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The Sanford Center and Stem Cell Research at UCSD

In a bold and singular step toward delivering the therapeutic promise of human stem cells, businessman and philanthropist **T. Denny Sanford** has committed $100 million to the creation of the Sanford Stem Cell Clinical Center at UCSD.

"This gift and the creation of the Sanford Stem Cell Clinical Center will further UC San Diego's leadership in stem cell science and therapeutics, and advance our region's reputation as an international, collaborative hub for stem cell research," said Chancellor **Pradeep K. Khosla**. "This Center will support the goals and vision of our strategic planning process by translating discoveries into therapies that will improve and save lives."

The Sanford Center will accelerate development of drugs and cell therapies inspired by and derived from current human stem cell research; establishing, promoting and disseminating clinical trials and patient therapies that will help more quickly transform promise into reality.

The Sanford Center will integrate operations at four locations: the UCSD Jacobs Medical Center and a nearby proposed clinical space, both scheduled to open in 2016; the UCSD Center for Advanced Laboratory Medicine (CALM); and the Sanford Consortium for Regenerative Medicine (SCRM). It will provide essential physical and human resources needed to leverage stem cell research currently being conducted at the Sanford Consortium—an innovative "collaboratory" of San Diego scientists from UCSD, the Sanford-Burnham Medical Research Institute, the Salk Institute for Biological Studies, The Scripps Research Institute, and the La Jolla Institute for Allergy & Immunology—and other institutions on and around the Torrey Pines mesa, such as the J. Craig Venter Institute.

"Every day, scientists learn more about the regenerative powers of stem cells, which tantalize with their potential to treat, cure, even prevent, myriad afflictions, including cancer, Lou Gehrig's disease, and spinal cord injury. I see it in the amazing collaborative advances by researchers and doctors in the Consortium and across the La Jolla mesa," said Sanford. "I believe we're on the cusp of turning years of hard-earned knowledge into actual treatments for real people in need. I want this gift to push that reality faster and farther."


T. Denny Sanford

In 2008, Sanford donated $30 million for the development and construction of the Sanford Consortium for Regenerative Medicine facility, which opened in 2011. His gift to create the Sanford Stem Cell Clinical Center is the second largest donation received by UCSD in its 53-year history, following only the $110 million gift by **Joan** and **Irwin Jacobs** to endow the UCSD Diego Jacobs School of Engineering.

Since 2006, the California Institute for Regenerative Medicine (CIRM), the state's stem cell agency, has awarded UCSD scientists more than 60 grants totaling almost $138 million, with millions more given to other area institutions. **Lawrence Goldstein**, professor in the Departments of Cellular and Molecular Medicine and Neurosciences, director of the UCSD Stem Cell Program, and scientific director of the Sanford Consortium for Regenerative Medicine, said funding from CIRM and elsewhere has already helped push some stem cell-based projects into early clinical trials, with more nearing readiness.

"Clinical trials are not the finish line, but they are essential to advancing the science and ultimately creating much-needed drugs and therapies," said Goldstein, who will also serve as director of the new Sanford Center. "We have made profound progress in understanding the basic nature and abilities of stem cells. We know a great deal about how they work and differentiate and, in a number of cases, how to make them become the kinds of cells we think we need. Now we have to

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Inside

put that knowledge to the test in people, for people."

A great deal of the progress in stem cell research has occurred at UC San Diego School of Medicine. For example:


Catriona H.M. Jamieson

Catriona H.M. Jamieson, Associate Professor of Medicine and director of the Moores Cancer Center stem cell program, and colleagues are conducting or planning trials for several stem cell-derived treatments of leukemia and other blood diseases that have shown encouraging results in animal models and human clinical trials.


Mark H. Tuszynski

Mark H. Tuszynski, Professor of Neurosciences and director of the Translational Neuroscience Institute, investigates both the slowly evolving neurological damage of Alzheimer's disease and the sudden, catastrophic consequences of traumatic spinal cord injuries. In the latter work, Tuszynski and colleagues recently reported using introduced neural stem cells to regenerate axon growth at the site of severe spinal cord injuries in rats, restoring some movement.


Lawrence Goldstein

Goldstein's lab has created, for the first time, stem cell-derived, in-vitro models of sporadic and hereditary Alzheimer's disease using induced pluripotent stem cells from patients with AD. These functional Alzheimer's neurons in a dish promise to be an unprecedented tool for developing and testing drugs to treat the dreaded neurodegenerative disorder.

