*Review bg-2018-116*

**"Long-chain diols in rivers: distribution and potential biological sources"** by Julie Lattaud, et al

**General comments**:

This article describes the compositions of long-chain diols (LCDs) in the SPM of three river systems, and the effect of river flow and a seasonal change of LCDs. The main point is to attempt to elaborate the sources of LCDs in the river systems. Although these compounds are not so novel, the result in the article is suggestive for the bio-geochemical application of these compounds in the future.

The critical problem is the conclusion that LCDs in fast flowing parts of rivers are not coming from *in situ* living plankton but from stagnant waters of these river systems such as lakes or side ponds. The authors should sample SPM and surface sediments in these lakes or side ponds.

**Specific comments:**

1. Page 11, Lines: 5−9: The authors could confirm it by sampling the SPM at different depth in the water column.
2. The authors analyzed the GDGTs. Except the BIT indices, what other information could get from the GDGTs?
3. What the relationship between the temperature, precipitation and LCDs ?