

Andrew Benson

Andrew Benson got his B.S in chemistry at Berkley after being inspired by a high school teacher. He then got his Ph.D. at CalTech and also spent time at Civilian Public Services, Penn State, and the Scripps Institute of Oceanography.

Benson was an athlete and enjoyed climbing. He used to climb everything from the lab buildings on the Caltech campus and Sierra Nevada mountain range³.

“The key to Benson’s success was his habit of working at the bench almost every day and his dissatisfaction with imprecise results.”³



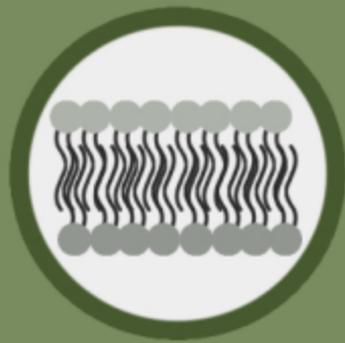
Tools of the Trade

Benson used recent advances in carbon isotopes to radiolabel carbon compounds and isolate them on paper chromatograms.

Pathway of Photosynthesis

Armed with his chromatograms

Benson identified RuBisCO as the protein responsible for carbon fixation. He also identified RuBP, 3PGA, and S7P as key metabolites in the cycle.



Cell Wall Structure

Andrew Benson also discovered phosphatidylglycerol, an important membrane lipid, and sulfolipid.

Over the years, Dr. Benson was a major contributor to many fields of science, ranging from carbon metabolism, discovery of plant lipid compounds, marine nutrition, arsenic metabolism, and even aging studies in salmon¹.

His legacy is passed down through the many scientists that he mentored and inspired. “What he did at Scripps was to bring scientists together to solve big problems, that was his real genius.”⁵

Sources

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2. Benson AA (2010) Last days in the old radiation laboratory (ORL). Berkeley, California, 1954. *Photosynthesis Research* 105:209-212.
3. Buchanan, Douce, Govindjee, Lichtenthaler, and Summon (2016) Andrew A. Benson, *Biographical Memoir*. National Academy of Sciences
4. Buchanan and Wang (2012) A conversation with Andrew Benson: Reflections on the discovery of the Calvin-Benson cycle. *Photosynthesis Research* 114(3).
5. Christine Huard (2015) Andrew A. Benson, 97, unraveled photosynthesis. *The San-Diego Union Tribune*.