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About the Collaboratory

By Larry Goldstein, Professor of Cellular and Molecular Medicine and Director of the Sanford Consortium

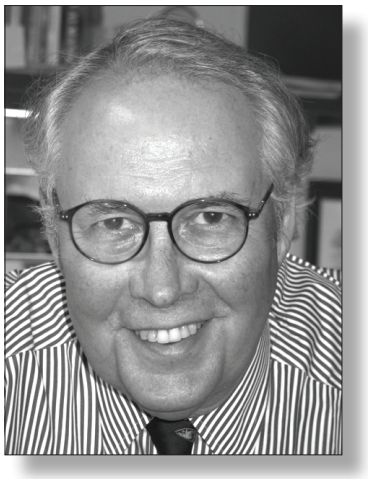
Stem cell research brings the potential for deep understanding in biology and for applications in medicine. Its potential technological reach is broad and as such is effectively an enabling technology of great power. Conceptually the technology is simple. It involves the ability to grow and maintain a special type of cell called a stem cell, which is self-replicating, but can, in response to special biochemical and other signals, generate specialized cell types found in diverse organisms including humans. In humans this technology enables the creation of models of disease in a lab dish that are truly human and can be studied and tested for human-specific aspects of disease. Thus, better development of drugs may result. This technology also has the potential to generate defined cell types for surgical implantation to rescue functions of cells that were previously lost or damaged in diseases such as Parkinson's, diabetes, and ALS. Finally, the creation of cancer-killing cells or drugs using stem-cell technology is also potentially in our grasp. Thus applications in a diverse variety of medical conditions are possible using stem cell technology.

UCSD and collaborating research institutes and companies on the La Jolla Mesa are playing a prominent role in the early stages of this stem cell revolution.

Our Stem Cell Program, which I direct, has enabled the recruitment and career development of many new faculty, the creation of shared specialized core facilities, and the training of young scientists and clinicians here and in neighboring research institutes in collaborative training activities. As Scientific Director of the Sanford Consortium for Regenerative Medicine, I facilitate interactions of a diverse group of multi-disciplinary scientists and engineers from five institutional partners on the La Jolla Mesa: the Sanford Burnham Medical Research Institute, The Salk Institute, the Scripps Research Institute, UCSD, and the La Jolla Institute for Allergy and Immunology. The Sanford Consortium building houses almost 30 different laboratories and core facilities and was designed to enable scientific collaboration across institutes and across disciplines. The UCSD contribution is composed of faculty and their labs from close to a dozen different departments drawn from four different schools including Biological Sciences, Engineering, Pharmacy, and the Medical School. Our faculty's research ranges from engineering to clinical medicine and much in between. But we all share a core interest in stem cell and regenerative medicine research.

We now have a new opportunity with the creation of the Sanford Stem Cell Clinical Center. Owing to the generosity of my friend T. Denny Sanford, we have received a generous and visionary gift to enable us to begin aggressively translating work in our laboratories to clinical trials in human patients in UCSD hospitals and clinics. This strategic opportunity is designed to leverage almost $200 million additional dollars from a variety of sources including institutional contributions, grants, clinical trials, and patient care. If we are successful we will create a novel engine for the testing of stem cell technology in humans in ways that are both ethical and visionary. The Sanford Stem Cell Clinical Center will also enable activities that include bioethics research with colleagues in Arts, Humanities, and Social Sciences, so that potential patients may be adequately counseled. It will also include the development of genomic, imaging, and clinical facilities that are specialized for applying the fruits of stem cell research to human disease. Our future in this area of science, technology and medicine is very bright and particularly exciting given the uniquely collaborative environment in San Diego. ❖

The Martian Who Landed in La Jolla



By William Lanouette

The U.S. program to create the world's first atomic bombs began at Columbia University in 1939, where the European émigré physicists **Enrico Fermi** and **Leo Szilard** met and co-designed the world's first nuclear reactor. Because early federal funding was administered from an office on Broadway, in the Army's Manhattan Engineer District, the whole enterprise came to be called the "Manhattan Project." During and after World War II, both men worked at the University of Chicago, and from there Szilard wandered—to Princeton, New York, Washington D.C., and finally San Diego.

