Abbas Syed* (sabbas.iitk@gmail.com), Assistant Professor, School of Basic Sciences, IIT Mandi, H.P., Mandi, 175001, India, and Lakshman Mahto. Fractional model of phytoplankton allelopathy.

In this work, we investigate the fractional model of two interacting phytoplankton species in which one species is producing a chemical which stimulate or reduce the growth of other species. I will use the concept of Caputo’s fractional derivative. After establish existence, uniqueness and stability analysis, we do numerical simulation too to validate our analytical finding. (Received September 12, 2012)