

# Palo Alto Rotary Pinion

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IF the meeting was called to order by E.J. HONG at 12:29 p.m., it was because she was eager to get started. The Pledge of Allegiance was led by Chrissy Coolidge, who was married five months and a day ago and is still married.

## GUESTS

ROGER SMITH had a guest, Jane Kaylock, a financial advisor and prospective potential member of the club.

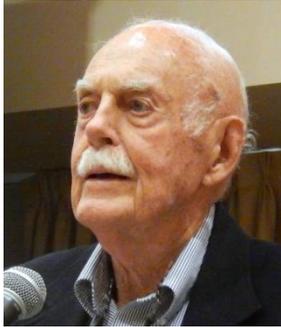
President EJ HONG fined herself \$.25 for failing to wear her name badge.

## REMINDER

April 26, 2015 there is the Big Basin Rotary event, so save the day.

## OPENING REMARKS

Opening remarks were made by CHET DOUGLAS. CHET, commented on the enjoyment he has from visiting other clubs. There are Rotary Clubs anywhere in the world. He has visited the club in Kauai Hanapepe with wife. Not sure what to wear, CHET wore a Hawaiian shirt to the meeting and was happy to see that all the local Rotarians were similarly attired. He has also attended Rotary Club meetings in France, where he sat at the head table. In the



final remarks, an older gentleman stated that they were fortunate to have an American because they were the ones who kicked out the Germans and the French were free because they saved us. Chants of vive la France and vive la America were heard. CHET noted that clubs could be located by simply going on the web to rotary.org and closed with a rousing chant of vive la America and vive le Rotary.

E.J. HONG jumped in to remind people that there are 1.2 million Rotary Club members and approximately 40,000 clubs.

SALLY TOMLINSON of the Program Committee announced that it is program evaluation time and that programs can be evaluated either by email or paper form.



Next, E.J. inducted new member PAMELA KRUDOP, a relationship manager at Avid Bank. PAM was sponsored by KATIE SEEDMAN. PAM is a bike rider who enjoys making a difference.

DAN QUINN announced he was joining the President's Club in honor of Emmy Noether, one of the greatest mathematicians of all time, who received her Google Doodle on March 23rd. She developed the laws proving that the conservation of energy momentum and angular momentum were mathematically derived. DAN also auctioned off his book about ants raising \$200 for Rotary annual charities.



ROSEANNE FAIRTY announced the results of the vocational scholarships. This year there were 24 applications and 10 scholarships totaling \$21,500 were given out to students from three community colleges, Foothill, DeAnza, and Skyline. Students are studying stenography, radiology, nursing, and other technical fields.

SALLY TOMLINSON introduced our speaker, Marcie Darnovsky. She noted that the San Francisco Chronicle had recently run an article regarding entrepreneurs trying to synthesize new life forms in which Dr. Darnovsky was quoted. Dr. Darnovsky is with the Center for Genetics and Society, which is interested in social justice and the public interest implications of genetic technology. She has a PhD from the History of Consciousness program at UC Santa Cruz and has been quoted in the New York Times and many other publications.



Dr. Darnovsky began her speech by thanking the Rotary Club members for their public-mindedness. The title of her speech was "Does Biotech Become Us: New Technologies and the Human Future." She began by discussing Austin Heinz, CEO of Cambrian Genomics who is a leader in the synthetic biology field. Synthetic biology is an engineering approach to genetic technology. Heinz has announced that their goal is to develop completely novel organisms.



Dr. Darnovsky raised the question who sets the rules? Heinz and others are dead set against the government regulating, although he has spoken of setting up a "God council."

Many have predicted that we will be using synthetic biology to affect the human species. There is a potential that it could be beneficial for illnesses. However, it could also be used to redesign humanity. Proponents have spoken of designing humans digitally and seizing control of human evolution.

The Center for Genetics and Society got its start in 2001 during an earlier round of public interest in genetic engineering. Some were talking about a future that included the genetically rich and the "naturals." Forty to 45 countries have laws barring genetic engineering that will affect the human race. The United States does not.

In the last few years, precision gene editing techniques that are more efficient have been developed. They have been applied to human cell cultures since 2012. Several teams have modified human gametes. On March 12, the science publication Nature published an article entitled "Don't Edit the Human Germ Line." It asserted this position mostly on safety grounds, but also on social and ethical grounds. Also, there is a risk of a public backlash against research. Science Magazine has also urged a moratorium on research, as has the International Society for Stem Cell Research. They have urged that there be no clinical uses of such technology.

Dr. Darnovsky then addressed the question of why she and others oppose such research. She mentioned three different aspects. First of all, there is the question of safety as maybe off-target effects from the genetic engineering. Developmental biology is complex and the effect of changing of single gene is not always understood. Genes have complicated ways of working and how they turn themselves on and off. She noted that with regard to genetic diseases, there are existing techniques for screening and discarding embryos that could be effective.

The second ground for opposing such research is such research can cause irreversible changes in the human genes.

Dr. Darnovsky also opposes human genetic engineering at this time because it could be problematic socially. There will be lack of social equality if we live in a world where there are genetic have and have-nots. This will reinforce existing social hierarchies and encourage genetic reductionism. Also alternative or unwanted variations may be suppressed. In response to a question, Dr. Darnovsky noted that many disability rights advocates are against such engineering because if selection was permitted, they would not be here.

## UPCOMING EVENTS

March 30 - Robert Siegel, Professor of Microbiology and Immunology, Stanford Medical School: "Infectious Disease and the Human-virus Relationship"

April 6 - Izabela Moi, Knight Fellow: "Bringing Underrepresented Voices to Journalism in Brazil"

April 13- New Member Talks: Richard Keller, Lee Lippert, Lisa Akselrad

April 20- Scott Sagan, "The Nuclear Future: Can we have the Spread of Nuclear Power without the Spread of Nuclear Weapons?"

