## In Honor of Robert E. Blankenship

By Govindji, Govindji Asthana, Govind Ji, Govindjee, Govind Jee, NFN Govindjee, Mister Govindjee, Professor Govindjee, Date Govindjee, Govindjee Govindjee, Editor Govindjee, J.C.M. Jr. Govindjee But, according to TSA **FNU Govindjee** September 20, 2014 **Rebeiz Foundation For Basic Research,** Champaign, Illinois (http://www.vlpbp.org/)



## **RFBR** 2013 Lifetime Achievement Award

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in Molecular Mechanisms of Photosynthesis

C. A. Rebeiz, President

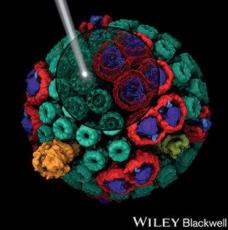
**September 20, 2014** 



### Bob is usually pretty relaxed about things and people







"Vittal, Don't you know where oxygen comes from in cyanobacteria? I will tell you, just read my book, says Bob, and then adds "It is only \$65"

And, don't forget to tell Ken Sauer that his "student" Bob B. is being honored on Sep. 20 in Urbana by the Rebeiz Foundation. And seriously, do note that I dedicated this book to my Mom who whose encouragement took me to life in science".....Bob

### Liz is always cool.... She says: OK....you fight it out with Anna Moore; I am staying out of it, 2013



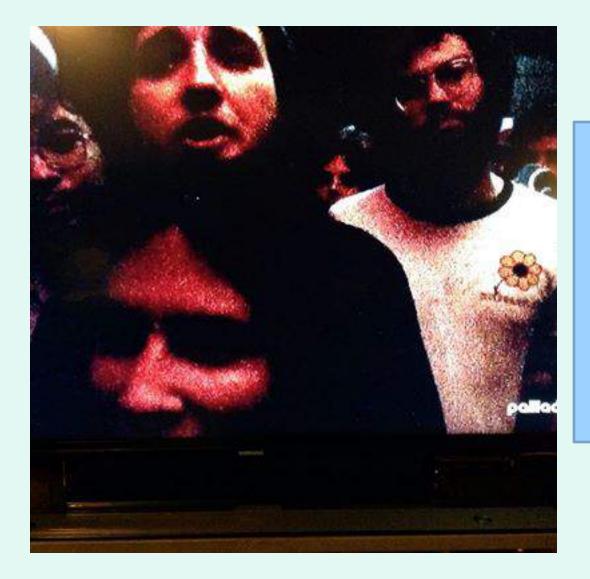
# Bob and Liz : well what a lovely couple: it was 1971: 43 years ago (June 26, Golden Gate Park, San Francisco)





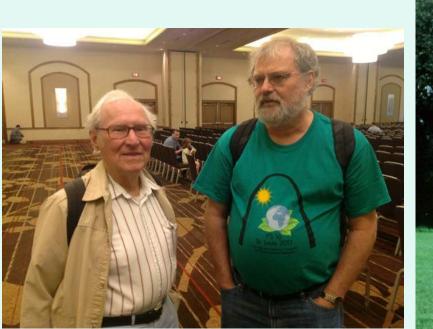


Now, he uses a darker shade of Sunglasses!



Is this you Bob in Grateful Dead Movie? Bob's mentor was Ken Sauer, ~ 40 years ago ; and, on the right, you see Bob 2 years after his PhD; with some of the British mafia (including Colin).

Today, we miss Colin Wraight (1946– 2013) sadly at this gathering; he was here just last year.. we pause for this great friend just for a second

