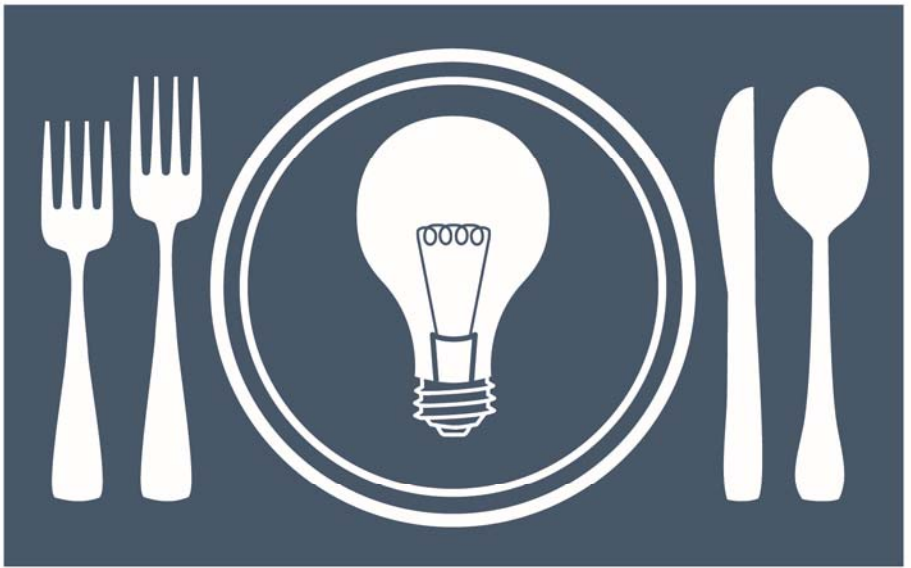

Oakland Unified School District



DINNER with
a **SCIENTIST**

May 30, 2013, 5-8 pm

Welcome to Oakland Unified School District's fourteenth 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 Seating (*table # on name tags*)
- Welcome & Ice Breaker
Duffy Ross, Science Specialist, OUSD
- Welcome
Tony Smith, Superintendent, OUSD
Gary Yee, Interim Superintendent, OUSD
Sarah Cramer, Oakland Zoo
- 5:50 Dinner & Conversation with Scientist #1
- 6:20 Keynote
Maynard Holliday, Robotics Engineer
Elad Inbar, RobotsLAB US Inc.
- 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 *Mentha* or *Rubus*

Scientist Biographies

Maynard Holliday

Keynote

Robotics Engineer, Sandia National Laboratories mhollid@sandia.gov

I am a senior engineering and robotics professional. Using my knowledge of robotics and intelligent machine systems, I have published and presented my work internationally over the past 25 years. In addition, I won a scholarship to Stanford University and to the International Space University in France!

Ashley Gibb

Table 9, 10, 8

Graduate Student, UC Berkeley ashleygibb@berkeley.edu

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.

Carla Moreno

Table 6, 7, 4

Assistant Structure Representative, Caltrans

I have been an engineer on the new SF-Oakland Bay Bridge for the past 10 years, I enjoy building big! Seeing something develop from drawing plans to an actual bridge is amazing, even all of these years later. I became an engineer because science was a challenging and I like a good challenge.

Carol Hood

Table 3, 1, 2

Immunotoxicologist, The Clorox Company carol.hood@clorox.com

I have always been interested in what makes us sick and how to have better health. As an Immunotoxicologist, I provide people with information on how to be safe around cleaning products – which can protect them from germs and viruses. I work on several scientific affair committees, including the asthma forum, green chemistry and children's health and exposures. The goal of this work I do is to help our government make decisions regarding new laws and regulations that will be scientifically sound and safe for the public.

Christoph Maurath**Table 10, 8, 9**

Scientist,

Livermore Software Technology Corporation

chris@lstc.com

I am a scientist at Livermore Software Technology Corporation where I create virtual finite element models of crash test dummies which our customers use to design safer cars. As a kid I was always interested in how things worked and took many of my toys apart to see how everything looked inside. Most of the time I could put them back together again. My biggest inspiration to pursue science and technology was my dad who is also an engineer. Now, I have a Doctor of Science in Transportation Safety Engineering.

Colton Leppink**Table 13, 11, 12**

Scientist I, The Clorox Company

colton.leppink@clorox.com

I attended Michigan State University where I received my BS in Packaging. I worked with Del Monte Foods as a Packaging Engineer. I was hired into The Clorox Company as a "Scientist I" working in the R&D Sector for the Specialty Packaging Division. I love science because it is exciting, creative and all around us in everyday life. If you have a big imagination and passion for creativity, go into a Field of Science!

