

Trabalhos Científicos

- **Título:** Results From The Pilot Study Of A Birth Cohort Of Environmental Exposure And Childhood Development Pipa Project. Brazil.
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- **Resumo:** Background/Aim: The PIPA project is a prospective cohort study, which will be initiated in the city of Rio de Janeiro (Southeastern Brazil), with the aim of investigating environmental pollutant effects on maternal-child health. A pilot study was carried out between September 2017 and August 2018, totaling 142 enrolled pregnant women, ensuing 135 (95) births and the collection of umbilical cord and mother blood samples, and both mother and newborn urine samples. This work presents the results of these analyses. Methods: Mercury, lead, cadmium, and arsenic concentrations were determined in mother and umbilical cord blood samples of 117 mother-newborn pairs. Urine pyrethroid concentrations were analyzed in 142 mother samples and in 223 newborn samples collected at birth and during the 1st, 3rd and 6th months of life. Results: The median mother age was 27 years old, with a median family income of U\$ 590.00, 75.7 of the women were not-white and 59.7 had over 10 years of study, 46 indicated tobacco exposure and 45.2, alcohol consumption during pregnancy. A total of 57.25 newborns were male (total = 131). The birth weight median was 3.225kg (8.7 with weight 2.500 kg) and 8.8 were premature. The lead and arsenic concentration medians detected in mother (As: 11.13 µg L-1, Pb: 3.75 µg dL-1) and cord (As: 10.71 µg L-1, Pb: 3.69 µg dL-1) blood were above the levels reported in other national and international studies. A good correlation between all metals in mother and cord blood was observed. Pyrethroids with increasing means throughout the 1st, 3rd and 6th months were observed in 39 (17.5) newborn urine samples, without statistical significance, and in 69 (48.6) mother urine samples. Conclusion: These results indicate the need for the establishment of health surveillance programs in Brazil, to investigate and monitor environmental pollutant exposure in children since gestation.