



**Coloquio internacional sobre la contaminación actual y histórica
en los ecosistemas acuáticos Andinos**

**Colloque international sur la contamination actuelle et historique
des écosystèmes aquatiques andins**

**International colloquium on current and ancient contamination in
Andes aquatic ecosystems**

La Paz – May 3rd – 5th 2016

Universidad Mayor de San Andrés - Cota-cota, La Paz

Organization committee:

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General Planning

- **May 3rd 2016: Contamination and eutrophication of Lake Titicaca**

AM session: Mercury biogeochemistry and contamination of aquatic ecosystems of the Andes region

Keynote Lecture: Jean-Remi Davee Guimarães: Hg contamination in Latin America: the past is not what we think, nor the future

PM session: Chemical contamination, eutrophication and monitoring of Lake Titicaca and its watershed

Keynote Lecture: D. Acha: Eutrophication of the Cohana Bay

- **May 4th 2016: Arsenic issues in the Andes**

AM session: Arsenic biogeochemistry and contamination of aquatic ecosystems of the Andes region

Keynote Lecture: Gabriela Lobos: Arsenic contamination of groundwater (Chile)

PM session: Workshop on sampling and analytical methods for Hg and As speciation in environmental matrices

- **May 5th 2016: Historical reconstructions of the human-climate interactions in the altiplano: implication of archeological purposes**

AM session: Paleo-environmental reconstruction of Altiplano's archives

Keynote Lecture: Holocene Paleoenvironments in the Lake Titicaca basin (S. Fritz & P. Baker)

PM session: Archeology: historical human – environment interactions

Keynote Lecture: Recent contribution of terrestrial and subaquatic archeological investigation in Lake Titicaca (C. Delaere & M-A. Vella)

Detailed planning:

• **May 3rd 2016: Contamination and eutrophication of Lake Titicaca**

AM session: Mercury biogeochemistry and contamination of aquatic ecosystems of the Andes region: A case study in Lake Titicaca and Uru Uru

Chairmen: David Amouroux & J-R Guimarães

Keynote Lecture: Jean-Remi Davee Guimarães: Hg contamination in Latin America: the past is not what we think, nor the future

Open sessions:

- National mercury assessment baseline in Bolivia (Carlos I. Molina)
- Processes controlling Methyl-Hg formation and degradation in Lake Titicaca hydrosystem (Bolivian Altiplano) (D. Amouroux)
- Contamination of lake Uru-Uru & trophic transfer (D. Point & Lucia Alanoca)
- Methylmercury production and exchanges in sediments of Lake Titicaca (S. Guedron)

PM session: Chemical contamination, eutrophication and monitoring of Lake Titicaca and its watershed

Chairmen: Dario Acha, Stéphane Guédron and Maria Eugenia

Keynote Lecture: D. Acha: Eutrophication of the Cohana Bay

Open sessions:

- Antibiotics contamination in the Katari watershed and impact assessment in the context of the Bolivian Altiplano (C. Duwig)
- Arsenic and nutrient contamination in the Katari River (O. Ramos)
- Hg and sulfate reducing bacteria in Lake Titicaca (M-E. , Carlos & Pablo)
- Ecological status and evolution of Lake Titicaca: observatory approach (X. Lazzaro)

• **May 4th 2016: Arsenic issues in the Andes**

AM session: Arsenic biogeochemistry and contamination of aquatic ecosystems of the Andes region

Chairmen: Oswaldo Ramos, J. Quintanilla, Lorena Cornejo & Gabriela Lobos

Keynote Lecture: Gabriela Lobos: Arsenic contamination of groundwater (Chile)

Open sessions:

- Human arsenic exposure in Bolivian Andes: Where do we stand? (J. Gardon)
- Genotoxicity of arsenic (Noemi Tirado Bustillos)
- Arsenic in mine impacted systems, Poopo and Antequera subwatershed, Bolivia (O. Ramos)
- Hydrogeochemistry of As in the central Bolivian altiplano (M. R. Ormachea Muñoz)
- Arsenic in the human food chain: current and historical concerns (Lorena Cornejo)

PM session: Workshop on sampling and analytical methods for Hg and As speciation in environmental matrices

Chairmen: Emmanuel Tessier & Mauricio Rodolfo Ormachea Muñoz

Open sessions:

- Hg speciation analysis : from sampling to speciation analysis (E. Tessier)
- Inorganic As speciation (M. R. Ormachea Muñoz & O. Ramos)
- Organic As speciation: advances and limits (G. Lobos)

Open discussion: As & Hg speciation

- **May 5th 2016: Historical reconstructions of the human-climate interactions in the altiplano: implication of archeological purposes**

AM session: Paleo-environmental reconstruction of Altiplano's archives

Chairmen: Paul Baker, Sherilyn Fritz

Keynote Lectures: Holocene Paleoenvironments in the Lake Titicaca basin (Fritz & Baker)

Open sessions:

- Historical reconstruction of Lake Titicaca using new tools for organic matter characterization (py-GC-MS) (Julie Tolu & S. Guédron)
- Ice record of Bolivia: paleoclimatic reconstruction (P. Ginot)
- Peat Archives: Escalerani (Cordiera oriental) (Kateryn Escobar)
- Exploring chronic arsenic poisoning in pre-Columbian Chilean mummies (L. Cornejo)

PM session: Archeology: historical human – environment interactions

Chairmen: Carlos Lémuz & José Capriles

Keynote Lecture: Recent contribution of terrestrial and subaquatic archeological investigation in Lake Titicaca (C. Delaere & M-A. Vella)

Open sessions:

- Desarrollo de las tecnologías agrícolas prehispánicas y su correlación con las reconstrucciones paleoambientales entre los periodos Formativo y Tiwanaku en la Cuenca del Lago Titicaca, Bolivia (Carlos Lémuz y John Janusek)
- Cuatro mil años de cambio climático, desarrollo cultural y pesca en el Lago Titicaca (Four thousand years of climate change, cultural development, and fishing in Lake Titicaca) (José Capriles)