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B.S. Biochemistry

Mentor:

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Biochemical Pathways Affected by Cholera Toxin

Cholera is a severe diarrheal disease that is caused by the ingestion of the bacterium *Vibrio cholerae*. This bacterium produces an endotoxin, labeled Cholera Toxin (CTx), which interacts with G-proteins in intestinal cells. This interaction causes G-proteins to be locked into their active states, resulting in continuous production of cAMP via adenylate cyclase. The excessive production of cAMP directly results in the diarrhea symptom that is characteristic of Cholera. In my research, I have examined the interaction of Cholera Toxin with G-Protein coupled receptor pathways in order to advance knowledge on its mechanism and provide a target for a future cure.