

JEANNE MÉRIGNAC-LACOMBE REWARDED FOR HER THESIS ABOUT THE REGULATION OF OLFACTORY PERCEPTION



CSGA PhD students in the spotlight in spring 2021! The 11th edition of the flavour research awards organised by the international office of GIRACT rewarded Jeanne Mérignac-Lacombe for her thesis subject: the enzymes of the metabolism of odorant molecules.

Thanks to the research work led by Jean-Marie Heydel, Jeanne Mérignac-Lacombe's thesis supervisor, we know that some enzymes are involved during smell perception. These enzymes, present in the nasal cavity near olfactory receptors, play a crucial role in the degradation of odorous molecules. When these odorous molecules are eliminated, these enzymes take part in stopping the olfactory signal and thus in avoiding the saturation of olfactory receptors. Thanks to them, the odors we smell are

neither too strong nor too persistent.

These enzymes are called “**Odorant Metabolizing Enzymes**”, or OMEs. Their impact on olfaction is beginning to be well known but so far we know little about their own regulation. The objective of Jeanne Mérignac-Lacombe's thesis project is to explore an innovative hypothesis: the regulation of these enzymes by their own substrate. In other words, the OME enzymes that regulate odorous molecules could be regulated by these odorous molecules. Such mechanism could explain the high efficiency of OMEs on smell and would open new research perspectives regarding the regulation of these enzymes by other compounds like hormones or drugs.

Contact

Jeanne Mérignac-Lacombe, jeanne.merignac-lacombe@inrae.fr

Jean-Marie Heydel, Jean-Marie.Heydel@u-bourgogne.fr

To know more

Every year, the “Flavor Research” prize organized by the international firm GIRACT rewards 6 doctoral students in the first year of their thesis in Europe.

<https://www.giract.com/flavor-research-programme.php>

Keywords

Olfaction; perception; odorant; odor; regulation; enzyme; reward