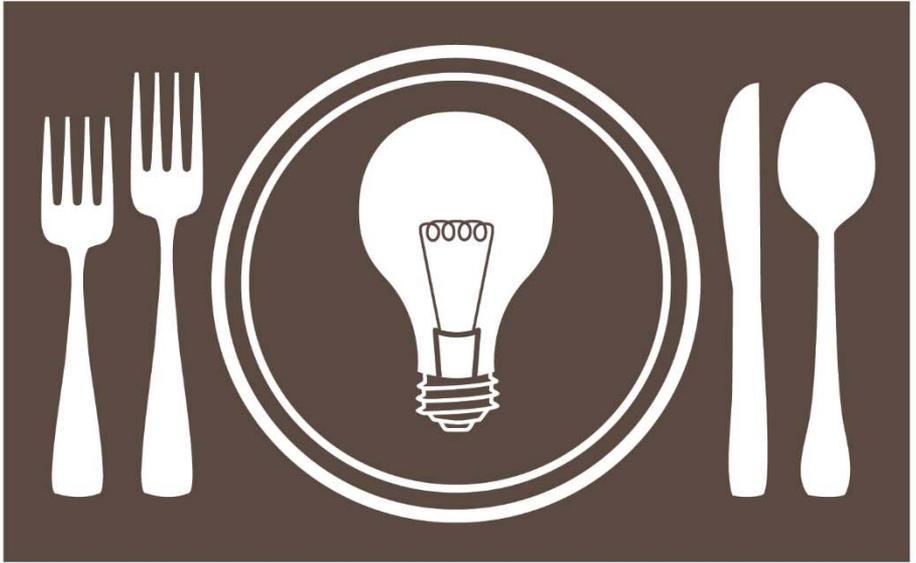


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Oakland Unified School District



**DINNER** with  
**a SCIENTIST**

May 28, 2013, 5-8 pm

Welcome to Oakland Unified School District's fifth annual Dinner with a Scientist! We are proud to collaborate with Chevron Corporation, Oakland Zoo, S. D. Bechtel, Jr. Foundation, and many other science organizations in the Bay Area to offer an evening of science exploration and conversation. Science teaching and learning occurs daily in our schools, but seldom do we have the opportunity to connect scientific concepts with the real work of scientists. Tonight is that rare opportunity to converge education with the local scientific community.

I want to especially thank all the scientists, volunteers, and teachers who made this event possible. The field of science is ever changing as evidenced by the diverse group of scientists in attendance. Whether you are a student interested in science, a science teacher, or a scientist working to improve our understanding of the world around us, my hope is that you broaden your perspective through this evening's activities.

Caleb Cheung  
*Science Manager, OUSD*

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On behalf of the Oakland Zoo, we would like to thank the Oakland Unified School district for organizing this inspiring, exciting event. We are honored to be a part of an evening that brings together teachers, students, and scientists who are interested and energized about science. Among us are current and future leaders of the scientific community. Also among us are the tireless, extraordinary mentors, the ones that have brought all of us to where we are now - teachers.

Whether you are aspiring to become a biologist, chemist, veterinarian, green engineer, or simply a nature lover, we invite you to explore the Oakland Zoo and be inspired by our animals, research, programs, and plans for the future. We hope this evening will help fuel new ideas for learning and bring about career opportunities that many youth have never explored or thought about. Thank you for being passionate about science and have a wonderful evening.

Dr. Joel Parrott  
*Executive Director, Oakland Zoo*

## Program

- 2:00 Visit Zoo (optional)
- 5:00 Registration & Live Animal Encounters
- 5:25 Seating (*table # on name tags*)
- Welcome & Ice Breaker  
*Caleb Cheung, Science Manager, OUSD*
- Welcome  
*Tony Smith, Superintendent, OUSD*  
*Roseann Torres, Board of Directors, OUSD*  
*Nik Dehejia, Director of Strategic Initiatives, Oakland Zoo*
- 5:50 Dinner & Conversation with Scientist #1
- 6:20 Keynote  
*Sarah Richardson, Postdoctoral Fellow*  
*Lawrence Berkeley National Laboratory*
- 6:45 Dinner & Conversation with Scientist #2
- 7:15 Raffle
- 7:20 Dessert & Conversation with Scientist #3
- 7:50 Appreciations and Conclusion
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## Menu

