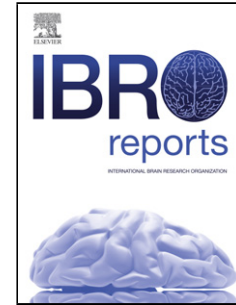


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Title: The transcriptome of the rat subfornical organ is altered in response to early postnatal overnutrition

Authors: Colleen S. Peterson, Shuo Huang, Samantha A. Lee, A.V. Ferguson, W. Mark Fry



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Title: The transcriptome of the rat subfornical organ is altered in response to early postnatal overnutrition.

Running Title: Early overnutrition alters gene expression in rat SFO

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Figures: 3 (do not use colour in print)

Abstract

Early postnatal overnutrition in humans is associated with long-term negative outcomes including obesity, increased risk of type-II diabetes, and cardiovascular disease. Hypothalamic neurons from rodents exposed to early postnatal overnutrition show altered expression of satiety signals and receptors, and exhibit altered responses to many satiety signals, suggesting a hypothalamic link between early overnutrition and development of these sequelae. Importantly, several hypothalamic nuclei receive information regarding circulating hormones (such as insulin, leptin and ghrelin) from the subfornical organ (SFO), a forebrain sensory circumventricular organ which lacks a blood brain barrier. Previous transcriptomic studies indicate that challenges to energy balance and hydration status stimulate changes in gene expression within the SFO,

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