

---

**THE ROLE OF FAMILY STRUCTURE AND OF TRYPTOPHAN HYDROXYLASE 2 (TPH2) ON THE STABILITY OF DEFICIENT EMOTIONAL SELF-REGULATION SYMPTOMS THROUGHOUT ADOLESCENCE**

**M. Nobile**<sup>1</sup>, V. Bianchi<sup>1</sup>, M. Bellina<sup>1</sup>, A. Greco<sup>2</sup>, D. Monzani<sup>2</sup>, A. Tesei<sup>3</sup>, M. Molteni<sup>3</sup>

<sup>1</sup>Child Psychiatry Unit, Scientific Institute 'Eugenio Medea', Bosisio Parini, Italy ; <sup>2</sup>Department of Psychology, Università degli Studi di Milano Bicocca, Milano, Italy ; <sup>3</sup>Child Psychiatry Unit, Scientific Institute 'Eugenio Medea', Milano, Italy

---

**Introduction.** Deficient emotional self-regulation (DESR) have been found to be a very heritable trait that increases susceptibility for later psychopathology, including severe mood problems and aggressive behaviour. A common single nucleotide polymorphism (SNP G-703T, rs 4570625) in the transcriptional control region of TPH2 has been reported to modulate amygdala responsiveness to affective stimuli and has been found to be associated with emotional dysregulation.

**Aims** we have investigated the moderating role of a TPH2 polymorphism on genesis and stability/instability of DESR during the transition from early to late adolescence, taking also into account the possible interaction with family structure.

**Methods** This is a five year follow-up study of the genetic section of the PrISMA project (Progetto Italiano Salute Mentale Adolescenti) The final study population included 287 subjects (50.9% boys, 49.1% girls, aged 15-19). To test for hypothesized influences and moderation effect of TPH2 genotype we performed a path analysis using Mplus 6.11 and the bootstrapping procedure describe by Preacher et al. (2007)

**Results.** The effect of family structure on early-adolescence DESR is moderated by TPH2 genotype: subjects living in monoparental families which are also homozygous for G-allele show higher scores on DESR index. Otherwise, the effect of family structure on late-adolescence DESR is mediated by the same symptoms in early-adolescence and this mediation is moderated by TPH2 G-703T polymorphism

**Conclusions** Future models of the developmental link between environmental adversities and dysregulation problems therefore need to consider that a more 'dynamic' G×E perspective.