

# IV REUNIÓN BINACIONAL DE ECOLOGÍA

## Interacción, Espacio, Tiempo

8 al 13 de agosto 2010  
Buenos Aires, Argentina



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### CONFERENCIA PLENARIA

Martes 10 de agosto  
11:30 hs

#### EXPLORING THE ROLE OF COMMUNITY COMPOSITION IN THE METABOLIC RESPONSE OF FRESHWATER BACTERIOPLANKTON COMMUNITIES TO ENVIRONMENTAL CHANGE

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The metabolism of aquatic bacterial communities is central to the functioning of all aquatic systems. Bacterioplankton metabolism is strongly reactive to the environment, and although the direction and magnitude of the overall metabolic response are in general well understood, the actual underlying processes remain unclear. In particular, we do not know what role community composition and diversity play in determining this response. Here we examine the connections that exist between the environment, bacterioplankton community metabolism and community composition. We explore this question from a dynamic standpoint, by following bacterioplankton communities as they traverse a variety of resource gradients in transition zones between lakes, streams and wetlands in a watershed in Québec. We show that under some circumstances community composition does play a role in the response of bacteria to resource gradients, but that this role is not fixed and varies spatially and temporally. These variations in the apparent role of community composition may be linked to shifts in the level of metabolic plasticity and functional redundancy of the community, and also to the type and intensity of the gradient involved. Our results suggest that there is no single, consistent link between the environment, composition and metabolism of these bacterioplankton communities.