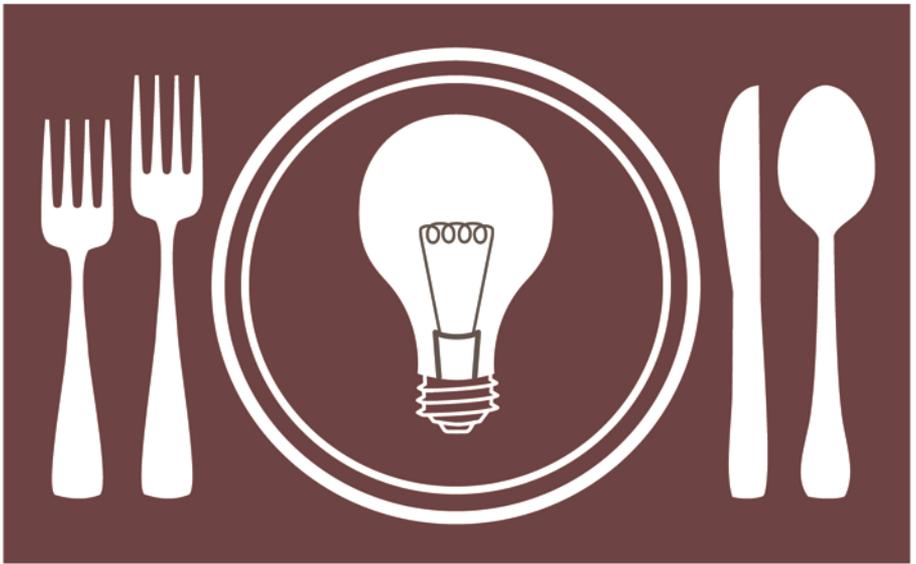

Oakland Unified School District



DINNER with
a **SCIENTIST**

May 24, 2016, 5-8 pm

Welcome to Oakland Unified School District's eighth 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

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 Welcome & Ice Breaker
Brenda Tuohy
Elementary Science Specialist, OUSD
Chantal Burnett
Assistant Program Director, Volunteer Services
Oakland Zoo
- 5:50 Dinner & Conversation with Scientist #1
- 6:20 Keynote
Lisa D. White
Director of Education,
UC Berkeley, Museum of Paleontology
- 6:45 Dinner & Conversation with Scientist #2
- 7:15 Raffle
- 7:20 Dessert & Conversation with Scientist #3
- 7:50 Appreciations and Conclusion
-

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
Random Quotes in a Warped Surface

Scientist Biographies

Lisa White

Keynote

Director of Education,
UC Berkeley, Museum of Paleontology

ldwhite@berkeley.edu

I am the Director of Education at the Museum of Paleontology at UC Berkeley and part of my job includes developing learning materials and museum programs for teachers and students on the fossil record, evolution, and global climate change. As a youth growing up in San Francisco, I loved museums and was drawn especially to the paleontology and geology exhibits. After receiving my PhD in Earth Sciences from UC Santa Cruz, I was a professor of geology at San Francisco State University where I created science field programs for urban youth in outdoor settings, such as the National Parks. I also study small microfossils found in deep ocean rocks and I love sharing my excitement about fossils and the history of life with others!

Amy Strom

Tables 16, 17, 18

Graduate Student, UC Berkeley,
Lawrence Berkeley National Laboratory

amystrom@berkeley.edu

I am a fourth-year graduate student at UC Berkeley. I use fruit flies to study how DNA is packaged and regulated inside cell nuclei--and how this regulation goes wrong as animals age. My undergraduate education at the University of Michigan inspired me to pursue research and teaching, and I hope to continue both as an academic researcher and professor in the future. Outside of the lab, I like to spend time on and in the ocean; sailing, kayaking and scuba diving!

Amy Wat

Tables 9, 7, 8

Graduate Student, UC Berkeley,
Lawrence Berkeley National Laboratory

awat@lbl.gov

As a graduate student, I study how to make new materials for cars, airplanes, and armor. Then break them to measure the strength of the materials. I make engineering materials that are inspired by the mother-of-pearl component of abalone shells. I became interested in this work because I loved how science expands understanding of our world, but I was excited about making something new as an engineer. This work combined the best of both worlds!

Audrey Nelson

Chemical Engineer, Chevron

Tables 8, 9, 7

audrey.nelson@chevron.com

I work as an engineer making the fuels that make your car, truck and planes go! I've always enjoyed solving puzzles, building things with my hands, and figuring out how things work. Engineering lets me do all of these things on a much bigger scale.

Benjamin Kessler

Graduate Student, UC Berkeley

Tables 20, 21, 22

benjikessler@berkeley.edu

I am a biologist, and I'm interested in how and why animals sense the world in the ways that they do. I am especially fascinated by color vision in the animal kingdom. I decided to become a scientist because I love asking questions and I love hanging out with other scientists. I am from Albany, California.