Fermi once surmised that with *all* the planets in *all* the galaxies in *all* the universe, intelligent life *must* have evolved elsewhere, and over time these creatures *must* have landed on earth. So, he asked, "Where are they?" To this Szilard replied: "They are among us, but they are called Hungarians."

Indeed, within the Manhattan Project, four leading scientists were Hungarians; called "the Martians" because they were superhumanly intelligent and spoke an unearthly language: **John von Neumann**, **Eugene Wigner**, **Edward Teller**, and Szilard.

All four were born to assimilated Jewish parents in Budapest: Szilard in 1898, Wigner in 1902, von Neumann in 1903, and Teller in 1908. When the fascist **Miklós Horthy** took power in 1919 and Jews were banned from universities, Szilard fled to Berlin. There he attended a weekly physics colloquium that attracted investigators who would come to be considered leaders of modern science: **Albert Einstein, Max Planck**, **Max von Laue**, **Fritz Haber**, and **James Franck**.

"I only want to know the facts of physics," Szilard told Planck when applying for his course. "I will make up the theories myself." Szilard was equally bold with Einstein, and soon was walking him home from the colloquium. They became good friends, and in the 1920s the two collaborated to design an electromagnetic pump for kitchen refrigerators, filing more than 30 joint patents. Szilard sketched the first designs for a linear particle accelerator and for a cyclotron, although these were later developed and built by others. Beginning in 1928, Szilard and von Neumann taught physics courses together at Berlin University. Szilard's main intellectual concern (and his doctoral thesis) later became known as "cybernetics" or "information theory," and von Neumann went on to develop game theory and computers.

When they became refugees from Hitler's Germany, all four Martians landed in this country. Von Neumann came in 1930 to the Institute for Advanced Study in Princeton (where Einstein arrived in 1933). Wigner joined the Princeton faculty in 1930, and Teller went to the George Washington University in 1936. Szilard fled first to London and Oxford before joining Fermi at Columbia.

In London in September 1933, Szilard thought of two concepts essential for developing the atomic bomb: the "nuclear chain reaction" and the "critical mass" needed to sustain it. He named uranium in his 1934 patent for these concepts, but five years passed before he learned that this was, in fact, the element that might release the energy of the atom. In December 1938, chemists **Otto Hahn** and **Fritz Strassmann** in Berlin first split or "fissioned" the uranium atom, and when that news reached Szilard in New York, in January 1939, he panicked.

By March of that year, Szilard's experiments proved that uranium fission releases the *extra* sub-atomic neutrons needed to power his nuclear chain reaction. That summer, Szilard surprised Einstein when he told him about chain reactions. "I haven't thought of that at all," Einstein said. But he quickly saw new and dire possibilities for his famous $E = mc^2$ equation. He agreed to sign a letter Szilard proposed and drafted to President **Franklin Roosevelt** warning about German atomic research and urging a U.S. response.

A fateful crossover occurred in June 1942. In Germany, **Werner Heisenberg** and other scientists told armaments minister **Albert Speer** that their research would *not* lead to a nuclear weapon before the war's end. They had used low-grade graphite for their chain-reaction experiments, which failed. They didn't realize—as Szilard did—that only *pure* graphite would sustain a chain reaction. So, ironically, the very month that Germany effectively abandoned A-bomb work was when the U.S. expanded its modest academic programs to give them the Army's full support. The Fermi-Szilard reactor first worked on December 2, 1942, proving that a bomb was possible, and that both uranium and plutonium might fuel it. Afterward, Szilard told Fermi he thought this would go down as "a black day in the history of mankind."

Thereafter the Manhattan Project ran at accelerating speed. By 1945, more than 130,000 people worked at more than 30 secret sites around the country, with a budget of $25 billion in today's dollars—all hidden from Congress and the public. (After the war Szilard said the most powerful weapon to come from their work wasn't the A-bomb but the "SECRET" stamp.)

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At the bomb design lab at Los Alamos, New Mexico, von Neumann and Teller worked with **J. Robert Oppenheimer** and other leading scientists. Von Neumann's mathematical calculations showed they needed much less plutonium for a bomb than was first assumed, and enough plutonium was made in reactors before the war's end to make two bombs: the first tested in July 1945, the other used in August to destroy Nagasaki. Wigner designed reactors at Oak Ridge in Tennessee, where uranium was purified: by war's end just enough for the one bomb that leveled Hiroshima.