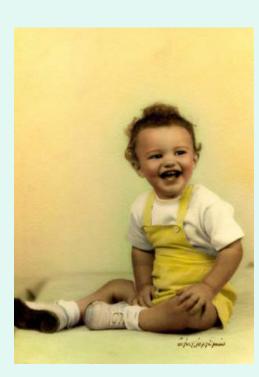




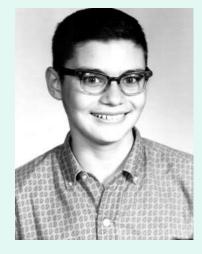




### Look at the baby, then look at the handsome young boy: Who is he ? 1948-1960



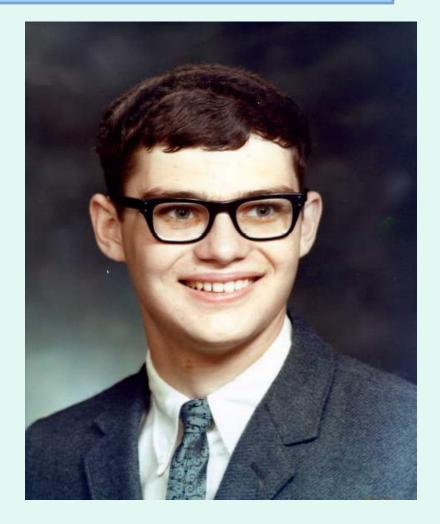




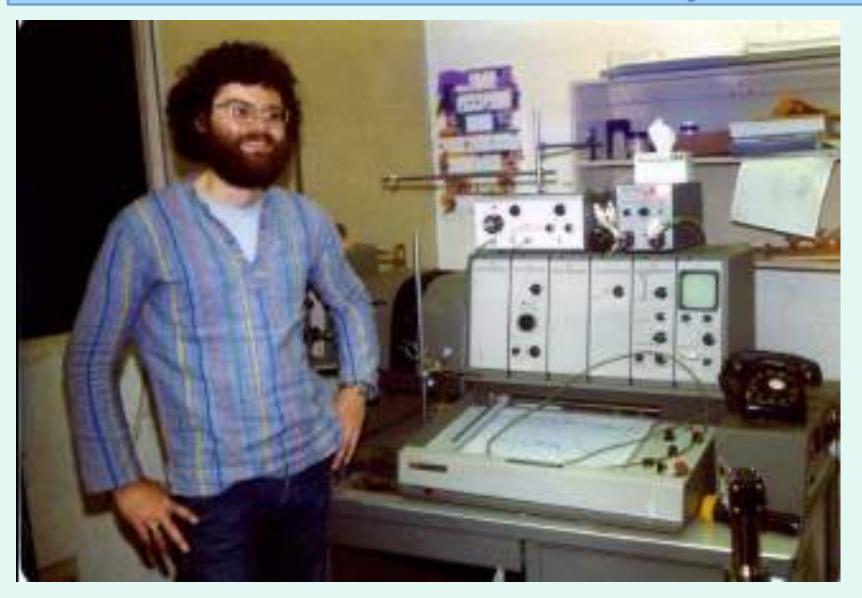


## High school--1964-1966: Well ? Well; Wow? Whoa?





### What a hairdo and the look in his eyes?



I know that your papers are like your children (350<sup>+</sup>), as you once said to me, but sometimes, one needs to be ruthless, and, choose just a few..

Have you heard of Nizam (Nawab) of Hyderabad?



olume 51, number 1

FEBS LETTERS

#### OBSERVATION OF A NEW EPR TRANSIENT IN CHLOROPLASTS THAT MAY REFLECT THE ELECTRON DONOR TO PHOTOSYSTEM II AT ROOM TEMPERATURE

Robert E. BLANKENSHIP, Gerald T. BABCOCK,\* Joseph T. WARDEN,\*\* and Kenneth SAUER Department of Chemistry and Laboratory of Chemical Biodynamics, Lawrence Berkeley Laboratory, University of California, Berkeley, California 94720, USA



Received 1 November 1974





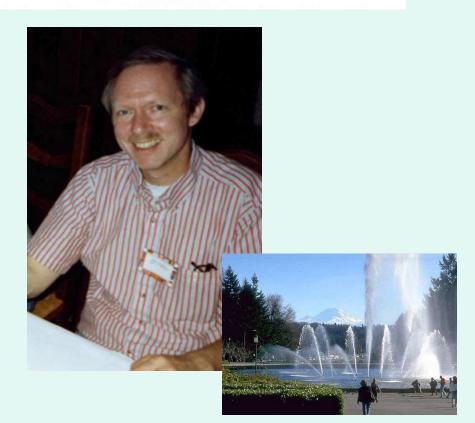
Jerry Babcock (1946-2000) was a fellow student, best friend, mentor, and collaborator of Bob; many of us (including myself; and Tony Crofts) remember him Biochimica et Biophysica Acta, 461 (1977) 297-305 © Elsevier/North-Holland Biomedical Press

BBA 47336

#### MAGNETIC FIELD EFFECTS ON RADICAL PAIR INTERMEDIATES IN BACTERIAL PHOTOSYNTHESIS

ROBERT E. BLANKENSHIP, TJEERD J. SCHAAFSMA\* and WILLIAM W. PARSON Department of Biochemistry, University of Washington, Seattle, Wash. 98195 (U.S.A.) (Received February 9th, 1977)

Bob worked , as a postdoc, with Bill Parson, a wonderful person... Bill is the same person Don Ort also worked with.



