

### **Breast milk & mummy smell - pheromones of mother-child bonding**

Do pheromones really exist? Although this phenomenon has long been controversial, evidence is emerging in the literature suggesting that humans, like many animals, can infer trait and state characteristics such as sex, age and emotional state from the smell of others.

It has been claimed that the most important human pheromone is the *human mammary pheromone*. This pheromone refers to the unique chemical signature of breast odor and mother's milk, or a combination, which guides unconditional responsiveness of the baby to the mother and to nutritious food. The implication is that odorous volatiles from the mother's skin and the milk she produces, when smelled by the baby, fosters the special bond between a mother and her baby. To better understand the composition of this signature and its role in mother-child bonding we are leveraging the core expertise on breast milk composition from Prof Marca Wauben (Faculty of Veterinary Medicine, Department of Biochemistry & Cell Biology) on olfaction and pheromonal communication from Prof Monique Smeets (Social Psychology) and on mother-infant interaction from Prof Judith Dubas (Developmental Psychology) in a novel collaboration.

We will use the FFU Seed money to develop a paradigm to test mother-infant bonding via preference expressed by babies for breast milk and compounds isolated from breast milk to generate pilot results in support of a grant application on the role of mammary pheromone in mother-child bonding.

*Monique Smeets, Marca Wauben, Judith Dubas*