

UNIVERSIDAD DE BARCELONA

Facultad de Farmacia

Departamento de Bioquímica y Biología Molecular

**REDESIGN OF CARNITINE ACETYLTRANSFERASE
SPECIFICITY BY PROTEIN ENGINEERING**

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OBJECTIVES

The objectives of the present thesis are

1. Identification of the amino acids responsible for the different acyl-CoA chain-length specificity of the members of the carnitine acyltransferase family.
2. Identification of the amino acids involved in choline-carnitine discrimination in the carnitine acyltransferase family of proteins.
3. Analysis of the effect of overexpressing CrAT on ester production during alcoholic fermentation in yeast and its possible biotechnological applications.