#### A unique photosynthetic reaction center from Heliobacterium chlorum

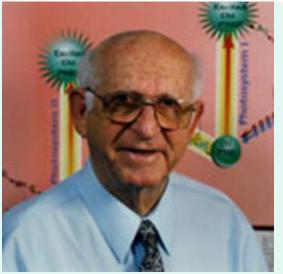
#### R. Clinton Fuller, Sallie G. Sprague<sup>†</sup>, Howard Gest\* and Robert E. Blankenship<sup>+</sup>

Department of Biochemistry, University of Massachusetts, Amherst, MA 01003, <sup>†</sup>Department of Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, CO 80309, \*Photosynthetic Bacteria Group, Department of Biology, Indiana University, Bloomington, IN 47405, and <sup>+</sup>Department of Chemistry, Amherst College, Amherst, MA 01002, USA

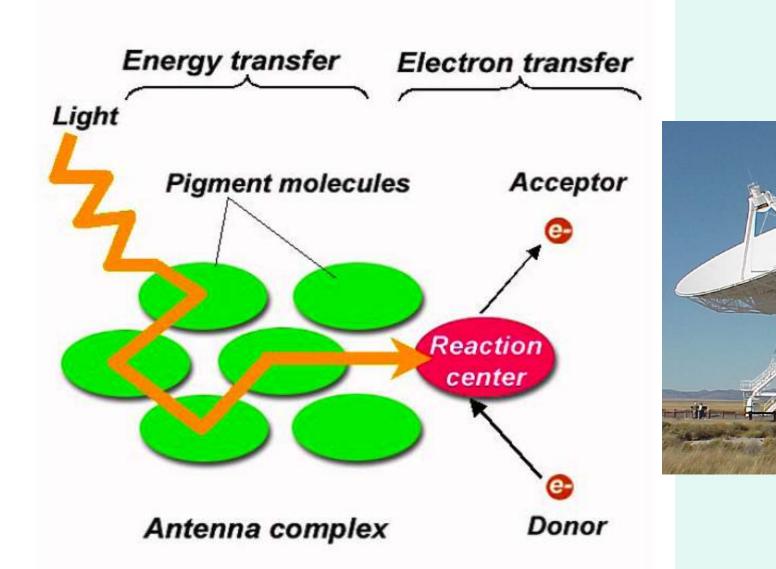


I had nothing to do with this work—just getting a photo with our common friend Clint Fuller (1925—2010)

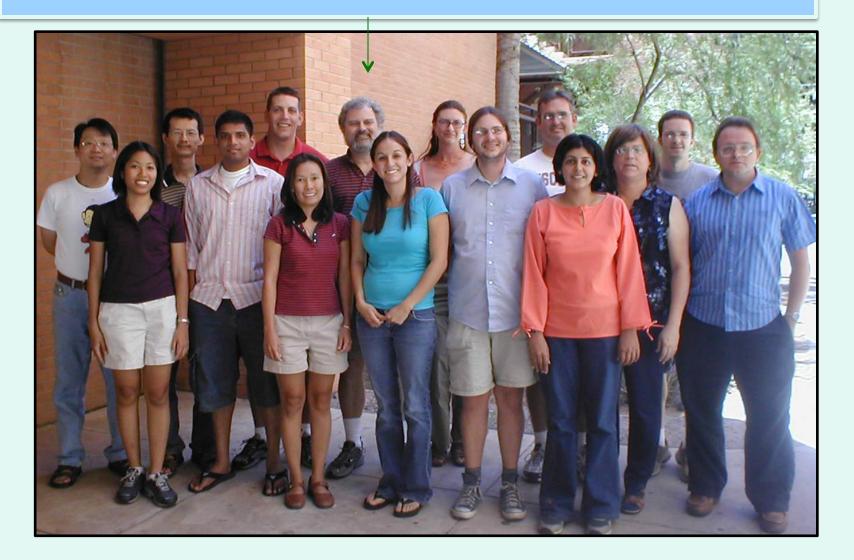
Received 21 January 1985



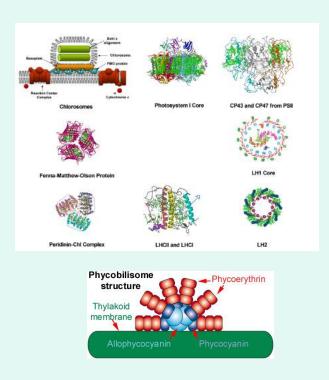
Howard Gest (1922—2012),also our common friend The antenna and the reaction center: Bob is a leading authority on how different anoxygenic and oxygenic photosynthesizers transfer energy and electrons