Fermi once described Teller as "the only monomaniac I've ever met who had more than one mania," although his chief obsession was to build a bomb based not on nuclear "fission"—splitting heavy atoms like uranium and plutonium—but on "fusion" by uniting light atoms like hydrogen. For this he gained notoriety in the 1950s as the "father of the H-bomb."

Szilard may justly be called the "father of the A-bomb," although after working furiously to create it he then spent the rest of his life trying to control it. In the spring of 1945, seeing Germany defeated and fearing a postwar U.S.-Soviet nuclear arms race, Szilard tried desperately to prevent the A-bomb's use against Japan, and instead to clamp it under international control.

To that end, in March 1945 Szilard drafted another Einstein letter to FDR, which failed to reach the president before he died in April. (After the war, Einstein said he had "really only acted as a mailbox" for Szilard.) Appearing at the Truman White House with that letter in May, Szilard was sent to meet **James F. Byrnes**, who was about to become Secretary of State and who saw the bomb as a way to "make the Russians more manageable" in Eastern Europe. Along on that trip was Nobel laureate in chemistry **Harold Urey**, who later settled at UCSD.

In June, Szilard helped Manhattan Project colleagues draft the Franck Report to the Secretary of War that urged an A-bomb demonstration before its use on cities. And in July, even before the first A-bomb was tested, Szilard organized

Jonas Salk and Leo Szilard

a petition to the President (signed by more than 150 Manhattan Project scientists) posing moral considerations about the bomb's use.

After World War II, Szilard worked tirelessly with Einstein, Urey, and other scientists to control the nuclear weapons they had helped create. Szilard also proposed ideas in biology that led others to receive the Nobel Prize. In New York in 1960, Szilard devised radiation therapy that eradicated his bladder cancer. That year he also met privately with Soviet premier **Nikita S. Khrushchev,** gaining his assent to a Moscow-Washington Hotline. In Washington in 1962, Szilard founded the first political action committee for arms control, the Council for a Livable World, which thrives today.

Szilard was the only "dove" among the Martians. Wigner (later a Nobel laureate) argued the U.S. could actually *survive* a nuclear war if only we expanded our civil-defense systems, a view Szilard considered as crazy. Still, the two remained personal friends. As a member of the U.S. Atomic Energy Commission (AEC), von Neumann advocated expanding America's nuclear arsenal, and was an advisor on the H-bomb at Los Alamos. Teller's fervent efforts to develop the H-bomb finally succeeded, but only after crucial help from von Neumann, **Stanislaus Ulam**, and **Richard Garwin**.

In 1954, many scientists ostracized Teller for testifying against Oppenheimer as a "security risk." When writing Szilard's biography I discovered that he had flown to Washington and tried to find Teller, to urge his friend not to testify. But with Teller sequestered by government lawyers, Szilard's search was futile.

Szilard did help Teller in another way, when in the 1950s his mother and sister were unable to emigrate from Hungary. Teller first enlisted his friend **Lewis L. Strauss**, a former AEC chairman and fervid anti-Communist, but his many diplomatic initiatives failed. Enter Szilard. A founder and active participant in the Pugwash Conferences on Science and World Affairs, Szilard knew several scientists from the Soviet bloc. At a conference in Austria, he met Hungarian physicist **Lajos Janossy**—stepson of the Marxist philosopher **György Lukacs**, and himself a well-known Communist. Szilard raised Teller's problem, Janossy promised to do what he could, and soon Teller was delighted to learn his mother and sister were freed. Still, Teller was furious with Szilard because their release had been arranged by ... a Communist! While Teller and Szilard disagreed and debated publicly about arms control, they remained good friends.

In 1956, Teller came to San Diego to work at General Atomics designing nuclear reactors with a team that included physicists **Freeman Dyson, Frederic de Hoffmann,** and **Hans Bethe**. Here they created the TRIGA, a research reactor that shuts itself down without a meltdown.

Szilard first came here, in 1956 and 1957, to consult on nuclear reactors at General Atomics. He loved San Diego, and in 1957 at a biology conference at the Waldorf-Astoria Hotel he met **Jonas Salk** and proposed creating a biology study center here to examine both basic science and its social effects. At first, Salk wasn't interested. But Szilard persisted, and conspired with **Roger Revelle** at UCSD to arrange a site for what became the Salk Institute for Biological Studies. Salk settled here in 1962, and the next year Szilard visited to help attract some of the world's best scientists to this new Institute—then just a cluster of house trailers perched by the glider port.