Random Leaves and Solutions  
Wheat, Yeast, and Garlic Mixture  
Extract of Newton's Favorite Fruit  
Dihydrogen Monoxide in Two States with Citrus Accents  
Sodium Chloride & Piper nigrum  
Steamed Random Plant Parts  
Grass Seeds and Random Plant Parts  
Grilled Poultry with Fungus and Roots  
Herbivore Option: Plant Pasta with Marinara Sauce  
Heat-Treated Cacao Carbohydrate Solids with Ripened Plant Ovaries  
Wrapped Cacao with Metha or Rubus

## Scientist Biographies

### **Sarah Richardson**

Keynote

Distinguished Postdoctoral Fellow,  
Lawrence Berkeley National Laboratory,  
Joint Genome Institute

[SMRichardson@lbl.gov](mailto:SMRichardson@lbl.gov)

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When I was a little girl in Baltimore, I wanted to explore outer space and find aliens. Then I discovered that bacteria is the strangest living thing on earth. Now my job is to 'train' bacteria to solve human problems. This is similar to the way we use horses to travel and cats to catch mice. I am studying how to use bacteria to make fuel or clean up oil spills. While it seems like an odd idea, we already use them to make foods like bread and cheese!

### **Aaron Ramirez**

Table 1, 2, 3

PhD Candidate, UC Berkeley

[aramirez4916@berkeley.edu](mailto:aramirez4916@berkeley.edu)

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My father was a middle-school science teacher and instilled in me an insatiable scientific curiosity. In college I was introduced to the research field of plant eco-physiology and began conducting my own research projects as an undergraduate. I am now pursuing a PhD in Integrative Biology at the University of California, Berkeley. I was recently awarded the National Science Foundation Graduate Research Fellowship to continue my PhD work on the evolutionary eco-physiology of native California shrublands.

### **Aminah Rumjahn**

Table 3, 1, 2

Scientist, The Clorox Company

[aminah.rumjahn1@clorox.com](mailto:aminah.rumjahn1@clorox.com)

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I am a scientist at Clorox where I have worked on bleach, laundry detergent and charcoal. I got my BS in Chemical Engineering at the University of California, Davis. I've always been curious about how things work and got hooked to science during chemistry lab after seeing solutions change colors and making ice cream with liquid nitrogen. Now I get to work on making charcoal burn better for cooking!

**Ashley Gibb**

Table 2, 3, 1

Graduate Student Researcher, UC Berkeley

[ashleygibb@berkeley.edu](mailto:ashleygibb@berkeley.edu)

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I'm a graduate student researcher at UC Berkeley. I studied chemistry in college, then spent a year living and teaching in Indonesia. Now I work to solve problems in physics, chemistry, and materials science. My research involves making and studying new nanomaterials. This means that I get to work with really small things. Occasionally, I get to use an awesome microscope that can see atoms! I went into science because I love learning about the world.

**Danika LeDuc**

Table 5, 6, 4

Associate Professor,

California State University, East Bay

[danika.leduc@csueastbay.edu](mailto:danika.leduc@csueastbay.edu)

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I am an associate professor in Chemistry & Biochemistry at California State University, East Bay. I earned my doctorate in chemistry at U.C. Berkeley. My research lab studies the biochemical mechanisms that allow certain clones of poplar trees to tolerate irrigation with saline water. This could help us better use clean water, a precious resource. I enjoy sharing my love of chemistry with my students, teachers, and others and collaborating with scientists around the world.

**Eve Robinson**

Table 8, 9, 7

Graduate Student, UC Berkeley

[erobinson@berkeley.edu](mailto:erobinson@berkeley.edu)

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I am a biomechanics graduate student at UC Berkeley researching flow patterns in the ocean to understand how small animals interact with their predators. I study how waves along the California coast affect the plankton that sea anemones can eat. I have worked as a science writer, in marine conservation, and been SCUBA diving for research on coral reefs in Belize, Australia, Israel, and along the rocky shores of the Pacific Northwest. I enjoy writing, art, teaching, traveling to new places, and building things; being a scientist allows me to do all of these.

**Jean Alupay**

Table 4, 5, 6

Graduate Student, UC Berkeley

[jsalupay@berkeley.edu](mailto:jsalupay@berkeley.edu)

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I am a graduate student in Integrative Biology at UC Berkeley. I study how and why an octopus uses a special defense mechanism called autotomy. You've probably seen autotomy if you've ever grabbed a lizard by its tail and found only the tail in your hand and the lizard escaped. I became interested in marine invertebrates, ecology, and behavior growing up in Santa Cruz with a fisherman father, frequently going to the beach.

