



CICLO

CONFERÊNCIAS 18|19

ISPA - INSTITUTO UNIVERSITÁRIO

COMMUNICATING (OR NOT) VIA SOCIAL CHEMOSIGNAL? OLFACTORY NEURODIVERSITY IN AUTISM SPECTRUM DISORDER



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SCUOLA INTERNAZIONALE
SUPERIORE DI STUDI AVANZATI
TRIESTE, ITÁLIA

The characterization of olfactory skills in autism spectrum disorder (ASD) has recently spurred the interest of scientific research. Besides anecdotes suggesting that individuals with ASD exhibit abnormal chemosensory experiences, now behavioral and psychophysiological data confirm this phenomenon. However, the behavioral manifestations and neural mechanisms of mature common and body odor perception in ASD are still unclear. Here, we investigate odor identification skills and the structural and functional underpinnings of olfactory perception in 33 adults with ASD (13F) and 39 controls (19F). Results indicate that: i) ASD are ~3 times more likely to show reduced odor identification skills than controls; ii) odor identification skills are underlined by significant changes in the tractography of the frontal part of the inferior fronto-occipital and the inferior longitudinal fasciculus across groups; iii) ASD and TD processed body odors in distinct networks from the nonsocial common odor. However, the network used are not overlapping. Behavioral results are discussed in the context of piriform cortex, orbitofrontal, and limbic functional activations as well as ASD severity. Taken together, our findings describe for the first time explicit and implicit olfactory behaviors and their neural underpinnings in adults with ASD and suggest that olfactory perception and neuroimaging can provide non-invasive tools for ASD characterization.

1 OUTUBRO 2018

12H30 | AUDITÓRIO 1

HOST
**GÜN
SEMIN**

ENTRADA LIVRE



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