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**BCHC CATALYZED BACTERIOCHLOROPHYLL BIOSYNTHETIC
PATHWAY IN *RHODOBACTER CAPSULATUS***

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Photosynthetic organisms convert light into energy by utilizing chlorophyll or bacteriochlorophyll to absorb the light and with the assistance of proteins make ATP as the main substance. In *Rhodobacter capsulatus*, the biosynthetic pathway of bacteriochlorophyll involves a variety of enzymes, each enzyme functions in a specific biochemical step. One of the enzymes catalyzes the reaction converting the intermediate 3-hydroxyethylchlorophyllide into 3-acetylchlorophyllide. One gene has been identified as being responsible for coding the enzyme that performs this reaction, *bchC*. This gene sequence codes for the protein BchC. In the experiments described in this poster the *bchC* gene has been isolated from *Rhodobacter capsulatus* and cloned into the bacterium *E.coli*. The protein has been expressed at high level by the bacteria and extracted for the purpose of study. The study of BchC is now focused in constructing an environment that allows the enzyme to be most efficient and the activity detectable.