Damon Tighe

Training Specialist, Bio-Rad Laboratories

Tables 21, 22, 19

damon_tighe@bio-rad.com

I grew up in an economically depressed area of rural California and was always fascinated by medicine and how organisms work. I pursued medicine in college, but found a bigger impact was possible through research, so changed my focus towards the end of college. I worked on the human genome project and biofuel related DNA sequencing. I'm very excited about the application of biotechnology to medicine, especially in the Bay Area.

Danny Hellebusch

Senior Scientist, PLANT PV

Tables 5, 6, 4

djhellebusch@gmail.com

I graduated with his Ph.D. from UC Berkeley in 2015 in chemical engineering. During my graduate work, I studied how to make printable solar cells for low cost solar power. I am currently working for a local start up that develops low-cost metallization pastes for silicon based solar cells. I have always enjoyed science and math since I was a child. During high school, I realized that pursuing engineering in college would enable me to contribute to reducing the cost of renewable energy sources such as solar power. As a scientist with PLANT PV I continue to pursue my dream.

Eva Nichols

Graduate Student, UC Berkeley

Tables 14, 15, 13

eva.nichols@berkeley.edu

I am a fourth year PhD student at UC Berkeley in the chemistry department. I work on transforming carbon dioxide, a gas in our atmosphere that contributes to global warming, into useful chemicals like fuels or even medicines! I enjoy being a chemist because I get to create substances that no one has ever made before and I get to work with my hands every day--it's actually a lot like cooking!

Gian Garriga

Professor, UC Berkeley

Tables 10, 11, 12

garriga@berkeley.edu

I went to graduate school after working several years in an unrelated area. For the first time in my life, I could not wait to get to work. I had found my passion. After studying gene expression as a graduate student, I switched fields as a postdoctoral fellow to study how animals develop a nervous system. My students and I continue to study nervous system development in my lab at Cal.

Jessica BirnbaumPackaging Scientist,
The Clorox Company

Tables 17, 18, 16

jessica.birnbaum@clorox.com

I am a scientist working in Research & Development at Clorox to develop consumer products. I got my degree in Chemical Engineering from University of California Santa Barbara. I first got interested in science when I started learning about electricity and how a simple battery can power an incandescent bulb to create light. At Clorox I get to create the products that people use every day such as Clorox Bleach, Clorox Disinfecting Wipes, and even foods products like Hidden Valley Ranch Dressing. I love knowing that millions of people are using and benefiting from the products I helped make.

Maria Schriver

Mechanical Engineer, LightSail Energy

Tables 22, 19, 20

mcschriver@gmail.com

I studied physics in college because I loved learning how the world works. In physics classes, I learned why the sky is blue and why metals are shiny. I moved to engineering in graduate school so I could solve big problems and help people. I wanted to help keep the natural environment clean, so I chose to work in clean energy. I help design and test an air compressor that will store energy produced by wind and solar farms so it can be used when people need it, instead of when it happens to be sunny and windy outside.

Mathew Summers

Graduate Student, UC Berkeley

Tables 19, 20, 21

msummers@berkeley.edu

As a kid, I loved to tinker with Legos, logic puzzles, and video games. Now, as a neuroscientist, I'm paid to tinker and play with brains. I use powerful microscopes and fancy lasers to gather data on the brain, and then use supercomputers to analyze that data. I got my start in science by staying curious, and taking every class I could in math, biology, and chemistry.

Michelle Moy

Senior Food Chemist, Del Monte Foods

Tables 2, 3, 1

michelle.moy@delmonte.com

I am a food scientist working at Del Monte Foods, Inc. in Vegetable Research and Development creating new products. I received a Bachelor's Degree in Food Science from the University of Illinois at Urbana-Champaign. Food science combines my interest in cooking and chemistry. Understanding the science behind food products makes walking through the grocery store an adventure.

Morgan Dill

Naturalist, East Bay Regional Park District

Tables 4, 5, 6

mdill@ebparks.org

When I was a kid, I used to spend all of my time exploring outside, turning over logs, building forts, finding flowers and letting bugs crawl on me. I've made it my mission to share science and nature ever since, starting as a nature center volunteer in high school, and after getting a BS in Environmental Science from the University of Notre Dame, migrating to California to share everything from the forest to the ocean at outdoor school, California State Parks, and now as a naturalist at East Bay Regional Park District.

Natasha Tworoski
Zookeeper, Oakland Zoo

Tables 12, 10, 11
natasha@oaklandzoo.org

I am a zookeeper at Oakland Zoo for a wide variety of animals, including bears, monkeys, flamingos, parrots, snakes and more. My interest in science comes from my love of animals and wanting to understand what makes us different and similar to the rest of the animal kingdom. My undergraduate and graduate degrees were in evolutionary biology and I had the opportunity to work on studies with monkeys in Japan, pronghorn in Montana and chimpanzees in Uganda. What makes animals so cool is each species, as well as each individual, behaves differently and sometimes in ways that don't make sense to us. My background in evolution and animal behavior makes me a better keeper, because it helps me to understand how to best recreate the lives the animals would experience in the wild. Additionally, zoos are important tools for scientists to see animals closer than they could in the wild, so we can understand our world a little better. It is a very exciting field to be in!