Salk said that Szilard "could effect chain reactions both in atoms and in human minds," and recalled Szilard's advice about three stages of truth. Confront scientists with a new idea and most will say, "It's not true!" Next, they'll say, "If true,

it's not important." Finally, they'll say, "We knew it all along!"

James D. Watson, who with **Francis Crick** gained the Nobel Prize for discovering DNA, told me recently that he thought Szilard had influenced him "more than anyone else" he knew—not for any particular scientific idea, but for his creative imagination. Watson said he loved being around him because "Leo got excited about something *before* it was true."

In January 1964, Szilard lured his wife **Gertrud (Trud**e) here, to encourage her to move from Washington. "We stayed in the best suite at La Valencia," Trude said, "and in two weeks I was sold." In February 1964, Leo and Trude rented a cottage at the Del Charro Hotel near La Jolla Shores (also a favorite hangout of **J. Edgar Hoover**). Szilard became one of the Salk Institute's first resident fellows, along with Crick and mathematician **Jacob Bronowski**.

In March 1964, Szilard began a pioneering paper on memory and recall, collaborating with Bronowski for statistical help. "This paper is a result of my not thinking about the problem for three years," he told Wigner, "and I am quite pleased with it." To **Nicholas Kurti**, another fellow Hungarian then visiting here from Oxford, Szilard said his memory paper "... will not be *right*, but it will be impossible to prove it *wrong*!"

That spring, Szilard and Salk began plans for the Institute to study the brain and how it works, and Salk looked to Szilard for ways to explore the social effects of science. When a friend asked Szilard why he had moved here, he replied: "I am 65—and I want a foretaste of Paradise." To another friend he wrote, this is "a wonderful place" and he had an appointment "for life," but then worried he might *outlive* this new Institute. Alas, on the night of May 30, 1964, Szilard died in his sleep of a massive heart attack.

The *New York Times* reported his death on page one, calling him "one of the greatest physicists of the century." The *Washington Post* praised his "prophetic sense of humanity" and the *Times* of London noted that by "qualities of quick imagination combined with persistence" he "left his mark on history as well as physics." During a memorial service at the Salk Institute, his colleague **Ed Lennox** spoke about how Szilard had cured himself of bladder cancer, but then suffered a fatal heart attack, concluding: "God would never have got him if Leo had been awake!"

For years afterward, Szilard's ashes sat at San Diego's Cypress View Mausoleum. Then, in 1998, the centenary year of Szilard's birth, his ashes were finally interred. In *two* places: Budapest, and Ithaca, N.Y. At the Kerepesi Cemetery, Hungary's Minister of Culture and Education said, "Today his countrymen see Leo Szilard as a latter-day Erasmus coming home at the end of decades of wandering. Just like Erasmus centuries before him, he had the courage to send letters to chief executives of Great Powers when at stake was how to do good for, or save the peace of the world."

In Ithaca, when Szilard's ashes were buried with his wife and her family, his friend and colleague Hans Bethe recalled how in England, in 1933, Leo seemed ubiquitous as he raced about working to settle academic refugees. "We thought he was seen at two places at the same time," Bethe recalled, and now that suspicion was demonstrably true!

Szilard had said that when he died he wanted his ashes launched in colored balloons "for the delight of children" and because "it is more pleasing for people to look up rather than to look down." At Ithaca, Szilard's grandnieces and grandnephews *did* send some of his ashes aloft by colored balloons, as young and old looked up.

Before moving to San Diego in 2012, I have enjoyed coming here for three decades to use Szilard's papers at UCSD's Geisel Library (Urey's, Salk's, and Crick's are there too). This spring, Mandeville Special Collections will use a grant from the National Archives to scan and digitize the Leo Szilard Papers, making them available and searchable on the Internet. As a pioneer of "information theory," Szilard would surely be pleased.

Lanouette's Genius in the Shadows *was reissued with a fascinating new Introduction in 2013. This article is drawn from a talk he gave in May at the House of Hungary in Balboa Park.* ❖

Sanford from p.2

The Sanford Stem Cell Clinical Center will advance these and other stem cell projects in crucial ways, said Goldstein, accelerating their movement into clinical trials with patients. The Center will deepen the connection with stem cell research partners in San Diego, allowing them to collaborate with one of the country's leading academic medical centers. It will establish the best standards in stem cell testing, safety and efficacy. It will effectively tackle the necessary regulatory requirements. All of these efforts, Goldstein said, are critical to speeding experimental therapies to use by patients.

