

# IS THE [<sup>15</sup>N]METHACETIN LIVER FUNCTION TEST SUITED TO ESTIMATE ENVIRONMENTAL EFFECTS ON THE MATURITY OF NEONATES?

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## SUMMARY

Clinical and paraclinical data of 91 neonates of the Saxon regions of Leipzig and of Torgau/Elbe were reviewed and correlated to the environmental conditions of the places of residence of their mothers during pregnancy. One of the parameters investigated was the hepatic detoxification capacity of the neonates measured by <sup>15</sup>N elimination rates in the [<sup>15</sup>N]methacetin urine test. Because of heavy air pollution in the places of residence of some of the pregnant women, a distinct reflection of environmental influence in the parameters was expected.

While some of the parameters considered, such as birth weight and bilirubin levels, did not correlate with mean exposure data of the residences of the pregnant women, the mean rate of the age-dependent maturation of hepatic <sup>15</sup>N elimination did. This maturation was seen to be significantly decreased in heavily polluted districts of the Leipzig region compared to lower polluted places of Leipzig and to the lowly polluted region of Torgau/Elbe.

**Key words:** environmental pollution, growth retardation, liver function tests, neonates, nitrogen 15, Saxonia, stable isotope pharmaceuticals

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