

In honor of Bob B. Buchanan

Govindjee

(gov@illinois.edu)

September 9, 2012

Rebeiz Foundation for Basic Research

(<http://www.vlpbp.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
- Charles F. Kettering Award for Excellence in Photosynthesis - American Society of Plant Biologists – 1998
- Stephen Hales Prize - American Society of Plant Biologists – 2005
- Fellow - American Society of Plant Biologists (2007); and of American Academy of Microbiology (2006)



- Who is this child?
- What is he doing?
- Entering the dairy industry?

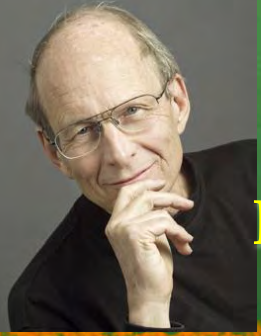
1940

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



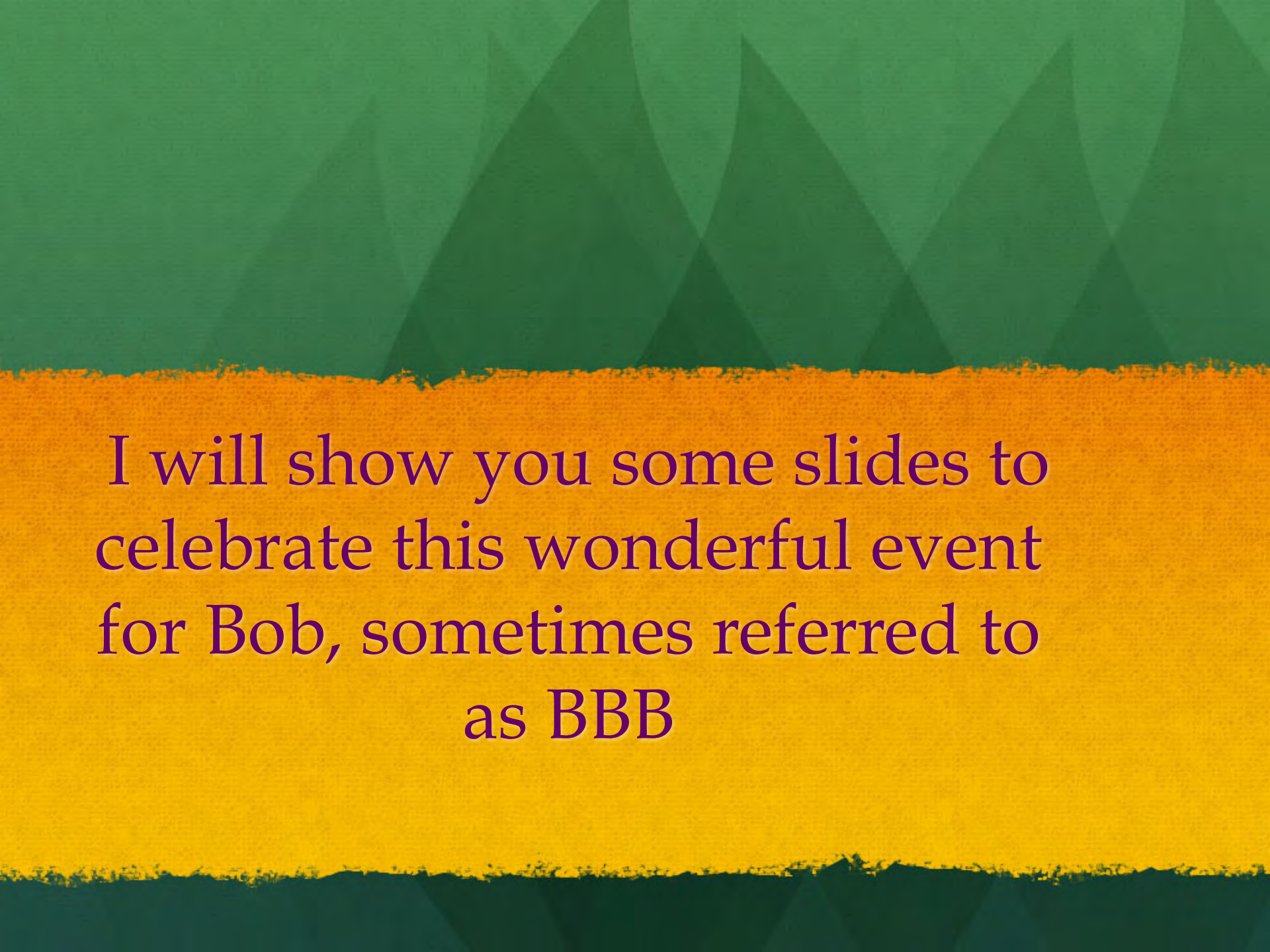
1980



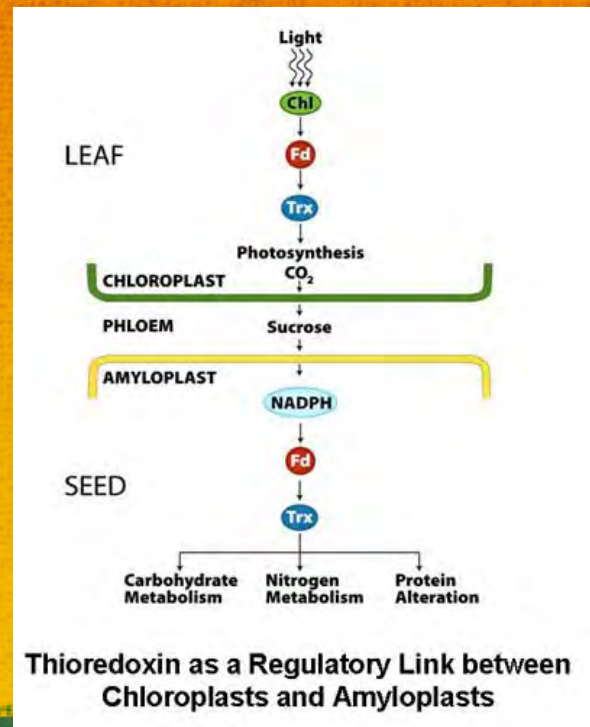


Today, on September 9, 2012,
we are honoring this distinguished young man,
Professor Bob Buchanan, from Berkeley, California
(that was also the home of Melvin Calvin, Andy
Benson and Dan Arnon: basically “dark reaction”
folks). And, importantly, we are honoring him in
Champaign-Urbana, Illinois (that 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



Source of figures: <http://pmb.berkeley.edu/profile/bbuchanan>

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!

Bob B. Buchanan (1963)



Peter Schürmann (1971)



Hilgard Hall



Jean-Pierre Jacquot (1980)



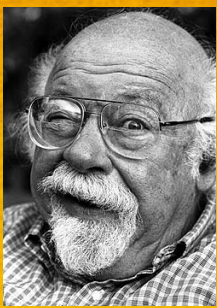
Richard Wolosiuk (1975)

Early investigators who studied the ferredoxin-thioredoxin system in Hilgard Hall at Berkeley during the 1960's, 70's and 80's.

