

## **Proposed BCHM 421/422 Project Outline – Project #3**

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**Project Title: Characterization of human mitochondrial atypical kinases ADCK3 and ADCK4**

**Keywords (3-5): kinase, coenzyme Q, ATP, biosynthesis**

**Project Goals:**

1. Express and purify selected proteins in co-enzyme Q biosynthesis pathway
2. Test interaction of co-enzyme Q protein with ADCK3 and ADCK4
3. Identify phosphorylation of co-enzyme Q proteins
1. Form ADCK complex(es) with co-enzyme Q proteins

**Experimental Approaches:**

1. Molecular cloning, protein expression and purification
2. Pull-down, co-IP and biophysical approaches
3. Kinase and ATPase assays
4. Crystallization