

Defining the Future of the
Public Research University

UC San Diego

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UC San Diego's **Scripps Institution of Oceanography** is the **best doctoral program of its kind**, as ranked by the National Research Council

UC San Diego is ranked by *Surflife* as the **best surfing school in the nation**.

Charging Ahead

From its inception, the University of California, San Diego has attracted leading scholars with an entrepreneurial spirit and a penchant for risk taking. The freedom to cross boundaries and to create new disciplines fuels breakthrough research with global impact. Our visionaries are looking for the next discoveries that will benefit people around the world in all walks of life.

LIVING THE Life Aquatic

Meeting the Beach

Each year, during UC San Diego's Welcome Week, students gather for beach games, surf and kayak lessons, and a massive beach clean-up. The event, called Meet the Beach, provides an opportunity for the campus to connect with its unique community and environment. The clean-up is a part of the Volunteer50 initiative, which encourages the campus community to perform 50 hours or more of community service during the academic year.



Campus volunteers help clean up the beach.

Conserving Coral Reefs

In addition to their natural beauty, coral reefs are ecologically and economically important ecosystems. By simulating future ocean conditions using computers to control CO₂ and water temperature above complex reef systems, **Davey Kline** is better understanding what might happen as the oceans warm and acidify – research that will help guide future decisions to protect and conserve the valuable reefs.



Davey Kline, Ph.D.



GiveDirectly's no-strings-attached donations are deposited through a mobile banking system straight to a recipient's cell phone.

UNDERSTANDING *Our Society*



Natasha Balac, Ph.D.

#1 UC San Diego is ranked **first for positive impact on the nation** by *Washington Monthly*

Giving Without Strings

What if we put more money and power directly into the hands of the poor? **Paul Niehaus** co-founded GiveDirectly.org, which sends no-obligation money to poor people abroad, directly to their cell phones. The results: increased assets and income, reduced domestic violence, and improved mental health. GiveDirectly.org has been awarded No. 1 charity ranking by GiveWell and "Leading Global Thinkers" recognition by Foreign Policy magazine.

Connecting Community Data

Recognized by the Obama administration for innovative partnerships that support national goals, **Natasha Balac's** collaboration with OSISO and Clean Tech San Diego is developing a sustainable communities data infrastructure. It connects systems that manage electricity, gas, water, waste, buildings, transportation and traffic to reduce power consumption and develop a model for the collection and refinement of data.

Incentivizing Success

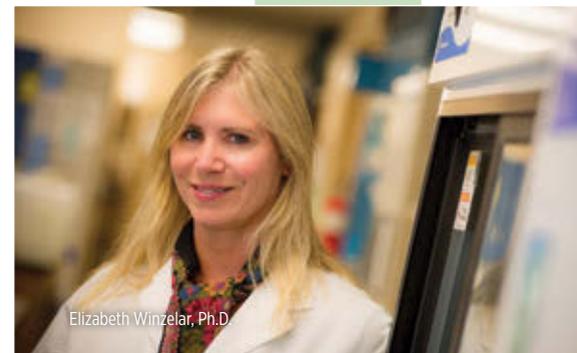
What will motivate students most to get better test scores? Money. Students attending low-performing schools tend to perform better on tests when promised financial or nonfinancial incentives for good scores, according to research conducted by **Sally Sadoff** in Chicago elementary and high schools. The findings also suggest that older students respond more to monetary incentives, while their younger cohorts prefer nonmonetary rewards such as trophies.



REINVENTING *Medicine*

Fighting Malaria on Multiple Fronts

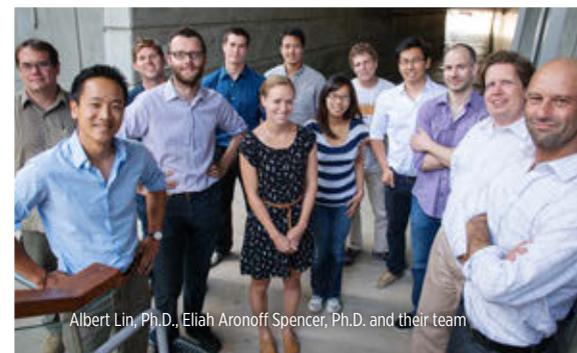
Malaria affects anywhere from 250 to 500 million people annually. Despite recent advances, the ailment persists as one of the world's deadliest infectious diseases. **Elizabeth Winzeler's** innovative research at the interface of chemistry and genetics employs advanced screening programs to create novel candidates for possible treatment. Her work investigates new classes of drugs that appear to target the disease parasite at all stages of its development and transition.



Elizabeth Winzeler, Ph.D.

Developing the Tools of the Future

What if you could hold the power of modern medical equipment in the palm of your hand? **Albert Lin** and **Elijah Aronoff Spencer** are developing a handheld device for scanning, analyzing and recording medical and environmental data using a mobile phone app. This competitor for the Qualcomm Tricorder XPRIZE could bring health monitoring and medical diagnostics to developing countries.



Albert Lin, Ph.D., Elijah Aronoff Spencer, Ph.D. and their team

Building a Model of Autism

Autism spectrum disorders are complex neurodevelopmental diseases characterized by deficits in verbal communication, impaired social interaction, and limited and repetitive interests and behavior. **Alysson Muotri** and colleagues have used stem cells from patients with Rett syndrome, one of the most aggressive forms of autism, to create the first human cellular model of the disorder that could be used for drug screening, diagnosis and personalized treatment.



Alysson Muotri, Ph.D.

UC San Diego

Learn more at ucsd.edu.