Sanford's donation is the latest in a history of philanthropic largess. In his lifetime, he has given more than $1 billion, primarily to health- and children-related causes, often in his native state of South Dakota. In 2007, for example, he announced a $400 million gift to the Sioux Valley Hospitals and Health System for various health care and research initiatives.

In San Diego, Sanford and his foundation donated $20 million to the Burnham Institute for Medical Research in 2007 and issued a $50 million challenge grant three years later to the renamed Sanford-Burnham Medical Research Institute.

Sanford, 77, resides in Sioux Falls, South Dakota, with vacation homes in Arizona, California, and Colorado. His family includes one brother, two sons, and two grandsons.

(Press Release, UCSD Office of Public Relations) ❖

EMERITI WEBSITE

The UCSD Emeriti Association maintains a website: **http://emeriti.ucsd.edu.**

Clicking the **CHRONICLES** button will allow you to view past issues of this newsletter. The website also provides the constitution and by-laws, lists of members, and minutes of meetings.

SHOULDN'T BOYCOTTS, LIKE CHARITY, BEGIN AT HOME?

A Parody on the American Studies Association Vote to Boycott Israeli Universities

By Martin Kramer

Dear Fellow Members of the American Studies Association (ASA),

We are pleased to report our progress toward our next boycott resolution. As you know, our president, Professor **Curtis Marez**, gained some notoriety from a quote given by him to the *New York Times*. He had been asked why, given the widespread abuse of human rights around the world and especially in the Middle East, the ASA had chosen to boycott only Israeli universities. His answer: "One has to start somewhere."

This prompted questions as to where we would go next. So we took our lead from a statement by Professor Marez: "We are targeting Israeli universities because they work closely with the government and military in developing weapons and other technology that are used to enforce the occupation and colonization of Palestinian land." In that spirit, we have decided that our next boycott should be leveled against additional universities that collaborate with their governments and militaries in developing weapons and other technology used to violate human rights around the world. And since we are the American Studies Association, we have decided to focus our quest in these United States, where perhaps, right under our noses, universities are falling short of our own new standards of academic virtue.

Our attention has been drawn to the University of California at San Diego—where, so it happens, Professor Marez chairs the department of ethnic studies. We begin with a basic data point, taken from a 2012 press release by the UCSD News Center under the headline: "UC San Diego Maintains Strong Ties With Department of Defense." The item notes that UCSD (itself situated on a former marine base) "has maintained a strong connection with defense initiatives for the military and U.S. government over the past five decades ... During this fiscal year alone, the Department of Defense has granted more than $60 million to support various basic and applied research studies at UC San Diego." To this must be added grants from defense contractors, who are thick on the ground in San Diego.

After an intensive internet search, we have discovered where some of this funding is going. The 2012 news item, quoted above, mentioned that the most recent DoD grant, for $7 million, went to a team of physicists, biologists, chemists, bioengineers, and psychologists, "to investigate the dynamic principles of collective brain activity." Nothing could sound more sinister. (Although our critics, pointing to our earlier boycott resolution, have claimed that "collective brain activity" does not have much potential.) Social scientists are also doing their share. For example, there is the political scientist doing a DoD-funded project on "cross domain deterrence," in collaboration with the Lawrence Livermore and Los Alamos National Laboratories. (E.g., you threaten a student with a failing grade, and they threaten back with harassment charges.) And there is the economist, funded by DoD and Homeland Security, asking "Can Hearts and Minds be Bought? The Economics of Counterinsurgency in Iraq." (In a word: yes, but every academic dean knows that anyway.)

However, there are projects far more ominous than "collective brain activity," such as weapons systems, and particularly drone warfare. San Diego is the nation's biggest center of military drone production, with the massive presence of General Atomics and Northrop Grumman, the two leaders in the field. General Atomics makes the Predator and the Reaper, Northrop Grumman makes the Golden Hawk and the Hunter. We remind our members that in the fall, Amnesty International and Human Rights Watch issued reports on civilian casualties in U.S. drone strikes in North Waziristan (Pakistan) and Yemen, respectively. Both reports are replete with disturbing case studies. Amnesty expressed "serious concerns that the USA has unlawfully killed people in drone strikes, and that such killings may amount in some cases to extrajudicial executions or war crimes and other violations of international humanitarian law." Human Rights Watch concluded that "US statements and actions indicate that US forces are applying an overly broad definition of 'combatant' in targeted attacks ... These killings may amount to an extrajudicial execution." We have already received direct calls from Waziri and Yemeni civil society organizations, demanding our action. (We discount the one that began: "Oh, ye unbelievers of the ASA...")

