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**“DETERMINANTS OF ALCOHOLISM: BRIDGING THE GAP BETWEEN
EPIDEMIOLOGICAL AND BASIC RESEARCH”**

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EFFECTS OF MONO- OR BIPARENTAL REARING ON PARENTS' BEHAVIORAL PROFILE, PARTNER PREFERENCE AND ALCOHOL CONSUMPTION

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We have previously reported that monoparental (MP) (ie., single mother) rearing condition in C57BL/6 mice implies that pups are more time unattended during the first postnatal weeks, when compared with biparental (BP) rearing. Also, MP-reared adolescents, show greater anxiety-like behaviors and major alcohol consumption. Here, we aimed to analyze if mono- or biparental rearing may affects parents' behavior, partner preference after cohabitation and alcohol consumption. After 4-5 months of biparental (mother-father) or monoparental (single mother) rearing condition, adults' parents and virgin males and females were evaluated in the concentric square field (CSF). Later adults' parents were evaluated for partner preference in the three-chambered social approach task for mice (TCST). Finally, parents and virgin animals were tested in a 4-hr daily, double-bottle alcohol consumption test (10% alcohol vs. water) during four weeks, three days per week. CSF results indicated that virgin adults spent more time in a highly illuminated exposed-risk area (bridge) and less time in a secure dark area (shelter) than BP- or MP-adults. MP-adults were the ones more active during the test. Virgin animals spent also more time per visit in the bridge than the other groups. Data from the TCST evidenced that cohabitation and parenting in this strain of mice (BP-condition) did not induce monogamy in males: BP-males showed preference for strange female over the partner. BP- and MP-females evidenced no preference between a stranger and the partner male. Finally, virgin animals display higher alcohol consumption scores in comparison with the remaining groups. Together, these results seem to indicate that parenting attenuates risk-associated behaviors that could underlie the enhanced vulnerability to develop alcohol-use.

THE ASSOCIATION BETWEEN ALCOHOL, TOBACCO AND MARIJUANA USE AND RISK PERCEPTION IN COLLEGE STUDENTS

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Alcohol, tobacco and marijuana use are highly prevalent at college. Perception of the risks associated with substance use (i.e., perceived risk [PR]) modulates engagement in substance use. This study examined, in college students, the perceived risk of using alcohol, tobacco, and marijuana and its association with alcohol, tobacco and marijuana use. We also examined differences in PR as a function of exhibiting last-year tobacco or last-year marijuana use, and differences in the PR of using alcohol as a function of exhibiting binge drinking ($\geq 4/5$ standard drinks per drinking session, women/men, respectively). College students ($n = 279$, 75.6% women; M age = 23.02 ± 3.36) completed an online survey that measured quantity (alcohol, tobacco) and frequency (alcohol, tobacco and marijuana) of substance use within the previous month and

year and PR of using alcohol, tobacco and marijuana (e.g., “How much do you think people risk harming themselves [physically, in their health, or in other ways] if they: 1-smoke >10 cigarettes per day, 2-drink 4–5 standard drinks every weekend, 3-consume marijuana >1 per week?”). Lower PR was significantly associated with greater quantity (alcohol *rs* between -.12 and -.35; tobacco *rs* between -.16 and -.23) and frequency of substance use (alcohol *r* between -.14 and -.32; tobacco *r* between -.19 and -.26; marijuana *r* between .26 and .56). Last-year tobacco users and last-year marijuana users perceived the use of tobacco ($t_{(277)} = 4.52; p \leq .001$) or marijuana ($t_{(277)} = 11.56; p \leq .001$) as less risky than peers who did not report use of these substances. Binge drinkers perceived alcohol consumption as less risky than non-binge drinkers ($t_{(277)} = 4.41; p \leq .001$). Discussion: Overall, results showed a significant negative association between PR and substance use, that was particularly robust for marijuana. This information allows a better understanding of substance use in emerging adults, which should be useful to identify college students at-risk for problematic substance use.

MATERNAL ODOR INCREASES THE CONSUMPTION OF A SOLUTION THAT MIMICS BITTER AND SWEET COMPONENTS OF ETHANOL TASTE IN RATS

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Several studies showed that early exposure to ethanol increased the subsequent acceptance of this drug on rats. However, little attention has been devoted to the interaction between the alcohol's taste -isolated from the unconditioned effects of the drug- and a familiar odor in the early ontogeny of the rat. Studies from our laboratory showed that a familiar (maternal) odor increased the consumption behaviors toward an artificial nipple containing an unpalatable tastant (quinine) in newborn rats. The present study assessed the influence of the own mother's odor (familiar due pre-exposure in the nest) on intake and grasp responses toward an artificial nipple providing a solution with a mixture of tastes (sucrose 0.1 M + quinine 0.0001 M) that emulates the taste of alcohol, in 4-day old pups. The results showed that the mother's odor enhanced intake and seeking responses toward an artificial nipple that provided the solution that mimicked the taste of alcohol (Experiment 1). This pattern of results was not evoked by the odor of an unrelated dam, nor was observed when the nipple delivered water (Experiment 2). The main new finding of the present study is that animals tested in the presence of the mother (and hence exposed to its odor cues) exhibited enhanced seeking and intake of a solution that mimics the chemosensory properties of ethanol without the unconditioned effects of the drug. This suggests that, during the early ontogeny, the exposure to familiar odors may facilitate the acceptance of flavors with aversive components (i.e., bitter taste), and therefore may act as a permissive factor of ethanol intake.

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