David Nagib**Table 12, 13, 11**

Postdoctoral Fellow, UC Berkeley

david.nagib@gmail.com

I am a postdoctoral fellow in organic chemistry at UC Berkeley. I grew up near Philly, where I spent most of my time playing football & basketball. When not reading or playing sports, I loved to solve puzzles! Word puzzles, crossword puzzles, 1000 piece puzzles, and especially those 3D puzzles, I loved them all. In school, I soon realized that scientists were basically professional puzzle-solvers and this was the perfect career for me. I earned my PhD from Princeton University two years ago by developing new ways to make medicines work stronger, faster, and longer. We did this by adding the super-element, Fluorine, to their chemical structures. Now at UC Berkeley, I am discovering even cooler ways to do this using gold as a super-catalyst. I love going to the laboratory every day and thinking about my work as a really hard puzzle - which if my team can solve - will help make new medicines.

Desiré Whitmore

Postdoctoral Researcher, UC Berkeley

Table 15, 16, 14

laserchick@berkeley.edu

I am a laser scientist at UC Berkeley studying the chemistry and physics of light interacting with matter. Growing up, I was always curious about how and why things work the way they do, and because I was good at math and chemistry, I studied Chemical Engineering at UCLA. After graduation, I decided to focus more on science than engineering and went to UC Irvine to get my PhD in Chemical and Material Physics.

Elad Inbar

Chief Operating Officer, RobotsLAB US Inc.

Table 2, 3, 1

elad@robotslab.com

I am the founder and CEO of both www.RobotAppStore.com the first marketplace for apps or robots, and www.RobotsLAB.com the educational department of Robot App Store dedicated to teaching science and math using robotics platforms. I am passionate about robotics and have shared my expertise with schools, science museums, and research groups at prominent universities around the world, including teaching algebra and physics using robots. With parallel careers in academia and technology, I am able to bridge the cutting-edge robotics industry and the educational market.

Elizabeth Donald

Senior Scientist, The Clorox Company

Table 18, 19, 17

elizabeth.donald@clorox.com

I am a geochemist, and I love exploring rocks, mixing chemicals, and making new supermarket products! I earned my Bachelor of Science degree from Yale University, and my PhD from Stanford University. Growing up I loved exploring the outdoors and the library, going to new places, and making messes! Science is exciting because it constantly reveals new things about who we are and the universe around us. The best part is that ANYONE can be a scientist!

Erandi De Silva

Post-doctoral Fellow, Genentech Inc.

Table 8, 9, 10

ekdesilva@gmail.com

I am passionate about making scientific discoveries in infectious diseases. My interest in this area stems from growing up in Africa, where these diseases dominate the health care setting. For my PhD work, I studied the biology of the malaria parasite. I have now left academia to work at a Genentech Inc., a biotech company, where I study bacterial diseases. I enjoy knowing that my discoveries may someday have a real impact on patients' lives. This potential impact is what drives my passion for biomedical research.

Jeff Clarkson**Table 7, 4, 5**

R&D Engineer, UC Berkeley,
Marvell Nanofabrication Laboratory

jpc6204@yahoo.com

I holds a PhD in Materials Science from the University of Rochester and am working in the field of nanotechnology at UC Berkeley. I have researched solar cells, nuclear batteries, transistors, chemical and biological sensors, pressure sensors, and electronics for space flight applications. Growing up I was very interested in car audio systems and wanted to learn more about electronics and circuits. I decided to go into the field of science because I enjoy experimenting with new ideas that can be used to improve our daily lives.

Jessica Almeida**Table 1, 2, 3**

Latent Print Examiner, Criminal Laboratory
Oakland Police Department

jalmeida@oaklandnet.com

I have a Bachelor of Arts Degree in Psychology/Human Biology from San Jose State University and an Associate of Science Degree in Forensics from Grossmont College. I have ALWAYS loved science. I have ALWAYS been fascinated in how things work from the inside out. It is crucial for us to have our own questions and answers about the world and what society assumes is ground truth. I love science because it is every changing and evolving.

Kate Alfieri**Table 21, 22, 20**

Graduate Student Researcher, UC Berkeley

kalfieri@berkeley.edu

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.

Laura Verduzco**Table 16, 14, 15**

Lead Planning Engineer, Chevron

laurav@chevron.com

I am currently working as a Lead Planning Engineer in the low carbon technologies group of Chevron Energy Technology Company. My job is to help assess global climate change and provide technical and strategic guidance to the Corporation. My projects include mitigation of and adaptation to climate change, greenhouse gas lifecycle assessment of fuel products, adaptation to climate change, wind energy technologies, and hydrogen for transportation, among others.