Just how much contract research on drones is done by UCSD? In July 2012, MuckRock News made a request under the California Public Records Act (the California equivalent of the Freedom of Information Act), asking to see "all contracts between UCSD and government agencies or private corporations for services relating to aerial drones, UAs, UAVs, and UASs ('drones')." A year-and-a-half later, UCSD has yet to produce any contracts, claiming that it is backlogged with other requests.

Nevertheless, your association has managed to uncover some specific instances. In 2006, the university's Structural Engineering Department did a project to boost the payload of the Hunter. According to Northrop Grumman, the project helped to "add additional communications, intelligence and weapon payloads to the Hunter, expanding the capabilities of the fighter." UCSD has also had a partnership with the Los Alamos National Laboratory, in which students worked on "damage detection for composite wings of the Predator UAV." Interest in this subject continues, and two Predator wings

were recently installed at the university for testing.

We intend to keep digging, but we believe this is enough to justify action. Remember the words of Professor Marez: "We are targeting Israeli universities because they work closely with the government and military in developing weapons and other technology that are used to enforce the occupation and colonization of Palestinian land." Given that UCSD works closely with the U.S. government and military in developing weapons and other technology employed by the United States (including the CIA) to perpetrate extrajudicial executions and other violations of international humanitarian law, UCSD is obviously a candidate for boycott by the ASA. Our standards, to be compelling, should be consistent.

We have also been apprised of the following, by the Students for Justice in Palestine at UCSD: "UC San Diego is built upon indigenous Kumeyaay land just as Israel is built upon indigenous Palestinian land." This being so, there are even further grounds for implementing a boycott, as UCSD stands on occupied Kumeyaay territory. Even the chancellor's residence sits in the midst of a Kumeyaay cemetery. We know the analogy is not perfect: if you drop a shovel in indigenous Palestinian land, you might still strike an ancient Jewish grave. Nevertheless, we believe the parallels are compelling, and that this is further reason to boycott UCSD.

We are certain no difficulty would be caused to Professor Marez were his university to be boycotted. This would only preclude "formal collaboration" with his institution, so he could continue to participate in our annual conferences. And we are certain the pressure on him would lead him to stand firm in the faculty lounge and confront his scientific colleagues, and above all the chancellor of UCSD. The chancellor himself is a computer engineer who spent years working at the Department of Defense (at DARPA, its basic research branch), and later served as an adviser to DARPA on unmanned combat air systems. But we are sure our boycott, and the persuasiveness of Professor Marez, would lead the chancellor to reverse the university's immoral course.

An ASA boycott of the University of California at San Diego would be a bold act, demonstrating our adherence to consistent principle and our solidarity with the peoples of Pakistan, Afghanistan, and Yemen, who live in constant fear of deadly U.S. drone attacks. In protesting these U.S. government violations of international humanitarian law, we have to start somewhere. Fellow members: let us make clear, in no uncertain terms, that we *do* have the courage to speak truth to power, even if it means sawing off the limb on which we sit!

Don't we?

Martin Kramer is president of Shalem College in Jerusalem. This parody first appeared on the Commentary *blog on January 7.* ❖

About That Boycott...

By Sanford Lakoff

In December the American Studies Association—whose current president is a UCSD professor of Ethnic Studies—announced a boycott of Israel's academic institutions, in protest against what was ambiguously described as its "occupation of Palestinian land." A few days later, my e-mail brought a u-tube video about a revolutionary new medical technology developed by an Israeli biotech staffed mainly by graduates of the Technion, "Israel's MIT." This innovation promises nothing less than a non-invasive way of treating Parkinson's disease and the similar affliction known as "essential tremor," which happens to run in my wife's family. Whatever anyone thinks about which side bears more blame for the persistence of the Arab-Israeli conflict, the story of this company and its new therapy should give pause to those who support a boycott of Israel's universities.

