oxide in the human body. Dr. Ignarro has shown that nitric oxide is an important signaling compound that controls many essential functions in the human body, and his work has advanced the understanding of the cardiovascular processes in general. He joined the UCLA

faculty in 1985, and for the past ten consecutive years he has won the American Medical Student Association's Golden Apple Award for outstanding teaching. Chancellor Carnesale explained that Dr. Ignarro's research in nitric oxide began with studies on nitroglycerin to determine how that substance alleviates hypertension and angina. He showed that nitroglycerin is converted to nitric oxide inside vascular tissue and that nitric oxide relaxes vascular muscles and inhibits blood clotting. This led to the discovery that the body produces nitric oxide on its own. Nitric oxide lowers blood pressure, prevents stroke, fights infections, and controls functions in many organs. Dr. Ignarro's findings have led to the development of new therapeutic drugs.

Dr. Ignarro expressed his appreciation to the Los Angeles campus for its support of his research. He recalled that when he came to UCLA from Tulane fifteen years ago he was interested in discovering whether the human body could produce nitric oxide for the purpose of regulating blood pressure. Because the resources for this study were not available in New Orleans, he decided to come to UCLA. Within one year of arriving on campus, he was able to do experiments to show that the human body can produce nitric oxide and that nitric oxide plays a role in lowering blood pressure. In less than four years, he was able to show that a deficiency in nitric oxide can lead to the development of impotence in males. This basic research led others to the development of the drug Viagra. Dr. Ignarro stressed that none of this would have been possible without the resources and the sense of motivation that exists at UCLA. He added that teaching had also been an important part of his career.

Chancellor Yang introduced Professor Walter Kohn, a condensed-matter theorist who has made seminal contributions to the understanding of the electronic structure of materials. He has also made basic contributions to the science of semiconductors, semiconductivity, surface physics, and catalysis. Professor Kohn has been a member of the UCSB faculty since 1979, when he was appointed founding director of the Institute for Theoretical Physics. The Institute, which brings together leading scientists from throughout the world, is a reflection of Professor Kohn's ability to think in new ways. Under his tutelage, the Institute has taken the lead in ways of doing science that have been emulated by leading institutions around the world. Chancellor Yang noted that Professor Kohn was awarded the Nobel Prize in Chemistry for his development of the density-functional theory. This theory simplifies the calculation to understand the inner structure of molecules, which are the building blocks of matter. Professor Kohn's discovery allows scientists to foresee the behavior of molecules using computers. The density-functional theory revolutionized scientists' approach to the electronic structure of atoms, molecules, and solid materials in physics, chemistry, and materials science. With the advent of supercomputers, density-functional theory has become an essential tool for electronic materials science. Professor Kohn's discovery has great potential for a wide range of applications, including the development of new drugs, a new understanding of the composition of interstellar matter, and insight into how chemical reactions affect the ozone layer.

Professor Kohn observed that the University of California had given him the best opportunities for his work as a teacher and scholar. His 70 Ph.D. and post-doctoral students have gone on to a variety of productive careers in government, industry, and academia both here and abroad. He noted that the University had given him the opportunity to participate in several new endeavors. At San Diego, he helped to develop the new campus under the leadership of Director Roger Revelle of Scripps Institution and the first chancellor, Herbert York. He was the second faculty member and second chair of the Department of Physics at UCSD. He served as the chair of the Academic Senate at San Diego and helped to launch UCSD's program in Judaic Studies. In 1979 he was asked to found the Institute for Theoretical Physics at the Santa Barbara campus. In 1982 President Saxon appointed him to the new Institute on Global Conflict and Cooperation. He also helped to establish UCSB's program on global peace and security. In 1986 the Academic Senate appointed him to its committee which looked into the University's management of the Department of Energy Laboratories at Livermore and Los Alamos. Following three years of intensive study, the committee determined that this management was not an appropriate function of the University and recommended its phase out, while maintaining collaboration on nonmilitary science and technology. He believed that the day would come when the University's involvement with nuclear weapons would be terminated.

Professor Kohn then gave a brief lecture concerning his scientific work. As noted by Chancellor Yang, he was awarded the Nobel Prize for the development of the density-functional theory. This theory pertains to the behavior of electrons in any form of matter. Professor Kohn described several theories about the nature of the hydrogen atom, beginning with the Bohr model, in which the electron is an orbiting particle around the nucleus. Schroedinger regarded the electron as a wave. An important development in physics in the twentieth century was the recognition of how these two theories may be harmonized. In density-functional theory, the electrons are considered as a cloud. It is not necessary to consider the motion of each individual electron; it suffices to know the average number of electrons located at any one point in space. It is possible to demonstrate mathematically that the density distribution contains all of the information about the system.

Regent-designate Vining observed that the way in which the Santa Barbara campus had begun to interact with the community could be seen in its outpouring of support and respect in the days following the announcement that Professor Kohn had been awarded the Nobel Prize.

President Atkinson noted that both Nobel Laureates had been deeply involved in the life of the University of California. Professor Kohn's leadership of the Institute for Theoretical Physics has been an enormous contribution to the scientific world.

Chancellor Yang announced the thirtieth anniversary celebration of the Black Studies and Chicano Studies Departments at the Santa Barbara campus. He stressed the importance for the campus to affirm the importance of its ethnic and women's studies programs. UCSB's social science programs are ranked seventh among public universities nationally for the quality

of faculty research. The campus' interdisciplinary departments bring together scholars with international reputations who offer students a broad perspective. The faculty have won numerous distinctive awards, including the National Humanities Medal. The ethnic and women's studies courses provide students with an essential aspect of a liberal arts education, the understanding of the immediate world in which they live. Courses in these departments are taken by students from all ethnic and racial backgrounds. The campus is proud of providing its students with this important intellectual foundation so that they can better understand and analyze their cultural traditions and those of others. Gender studies courses teach students about the concepts of gender and provide lessons essential to the understanding of human behavior in a constantly changing society. The campus' commitment to ethnic, racial, and gender studies is founded upon the research enterprise that cuts across departmental lines. Many UCSB faculty members are dedicated to generating new knowledge about the multicultural society.

Regent Johnson drew attention to the rise in the stature of the Santa Barbara campus under the leadership of Chancellor Yang. Chancellor Yang commented that the campus' achievements were the result of the efforts of the faculty, the students, and the alumni.

2. PUBLIC COMMENT

Chairman Davies explained that the Board had been convened as a Committee of the Whole in order to permit members of the public an opportunity to address matters on the morning's agendas. The following person addressed the Board concerning the item noted:

Item 14, Committees on Grounds and Buildings and Finance: Approval of University of California 1999-2000 Budgets for Current Operations and for Capital Improvements

Mr. Kirk Matsuzaki, a member of the University of California Student Association, expressed concern over the lack of student input in the University's operating budget.

The meeting adjourned at 9:20 a.m.

Attest:

Secretary