Maria C Suarez

Research Specialist, UC Berkeley-

Table 11, 12, 13

mcsuarez@berkeley.edu

I am a Biologist originally from Colombia. I did my MSc in Developmental Biology and PhD in Molecular Genetics from UW Madison studying plants responses to stress. I spent two years in Denmark doing research in the same field. Since I was little I started wondering how plants sense and respond to changes in the environment. Plants can't run away from environmental threats, and through my research I realized that they use very efficient mechanisms to survive attacks from pathogens, heat, cold, salty soils, etc. Lately, at UC Berkeley I started working with environmental remediation (clean-up) using plants and microorganisms. We identify and use organisms that can transform toxic chemicals into less toxic or harmless compounds. For example, our laboratory has used wetlands plants and microorganisms clean water contaminated with selenium and boron. We need to find ways to take better care of our planet.

Michael Kang

Graduate Student, UC Berkeley

Table 14, 15, 16

mskang@berkeley.edu

I am a bioengineering graduate student at the Department of Bioengineering at UC Berkeley. I study little creatures called yeast, tiny creatures too small to see that help us make useful things, like bread or yogurt. By rewriting their DNA, the "code" inside of all living things, we can teach these creatures to make other useful things, like medicine or fuel for your car!

Nerine Cherepy

Research Scientist,

Lawrence Livermore National Laboratory

Table 22, 20, 21

cherepy1@llnl.gov

I grew up in Arizona, in copper-mining country. The rich mineralogical environment encouraged me to start a rock collection and take interest in scientific nomenclature for understanding the natural environment. I completed my PhD at UC Berkeley in 1996, using lasers to study why photosynthesis is efficient. As scientist at Lawrence Livermore National Laboratory since 1998, I am developing new high-energy radiation detecting scintillator materials and instrumentation for gamma ray spectroscopy and radiographic imaging.

Rachel E. Pepper

Postdoctoral Fellow, UC Berkeley

Table 19, 17, 18rachel.pepper@berkeley.edu

I am a physicist at UC Berkeley, and I study how fluids (like water) move. In the past I've studied splashing, similar to what happens when a rain drop hits the ground. Now I study how tiny organisms move the water around them to get enough to eat. I got my Ph.D. at Harvard, and worked for two years at the University of Colorado studying how people learn physics before I moved to Berkeley. I decided to go in to physics because I like to understand how things work.

Rosemary Romero

Graduate Student, UC Berkeley

Table 4, 5, 6rromero@berkeley.edu

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.

Sandra Lee-Takei

Science Educator,

Community Resources for Science

Table 17, 18, 19sandra@crscience.org

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.

Simona Zompi

Scientist & Physician, UC Berkeley

Table 5, 6, 7simona.zompi@gmail.com

I am a Medical Doctor and Scientist specializing in Immunology. I study how the human body fights infections, especially viral infections such as Dengue virus and HIV. I grew up in Italy and studied in France. I worked in Africa, Asia and Latin America to help set up better health care systems and I am now directing the Center for Global Public Health at UC Berkeley.

Tania L. Gonzalez

Graduate Student, UC Berkeley

Table 20, 21, 22

tlgonzalez@berkeley.edu

I am a Molecular and Cell Biology graduate student at UC Berkeley. Since I was young, I loved growing plants and reading about science. In college, I found out that I also loved doing science. Now I research plant immunity and gene regulation to learn more about how plants fight off diseases. Did you know that plants can sense when they are being invaded? They alter their biochemistry to protect themselves from disease.

Notes

Participating Schools

Acorn Woodland Elementary, Brookfield Elementary,
Burckhalter Elementary, Carl Munck Elementary,
Community United Elementary, East Oakland Pride Elementary,
EnCompass Academy, Esperanza Elementary, Futures Elementary, Grass
Valley Elementary, Greenleaf Elementary,
Korematsu Discovery Academy, Markham Elementary,
New Highland Academy, Parker Elementary, Reach Academy,
RISE Community School, Sobrante Park Elementary

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Volunteer Scientists

*Ashley Gibb, Carla Moreno, Carol Hood, Christoph Maurath,
Colton Leppink, David Nagib, Desiré Whitmore, Elad Inbar,
Elizabeth Donald, Erandi De Silva, Jeff Clarkson, Jessica Almeida,
Kate Alfieri, Laura Verduzco, Maria C Suarez, Maynard Holliday,
Michael Kang, Nerine Cherepy, Rachel E. Pepper, Rosemary Romero, Sandra
Lee-Takei, Simona Zompi, Tania L. Gonzalez,*

Oakland Unified School District

*Tony Smith
Gary Yee*

*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

*Matthew Hurley, Gauri Vaishampayan, Erica Wong (Setup)
Howard Ruffner (Photography)
Espresso Gourmet (Catering)*