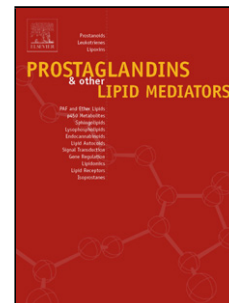


Accepted Manuscript

Title: Cord blood eicosanoid signatures and newborn gestational age

Authors: Sandra Gouveia-Figueira, Dries S. Martens, Tim S. Nawrot, Malin L. Nording



PII: S1098-8823(17)30041-2
DOI: <http://dx.doi.org/doi:10.1016/j.prostaglandins.2017.07.003>
Reference: PRO 6234

To appear in: *Prostaglandins and Other Lipid Mediators*

Received date: 28-2-2017
Revised date: 7-7-2017
Accepted date: 17-7-2017

Please cite this article as: Gouveia-Figueira Sandra, Martens Dries S, Nawrot Tim S, Nording Malin L. Cord blood eicosanoid signatures and newborn gestational age. *Prostaglandins and Other Lipid Mediators* <http://dx.doi.org/10.1016/j.prostaglandins.2017.07.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Cord blood eicosanoid signatures and newborn gestational age

Sandra Gouveia-Figueira^{a,*}, Dries S Martens^{b,*}, Tim S Nawrot^{b,c}, Malin L Nording^{a,d}

^a Department of Chemistry, Umeå University, 90187 Umeå, Sweden

^b Centre for Environmental Sciences, Hasselt University, 3500 Hasselt, Belgium

^c Department of Public Health & Primary Care, Leuven University, 3000 Leuven, Belgium

^d Department of Entomology and Nematology, University of California, Davis, CA 95616, USA

* These authors contributed equally to this work

Corresponding author e-mail: malin.nording@umu.se (MLN)

Highlights

- A maturation of lipid metabolism *in utero* is proposed.
- Correlations between cord blood oxylipin levels and gestational age are established.
- In newborns, nine eicosanoids are associated with gestational age at term birth.

Abstract

Beyond prostaglandins, the function of eicosanoids and other oxylipins in pregnancy and labor is poorly understood. In contrast to earlier work focusing on preterm infants, we investigated how oxylipin levels in newborns (measured in cord blood) vary during the last weeks of pregnancy in 190 mother-newborns (≥ 37 weeks of gestation) of the ENVIRONAGE birth cohort, Belgium. We found increased levels of PGE₂ ($p = 0.003$), PGF_{2 α} ($p = 0.042$), 8,9-DHET ($p = 0.037$), 11-HETE ($p = 0.034$), and 15-HETrE ($p = 0.008$) associated with full term pregnancy compared to early term labor. Furthermore, early vs late term was associated with increased levels of PGE₂ ($p = 0.012$) and TXB₂ ($p = 0.033$), while full vs late term was associated with

Download English Version:

<https://daneshyari.com/en/article/8359180>

Download Persian Version:

<https://daneshyari.com/article/8359180>

[Daneshyari.com](https://daneshyari.com)