Padraic Shafer
X-ray Physicist,
Lawrence Berkeley National Laboratory

Tables 15, 13, 14
pshafer@lbl.gov

I am a research scientist at the Advanced Light Source, an ultra-bright x-ray source in Berkeley that researchers from around the world visit to investigate the chemical and magnetic properties of new materials. My job allows me to discover interesting physics, build new tools for x-ray science, and I also get to work with many brilliant people on a daily basis.

Priscilla Erickson
Graduate Student, UC Berkeley

Tables 13, 14, 15
priscilla.erickson@gmail.com

I am finishing my PhD in the Molecular and Cell Biology program at UC Berkeley. I grew up loving animals and nature, and my dad was a cancer researcher who let me work in his lab in high school so I could see science in action. I got excited about studying evolutionary genetics after visiting the Amazon rainforest and the Galapagos Islands while studying abroad in Ecuador during college. Currently, I study the evolution of a fish that lives all over the Bay Area called the threespine stickleback. This fall I will start a new position studying the genetic basis of how organisms adapt to rapidly changing environments.

Rebecca Lin
Process Engineer, Chevron

Tables 11, 12, 10
LinRebecca@chevron.com

I have been a process engineer at the Chevron Richmond Refinery for almost 2 years. I aid with day-to-day operations along with long term projects of plants that makes gasoline and Techron components. I studied Chemical Engineering at Auburn University in Alabama--the state I was born and raised in. I love to be challenged, solve puzzles, and have fun doing cool stuff, and that's what STEM is in a nutshell.

Richard Lowe
Senior Scientist, The Clorox Company

Tables 3, 1, 2
richardlowe03@yahoo.com

After gaining my PhD in chemistry, I started my career working in a small pharmaceutical company developing new medicines. About 10 years ago, I gained a degree in public health, specializing in a field called epidemiology which is all about diseases and healthcare. After spending six years working in global maternal health, I am a now research scientist at Clorox. I help to design studies that show that our disinfecting products will kill harmful bugs - bacteria, viruses and fungi - which can result in patients getting infections while in hospital. I got into science because I'm always curious about how and why things happen, especially in the medical and healthcare fields.

Rosie Aboody
Laboratory Manager, UC Berkeley

Tables 6, 4, 5
raboody@berkeley.edu

Growing up, I always wanted to be a teacher – nowadays, I study how people learn! Even Silicon Valley's latest and greatest "smart" computers can't learn (in many regards) as well as a human baby. We combine philosophy, computer science, and psychology to figure out why humans are just so good at learning. I earned my BA at Cal, and in Fall 2016, I will be pursuing a PhD in Cognitive Development at Yale University.

Sarah A LaFrance
Software Developer,
Lawrence Berkeley National Laboratory

Tables 7, 8, 9
salafrance@lbl.gov

When I went to college, I studied chemistry but soon switched to computer science because I was having a hard time in the wet lab. I'm clumsy and tend to break things like test tubes, which isn't great for the experiment! Luckily, computer scientists today often work with biologists and chemists by making software tools, so I work at Berkeley Lab now at a safe distance from all the breakable things, writing applications that help visualize DNA.

Sarah Richardson

Tables 1, 2, 3

Postdoctoral Fellow,

Lawrence Berkeley National Laboratory

Smrichardson@lbl.gov

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!

Sowmya Ravikumar

Tables 18, 16, 17

Scientist, UC Berkeley

ravikumar@berkeley.edu

I am an optometrist by training. I started doing research on how well the eye focuses an image. This work was done for my thesis at Indiana University. I have since worked on how well the two eyes work together. I am working on how eyes develop near-sightedness and what happens to the structure and vision when eyes grow out of proportion.

Participating Schools

*Acorn Woodland Elementary, Bridges Academy,
EnCompass Academy, Esperanza Elementary,
Fruitvale Elementary, Futures Elementary, Garfield Elementary,
Glenview Elementary, Global Family School, Howard Elementary,
International Community School, Laurel Elementary,
Manzanita SEED Elementary, Melrose Leadership Academy,
Redwood Heights Elementary*

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Oakland Zoo

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Keynote Scientist

Lisa D. White

Volunteer Scientists

*Amy Strom, Amy Wat, Audrey Nelson, Benjamin Kessler,
Damon Tighe, Danny Hellebusch, Eva Nichols, Gian Garriga,
Jessica Birnbaum, Maria Schriver, Mathew Summers, Michelle Moy,
Morgan Dill, Natasha Tworoski, Padraic Shafer, Priscilla Erickson,
Rebecca Lin, Richard Lowe, Rosie Aboody, Sarah A LaFrance,
Sarah Richardson, Sowmya Ravikumar*

Oakland Unified School District

*Brenda Tuohy, Caleb Cheung, Christine Chen,
Claudio Vargas, Grey Kolevzon, Herberta Zulueta, James Narvaez,
Laura Prival, Ricky Logan, Rosita Young,
Sarah Pipping, Sonnie Dae Ross*

Other

*Morgan Seag, Community Resources for Science (Setup)
Marlene Wilson (Setup)
Sara Rusche (Photography)
Espresso Gourmet (Catering)*

Photos from tonight's event will be available at
<http://science.ousd.org>