Medical laymen like me can only marvel at these prospects but cannot appraise their realistic potential. Clearly, however, they are a reflection of the general excellence of Israeli science and innovation. Israel is becoming famous both for basic science and as a "start-up nation." In a country with a population of only 7.5 million, nine Israelis have won Nobel prizes for their work, seven in the natural sciences and medicine, one for economics, and one for literature—more than all the other countries of the Middle East combined. The number of Israeli companies on NASDAQ is the highest for any foreign country except China. The area around the Technion in Haifa is becoming a regional silicon valley. Herzlyia, a suburb of Tel Aviv, hosts branches of many of the most famous high-tech companies, including Intel, Yahoo, Sony, Microsoft, and Qualcomm. Nine Israeli start-ups have been acquired by American companies, including Apple, Facebook, IBM, and Google.

It is also worth noting that Israeli Arabs, who make up 20% of the country's population, study and teach at Israeli universities. Arab students constitute 33% of the enrollment at Haifa University, which is located in the most populous Arab region of Israel. The valedictorian of the medical school at the Technion this year was an Israeli Arab woman. On the West Bank, four of the six Palestinian universities now operating were set up prior to the creation of the Palestinian authority when the territory was fully under Israeli occupation.

Many American universities have condemned the ASA boycott. The Executive Committee of the Association of American Universities has opposed it forcefully: "Any such boycott of academic

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Lakoff from p.7

institutions directly violates academic freedom, which is a fundamental principle of AAU universities and of American higher education in general." Similarly, the American Association of University Professors has reiterated its long-standing opposition to academic boycotts, as has UC President **Janet Napolitano**. UCSD's Chancellor **Pradeep Khosla** issued a statement in effect echoing the position of the AAUP while not mentioning either the ASA or Israel.

It is certainly curious that Israel's universities should have been singled out for censure by the ASA, and presumably also by UCSD's Department of Ethnic Studies, given the staunch record of these universities in support of academic freedom and the dismal conditions that prevail elsewhere. The President and Dean of the Faculty of Trinity College rightly condemned the call for a boycott of "the only democracy in the Middle East," adding: "Why the ASA would propose an academic boycott of Israel and not, for example, of Syria, the Sudan, North Korea, China, Iran, Iraq, or Russia escapes rational thought."

An explanation may be found in the agendas of the ASA and the UCSD department. As the Israeli scholar **Martin Kramer** points out, "One of the ASA's central ideological prisms appears to be that the United States is an aggressive empire. Just scan the program of last year's annual conference, titled "Dimensions of Empire and Resistance," which was billed as a reflection "on indigeneity and dispossession," the "course of U.S. empire." Similarly, the Ethnic Studies Department aims to investigate "the critical conceptualization of social categories, particularly race, indigeneity, culture, ethnicity, gender, sexuality, class, and nation."

These agendas reflect systemic biases. Since Israel is an ally of the United States, it is by definition one of our colonial outposts even though Israeli Jews stem from tribes and kingdoms that inhabited the area for centuries. Palestinian Arabs, again by definition, are an indigenous population, even though most of them descend from migrants who came there from the Arabian Peninsula and elsewhere, and not from the Canaanites, Philistines, and others displaced by both peoples. And the fact that the America studied by members of the ASA is overwhelmingly composed of immigrants and their progeny presumably also makes it ipso facto an imperialist oppressor.

These premises are so flimsy that they all but collapse on merely being stated. But valid or not, the boycotters should stick to their principles. If they or their dependents should be struck by a disease treatable by Israeli biomedical innovations, they should remember their pledge to boycott any and all of them. It's the least they can do to show how superior they are to those of us naive enough to be grateful to those who make discoveries that enhance life and learning, whatever their nationality. ❖

❖ Mark Your Calendar! ❖

Stephanie Strathdee
Associate Dean of Global Health Sciences
"Global Health"
Wednesday, Feb 12, 4:00-5:30 pm

Mark Thiemens
Professor of Chemistry and Biochemistry and Dean of Physical Sciences
"Antarctic and Tibetan Ice Sampling"
Wednesday, Mar 12, 4:00-5:30 pm

Emily Roxworthy
Assistant Professor of Theatre and Dance
"From Performance Studies to Digital Humanities: Adventures in Interdisciplinarity"
Wednesday, Apr 9, 4:00-5:30 pm

Green Faculty Club

Chronicles

Newsletter of the UCSD Emeriti Association

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