

*Carlos Arellano*

## **Plant Litter Leachate in the Environment**

**The threat that climate change represents to mankind is now closer than ever. The carbon cycle, which is the circulation of carbon through earth, gives us the clue to identify how climate change is produced. It might be surprising to know that the falling leaves during autumn, that announce us the end of the sunny days of the summer, play an important role on climate change. The way in which local processes such as falling leaves and twigs, so called plant litter, can have a global effect is because of the chemical compounds that are released from them when they fall. These compounds contain high amounts of carbon, being a key feature in the carbon cycle. The topic gets more interesting once we take into account that the leached chemical compounds differ depending on wide variety of factors, such as plant species and plant part where the litter comes from.**

My thesis project was focused on investigate the amount of compounds leached from different plant litter, as well as its chemical characteristics. Patterns showed in the results suggest links between the type of compounds leached and the type of litter. Links such as having more compounds leached from leaves than from wood and more from summer green trees leaves than from evergreen trees leaves were highlighted. Also, the chemical characteristics of the leached compounds change over time depending on how long the litter has been exposed to the environment. In conclusion, knowing the characteristics and the behavior of the leached compounds from litter is an important tool in order to improve our understanding on the earth system. Understanding the earth processes is crucial in order to identify the causes, effects and possible solutions to climate change.

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