**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?



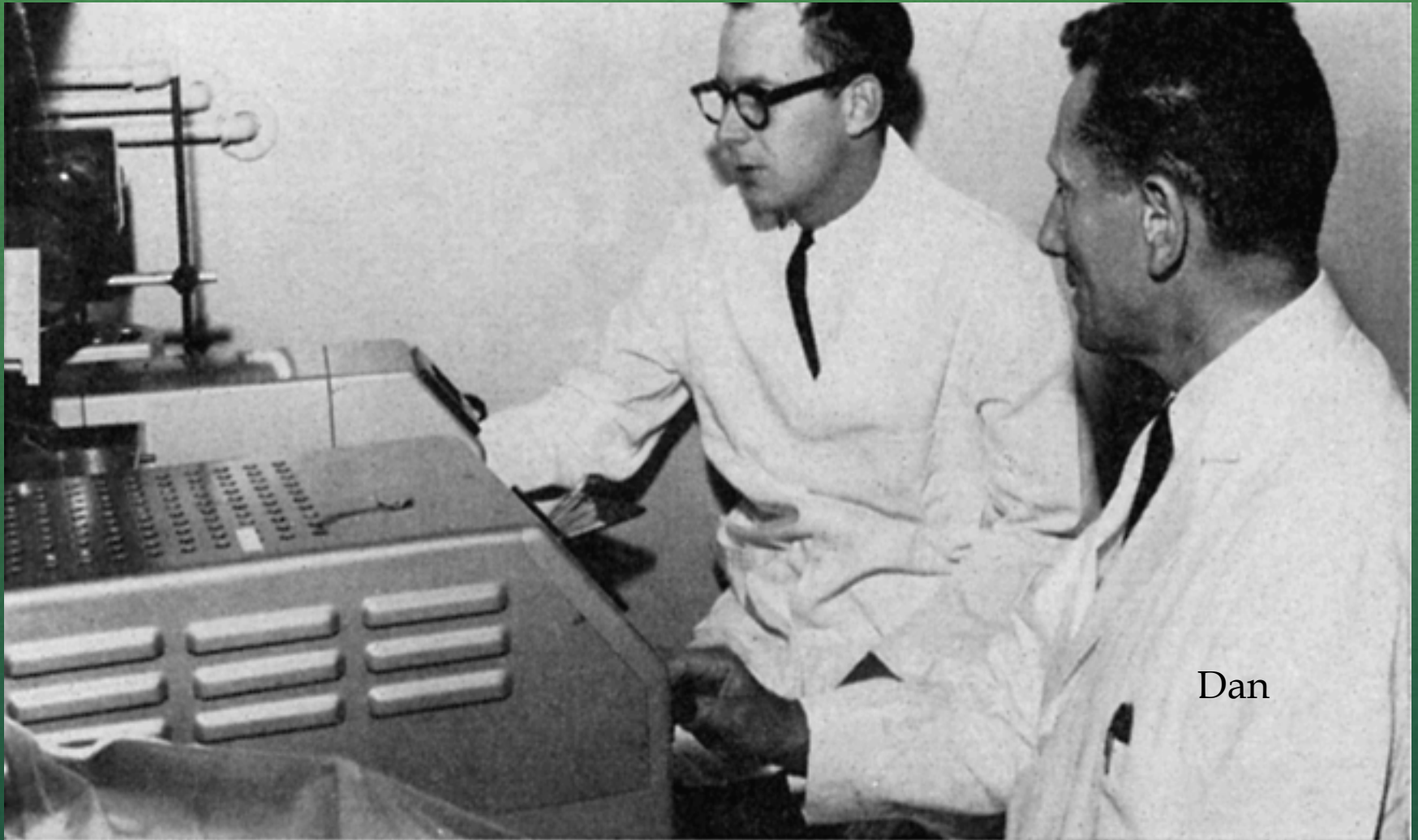
[1] Jesse C. Rabinowitz (1925 – 2003; a distinguished molecular and cell biologist), world authority on basic biology of folic acid; he was a true devotee of culture science, art, music, literature; above all, he was a great photographer



[2] Daniel I. Arnon (1910-1994; a distinguished plant biochemist), discoverer of photophosphorylation 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

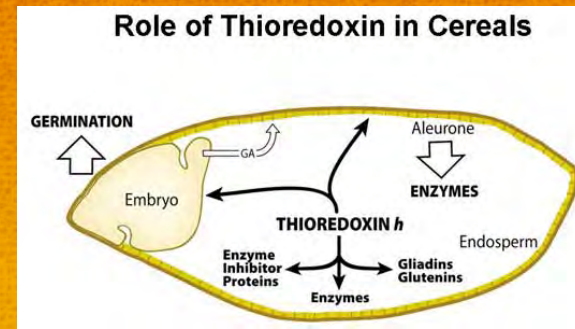
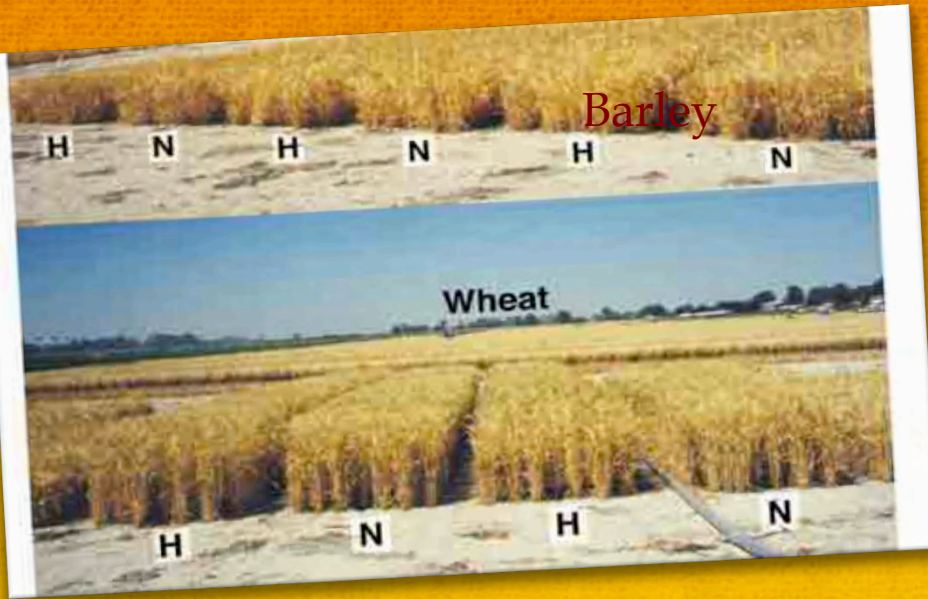


