

## **N-ACETYLGLUCOSAMINE UTILIZATION PATHWAY IN *VIBRIO CHOLERAE***

**SANTOS, E. O., Leme, J. M. M., and Coelho, A.**

Proteomics Network of Rio de Janeiro - FAPERJ

Departamento de Genética, IB, UFRJ

[eidvos@gmail.com](mailto:eidvos@gmail.com); [coelho@biologia.ufrj.br](mailto:coelho@biologia.ufrj.br)

*Vibrio cholerae* is the human pathogen of cholera disease and is an inhabitant of aquatic systems, where they are present either as free-swimming cells or in interactions with aquatic invertebrates and, in particular, with chitin present in the exoskeleton. Chitin is made of N-acetylglucosamine monomers (GlcNac), that can be used as a component of the cellular envelope and lipopolissacharides or as a source of energy, nitrogen and carbon for bacteria. The pathway of N-acetylglusamine utilization in *V. cholerae* El Tor is being analyzed. We studied intracellular and outer membrane proteins from this bacterium grown in the presence of this amino sugar, using 2-D electrophoresis and mass spectrometry. In a previous work, a differential proteome map of *V. cholerae* grown in presence of GlcNac compared with the glucose in minimum culture conditions was constructed and 69 proteins were identified. Now, were identified 30 new proteins, most of these with differential expression. When intracellular protein sample were separated and extracted from a SDS-PAGE, were recognized 60 proteins, including transduction factors, ribosomal proteins, chaperones, ABC transporters, hypothetical proteins and any other metabolic proteins from *V. cholerae* grown in presence of GlcNac. Another analysis of expressed membrane proteins from GlcNac growth revealed outer membrane proteins, flagellins and proteases, using the ESI Q-Tof mass spectrometer.

Support: CAPES, CNPq, FAPERJ, LNILS.