

## **Abstract of Presentation**

**Presentation Title:**

**The Environmental and Health Concerns Associated with Fluoride in Drinking Water**

Genandrialine L. Peralta<sup>1</sup> and Shinichiro Ohgaki<sup>2</sup>

<sup>1</sup>University of the Philippines, Diliman

<sup>2</sup>University of Tokyo, Japan

**Abstract:**

This paper provides an overview on the environmental and health issues related to the occurrence of fluoride in drinking water. The WHO water quality guideline value is 1 mg/L to provide protection against dental caries. Several countries practiced water fluoridation in the last 50 years with remarkable improvement in oral health while some regions of the world have naturally occurring fluoride in their groundwater which requires removal. Exposures to fluoride could also come from semiconductor industries, coal burning, and from drinking tea. Elevated fluoride concentration in water associated with dental and skeletal fluorosis, osteosarcoma, osteoporosis and neurological effects, was reported to be more harmful than arsenic. Less is known on its bioaccumulation and bioavailability to aquatic and terrestrial biota and its environmental pathways along with its long term effects on humans in warmer climates. More studies are needed to know its behavior and distribution prior to its management and control.