Dan

**Discovery of Ferredoxin-linked CO₂ 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



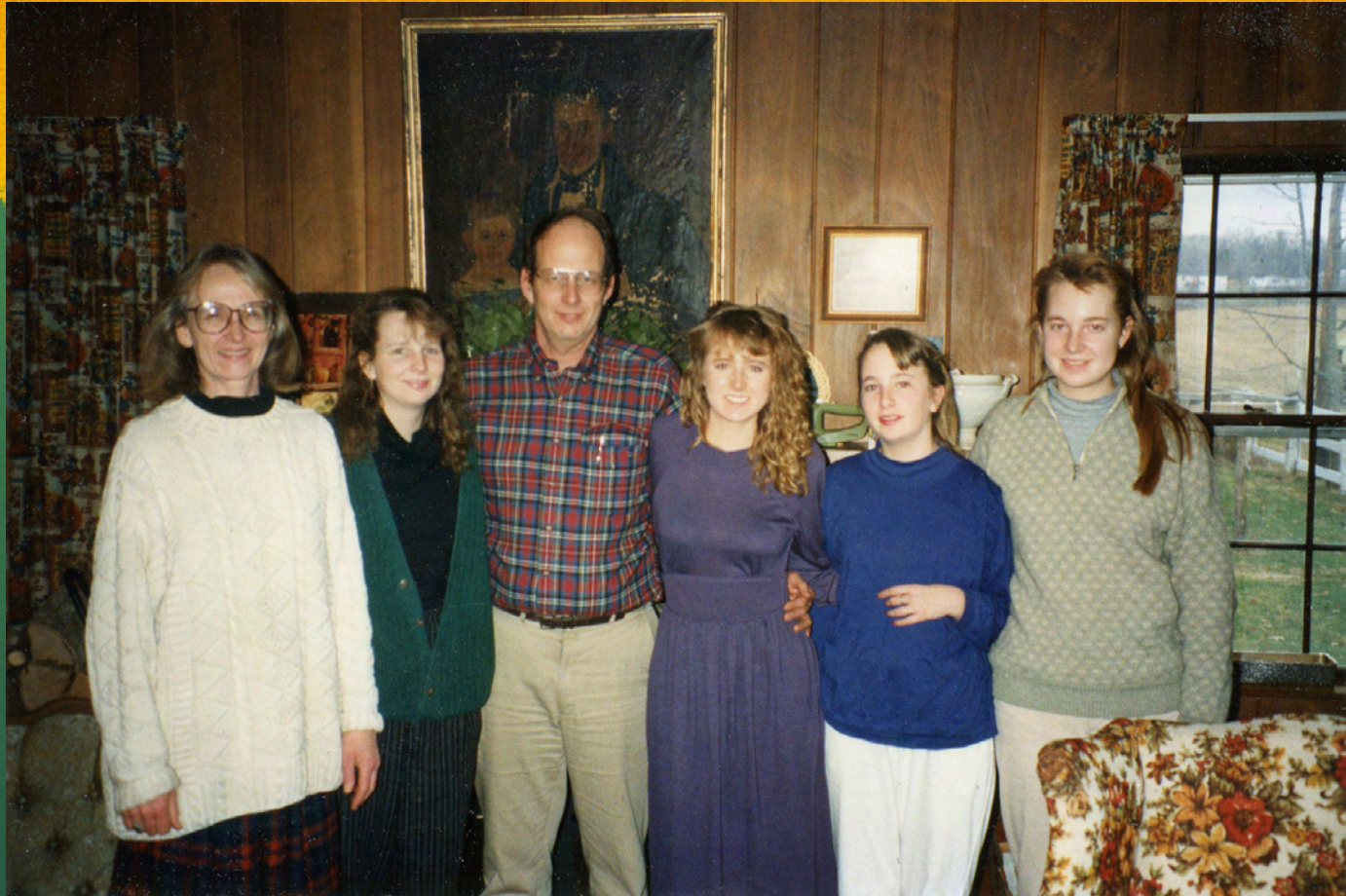
Change in Stress and Defense Proteins in Wheat Genotypes under Drought Conditions



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

This file can be used by anyone by making a reference to Govindjee (2012)
Unpublished Photos; <http://www.life.illinois.edu/govindjee>



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
Email: gov@illinois.edu

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**

