Structure of Bovine Rhodopsin

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Introduction

Receptors for many different neurotransmitters and hormones produce their intracellular signalling response through the mediation of guanine-nucleotide binding proteins. The best characterized G-protein-coupled receptor is the visual pigment rhodopsin.

We have crystals of rhodopsin that have so far diffracted to 3.5 Å. We would like to collect better native data sets from many crystals, compare full length and truncated forms of rhodopsin, and collect data from potential heavy atom derivatives.

Methods and Materials

Pre-frozen crystals were transported to APS and mounted onto the set using a cryostream set at 100K.

Results

Many native and derivative rhodopsin crystals were screened, but we were unable to match our previous resolution.

Discussion

We will continue to screen various conditions to improve our resolution.

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