**Jesyka Meléndez-Rosa**

Graduate Student, UC Berkeley

Table 7, 8, 9

jesymel15@berkeley.edu

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I grew up in rural Puerto Rico, a tiny little island near Cuba. I always loved animals, but in high school I thought the only way I could be involved with them was by going to veterinary school. When I went to college at the University of Puerto Rico, I realized that this wasn't true! I learned about scientific research and went on to study coral reefs, coffee snails, plankton, and green iguanas! Now, as a graduate student, I am interested in non-human mammalian behavior.

**Kaitlin Lawler**

Scientist, The Clorox Company

Table 11, 12, 10

kaitlin.lawler@clorox.com

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I received my Bachelor of Science in Chemical and Biomolecular Engineering at Georgia Tech. Currently I am a scientist doing product development for Clorox, specifically working with kitty litter. In high school, I enjoyed chemistry and other sciences because I got to discover how the world worked while doing hands-on activities. The best part about being a scientist is that I get to play around in a lab and learn something new every day.

**Kate Alfieri**

Graduate Student Researcher, UC Berkeley

Table 14, 15, 13

kalfieri@berkeley.edu

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I am a chemistry graduate student at UC Berkeley studying the proteins that are involved in the immune response. I got interested in science when I took high school biology and learned about different human diseases. I decided to study chemistry when I discovered that chemistry is fundamental to understanding biology, since big molecules called proteins are responsible for most biological processes.

**Kevin Metcalf**

Graduate Student, UC Berkeley

Table 17, 18, 16

kjmetcalf@berkeley.edu

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I am a graduate student in chemical engineering. I study bacteria, which are very small organisms that live almost everywhere, even inside you! Even though bacteria are very small, they are very similar to you and me. They have DNA, they reproduce, and they make protein, just like us! I am studying how bacteria secrete protein, which will make the cells great for manufacturing proteins.

**Kimberly Long**

Graduate Student, UC Berkeley

Table 6, 4, 5

kimlong716@gmail.com

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I am currently a first-year graduate student in Neuroscience at UC Berkeley. I previously attended Indiana University where I studied Biology and French. Now, I spend my days studying how stress can affect the brain, from the individual cell to your ability to learn and remember. I chose research science as my career because where else can you ask meaningful questions, play with the coolest toys, and discover things that no one has known before?

**Kristin Persson**

Staff Scientist,

Lawrence Berkeley National Laboratory

Table 20, 21, 22

kapersson@lbl.gov

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I am a Staff Scientist at the Lawrence Berkeley National Laboratory with a PhD in Theoretical Physics from the Royal Institute of Technology in Stockholm, Sweden. I lead The Materials Project ([www.materialsproject.org](http://www.materialsproject.org)), which focuses on finding new materials using computers and design tools. Observations and coming up with models for how things work have always interest me. I have studied many different topics (medicine, particle physics, etc.) before settling on my specialty, Computational Materials Science. Today, I find it very rewarding to work towards solutions for a sustainable energy future.

**Lindsey Dougherty**

PhD Candidate, UC Berkeley

Table 10, 11, 12

lindsaydougherty@berkeley.edu

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I am a graduate student at UC Berkeley studying how animals in the ocean use color and light to communicate with each other. Growing up in land-locked Colorado, I didn't get much exposure to the ocean until I was certified as a SCUBA diver when I turned 15. Ever since, my love for the ocean led me to live in Australia, teach diving in Zanzibar, and to conduct reef research in Indonesia.

**Liz Buzzard**

Scientist, The Clorox Company

Table 9, 7, 8

elizabeth.buzzard@clorox.com

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I am a packaging development scientist, and I love conducting experiments on new materials and sketching new packaging designs. I earned my Bachelor of Science degree from the University of Illinois in Materials Science and Engineering. In elementary school I loved building forts, reading, playing sports, and mixing random ingredients together in the kitchen. I love science, because it allows us to be detectives and solve mysteries and problems. It gives us clues as to why something happened and/or how things work!

**Mark Lescroart**

Postdoctoral Fellow, UC Berkeley

Table 12, 10, 11

mark.lescroart@gmail.com

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I study how our brains allow us to see objects in the world around us. I scan people's brains while they watch movies, and then try to figure out why their brains respond the way they do. I've been interested in science all my life, and after years of trying to figure the world out. I got my PhD from USC in 2011. I've been working in Jack Gallant's lab at Berkeley since.

**Molly Dickens**

Postdoctoral Fellow, UC Berkeley

Table 13, 14, 15

m.dickens@berkeley.edu

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I am a postdoctoral researcher at UC Berkeley and I study stress and the brain in wild birds. As a graduate student at Tufts University in MA, I spent my summers out in the Mojave Desert conducting field work. I have also had the awesome opportunity to conduct research in Costa Rica, Kenya, Australia, and the Galapagos Islands. I came to Berkeley a year ago after two years living in Europe, and working in a research lab at the University of Liege in Belgium.

