In honor of
Bob B. Buchanan

Govindjee
(gov@illinois.edu)
September 9, 2012
Rebeiz Foundation for Basic Research
(http://www.vlbpbp.org/)
Champaign--Urbana, Illinois
Professor Bob B. Buchanan
Executive Associate Dean, College of Natural Resources, University of California Berkeley

- Member – US National Academy of Sciences - 1995
- Fellow - American Academy of Arts and Sciences – 1997
- Fellow - American Association for the Advancement of Science – 1997
- Stephen Hales Prize - American Society of Plant Biologists – 2005
1940

- Who is this child?
- What is he doing?
- Entering the dairy industry?
Well, it took 40 years before the young boy, now a young man, was able to turn milk into ice cream, using Thomas Jefferson’s recipe.
Today, on September 9, 2012, we are honoring this distinguished young man, Professor Bob Buchanan, from Berkeley, California (that was also the home of Melvin Calvin, Andy Benson and Dan Arnon: basically “dark reaction” folks). And, importantly, we are honoring him in Champaign-Urbana, Illinois (that was the home of Robert Emerson and Eugene Rabinowitch, the “light reaction” folks) with the 2011 Lifetime Achievement Award of the Rebeiz Foundation, and that too at the beautiful home of Carole and Tino Rebeiz.
I will show you some slides to celebrate this wonderful event for Bob, sometimes referred to as BBB
Research in Bob’s Laboratory focuses on a very important regulatory protein, called thioredoxin, found in plants.

He is THE authority on this protein—a major discoverer of everything about it—Please ask him and see his eyes shine!

Source of figures: http://pmb.berkeley.edu/profile/bbuchanan
Who is Who of the Ferredoxin/Thioredoxin System, Berkeley: 1960s, 1970s and 1980s

Question: Who was the first?
Answer: Bob Buchanan

Source: BBB
Who were Bob’s mentors?

[1] Jesse C. Rabinowitz (1925–2003; a distinguished molecular and cell biologist), world authority on basic biology of folic acid; he was a true devotee of culture science, art, music, literature; above all, he was a great photographer

[2] Daniel I. Arnon (1910-1994; a distinguished plant biochemist), discoverer of photoposphorylation in chloroplasts; and one of the most colorful personalities in the field of photosynthesis (once in Germany, I had to share the same bed as him since the organizers only gave us a room with one big bed)
As a postdoc with Jesse C. Rabinowitz (1925 – 2003)
UC Berkeley – 1963
Discovery of Ferredoxin-linked CO$_2$ fixation in Photosynthetic Bacteria
With Daniel Arnon at the Zeiss Spectrophotometer
UC Berkeley, 1964
With Daniel Arnon – UC Berkeley, 1968
Discussing the Reverse Citric Acid Cycle in Bacterial Photosynthesis
Improving plants through photosynthesis — by overexpressing thioredoxin

Studies together with many including Ghasem Hosseini Salekdeh and his collaborators (in Iran) have uncovered a role for thioredoxin enabling wheat to survive drought conditions.
Family Gathering at Virginia Farm – 1991
Great, great grandfather and son in the background
I end this short tribute to Bob by showing a photo I took of him with Dan Arnon’s daughters, Ruth and Ann, ~ 2005. Congratulations and Enjoy the party
September 8, 2012  Visit of Bob and Melinda Buchanan

Bob Buchanan is the recipient of 2011 Lifetime Achievement Award of the Rebeiz Foundation

Thanks to Tino and Carole Rebeiz for bringing Bob Buchanan to Urbana, Illinois, and thanks to Don Ort for showing and explaining the SoyFace

[See the houses where Robert Emerson, Otto Warburg and Eugene Rabinowitch once lived]

Govindjee

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Visit to SoyFace

Left to right: Bob Buchanan, Don Ort; Melinda Buchanan and Govindjee, September 8, 2012, Photo by Matt Siebers
806 Main Street, Urbana, Illinois, where Robert Emerson once lived

Photo by Govindjee, September 8, 2012
Govindjee and Bob Buchanan, 806 W. Main Street, Urbana, IL, USA, Photo by Melinda Buchanan
Apartment in 801 South Coler, Urbana, where Otto Warburg once lived
Photo by Govindjee
801 South Coler, Urbana, IL, USA, where Otto Warburg had an apartment, Photo of Govindjee and Bob Buchanan, by Melinda Buchanan
1021 West Church, Champaign, IL, USA, where Eugene Rabinowitch had once lived, Photo by Govindjee
1021 West Church, Champaign, IL, USA, where Eugene Rabinowitch once lived
Bob Branch Buchanan, Melinda Buchanan and Govindjee, Photo by the person who is living there