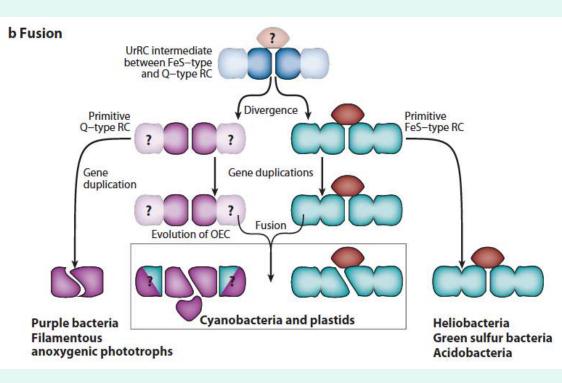


## 2005 (ASU: Tempe, Az)



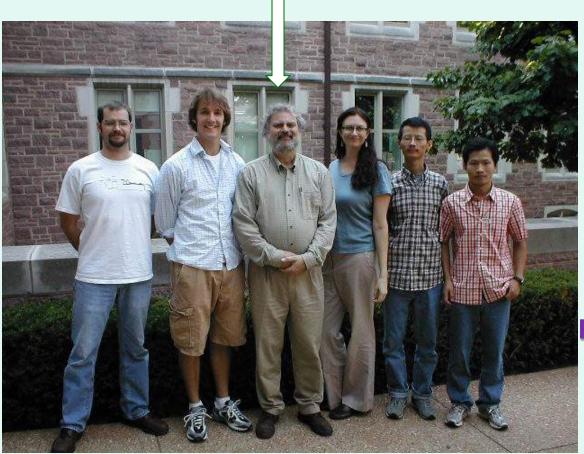
Bob looks at Evolution of Photosynthetic Systems : He is an expert on it; he will be talked into editing a book for me on It in the Springer Series!





Extreme diversity of antenna systems has suggested to him multiple independent evolutionary origins. He also looks at Reaction Centers (see right for his concepts of evolution).

## 2007 (St. Louis, Mo.)







Surobhi

Lahiri

Xinliu Gao



#### Patrick Bell



Soo-Goo Lee

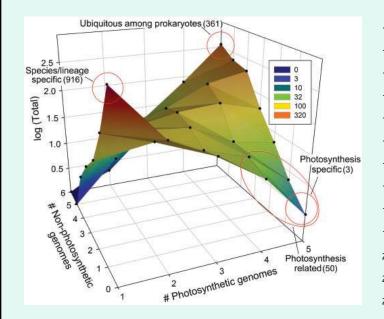


**Barb Honchak** 

Fernanda Reinert

Matt Sattley, Aaron Collins, Bob Blankenship, Heather Matthies, Yueyong Xin, Jianzhong Wen Let us just mention your wonderful molecular evolution analysis of complete genomes from all known phyla of photosynthetic prokaryotes that firmly established the importance of horizontal gene transfer in the evolutionary development of photosynthesis.

J. Raymond, O. Zhaxybayeva, S. Gerdes, J.P. Gogarten and R.E. Blankenship (2002) Whole genome analysis of photosynthetic prokaryotes, Science 298: 1616-1620.



#### **Robert E. Blankenship** Lucille P. Markey Distinguished Professor of Arts and Sciences, Investiture ceremony, 2006

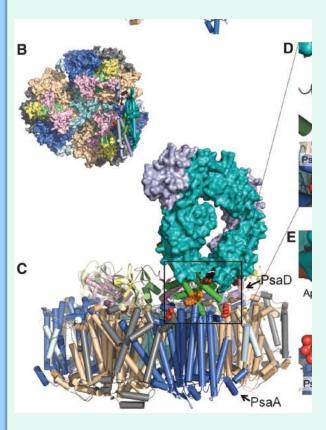




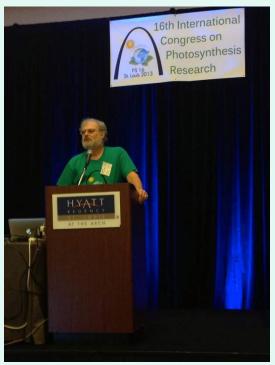
#### I was there

And, more recently, your report on cross linking and mass spectrometry analysis of cyanobacteria, and demonstration of the existence of a megacomplex consisting of Photosystems I and II and the phycobilisome.

H. Liu, H. Zhang, D.M. Niedzwiedzki, M. Prado, G. He, M.L. Gross and R.E. Blankenship (2013) Phycobilisomes Supply Excitations to Both Photosystems in a Megacomplex in cyanobacteria. Science 342: 1104-1107.



# 16<sup>th</sup> Photosynthesis Congress, St. Louis, Mo, 2013





#### **Bob's Group at the Congress dinner**

Before I let you go free, I have a quiz for you. What is chlorophyll a doing in all your bacteria that really use bacteriochlorophyll, and are not doing oxygenic photosynthesis?