**Percy Link**

Graduate Student, UC Berkeley

Table 15, 13, 14

plink@berkeley.edu

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I am a graduate student at UC Berkeley studying atmospheric science and hydrology (the study of the water cycle). I investigate how water evaporates from the land surface and returns to the atmosphere as vapor. The water cycle is really interesting because it is very dynamic, and because water is so important for people and ecosystems. I enjoy being an earth scientist because I love learning about how the natural world around me works.

**Rosemary Romero**

Graduate Student, UC Berkeley

Table 16, 17, 18

rromero@berkeley.edu

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I am a graduate student at UC Berkeley where I study seaweeds and the animals that eat them. I became a marine biologist because I loved exploring tide pools when I was a kid. I learned to SCUBA dive when I was an undergraduate at UC Santa Cruz and have been fascinated by seaweeds since my first dive in a kelp forest.

**Russell Wong**

Senior Engineer, Bayer HealthCare

Table 18, 16, 17

[russell.wong@bayer.com](mailto:russell.wong@bayer.com)

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What is that made of? Will it break? I am an engineer that chooses plastic materials and my job is to break things! I work at Bayer HealthCare where I select materials used to make life saving drugs. In the past I worked on the plastics used for the artificial heart, household refrigerators, car dashboards, hospital IV systems, and hot tubs/spas. I have a Bachelor's degree in chemical engineering, a Master's degree in bioengineering, and a Doctorate in polymer engineering. When I was young, I was really good at breaking things and loved to figure out if something was strong enough.

**Ryan Crews**

Scientist, The Clorox Company

Table 21, 22, 19

[ryan.crews@clorox.com](mailto:ryan.crews@clorox.com)

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I graduated in 2011 from Michigan State University. I began working at Clorox shortly after that. I currently work in the Specialty Packaging Development group, where I help develop the packages for our Hidden Valley Foods and Fresh Step/Scoop Away Cat Litter. I love science and I love problem solving. Science can help explain why things are the way they are. I grew up in Cleveland, Ohio and am an avid Cleveland sports fan.

**Sandra Lee-Takei**

Science Educator,

Community Resources for Science

Table 19, 20, 21

[sandra@crscience.org](mailto:sandra@crscience.org)

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I am a science educator with Community Resources for Science where I help design a wide range of fun activities for elementary school students from dissecting flowers and birds to making balloon rocket cars. As a child I was always very curious about the world around me and before teaching I studied how plants respond to stresses to pollution in the environment in a laboratory at U.C. Berkeley. From there my curiosity lead me to a job studying pollution right here in our community in Oakland and then to teaching college students about the environment and finally to my current job at CRS.

**Sara Balander**

Scientist, The Clorox Company

Table 22, 19, 20

sara.balander@clorox.com

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I'm a process and product developer, and I really like experimenting with new technologies. I earned my BS in Chemical Engineering from Purdue University, concentrating on the environment. I love science because you never know what you might discover about the world around you! Being a scientist is awesome because I've always enjoyed trying to figure out how things you buy at the store are made. Now I actually get to make them!

## **Participating Schools**

Chabot Elementary, Cleveland Elementary,  
Crocker Highlands, Elementary, Emerson Elementary,  
Encompass Academy, Hillcrest Elementary, Hoover Elementary,  
Joaquin Miller Elementary, Kaiser Elementary, Lafayette Elementary,  
Lincoln Elementary, Manzanita SEED Elementary,  
Martin Luther King Jr. Elementary, Montclair Elementary,  
Piedmont Avenue Elementary, PLACE @ Prescott,  
Sankofa Elementary, Sequoia Elementary, Thornhill Elementary

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Kevin Metcalf, Kimberly Long, Kristin Persson, Lindsey Dougherty, Liz Buzzard,  
Mark Lescroart, Molly Dickens, Percy Link, Rosemary Romero, Russell Wong,  
Ryan Crews, Sandra Lee-Takei, Sara Balander, Sarah Richardson*

Oakland Unified School District  
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Roseann Torres  
Caleb Cheung, David Avery, Laura Binczak, Phil Cotty  
Park Guthrie, Ricky Logan, Liz Martin, Nancy Midlin  
Duffy Ross, Claudio Vargas, Elizabeth Woodward  
Wilma Enriquez, Marilu Boytes, Marisol Boytes, Tasha Russell*

Other  
*Teresa Barnett (Setup)  
Howard Ruffner (Photography)  
Espresso Gourmet (Catering)*