

1. Record Nr.	UNINA9910137239903321
Autore	Elio Acquas
Titolo	Neuroactive metabolites of ethanol : a behavioral and neurochemical synopsis
Pubbl/distr/stampa	Frontiers Media SA, 2015 [Lausanne, Switzerland] : , : Frontiers Media SA, , 2015
Descrizione fisica	1 online resource (126 pages)
Collana	Frontiers Research Topics, , 1664-8714
Soggetti	Ethanol
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Sommario/riassunto	Ethanol is a very elusive drug, which has mechanisms of action that are diverse and relatively non-selective. Moreover, ethanol has been demonstrated to be a biologically active substance by itself, but also a pro-drug of the neuroactive metabolites, acetaldehyde and acetate. Acetaldehyde has traditionally been known as a toxic substance with several effects on multiple systems. However, in the last few decades evidence has accumulated to reveal the specific and, in some instances, distinct neural actions of acetaldehyde and acetate that are in part responsible for some of the observed psychoactive effects of ethanol. The present issue will address these challenges to provide an up-to-date synopsis of the behavioral and neurophysiological impact of the two direct metabolites of ethanol, acetaldehyde and acetate. In doing so, this issue will present human and rodent evidence on their behavioral and neurophysiological impact, either when administered alone as drugs, or when metabolically-derived from their parent compound. Emphasis will be placed to stress the importance of the different enzymatic systems that intervene to produce these metabolites, either peripherally and/or directly in the brain. Similarly, this Research Topic will be aimed at addressing some of the possible mechanisms of action of acetaldehyde and acetate in different brain areas and in different intracellular systems. Furthermore, the issue will

lay out some of the suggested mechanisms of action of ethanol and of its metabolites by which they form adducts with other molecules and neurotransmitters such as dopamine and opioids (which lead to salsolinol and tetrahydropapaveroline, respectively), and their impact on the synthesis and actions of neuromodulators such as adenosine and the cannabinoid system.
