Mystic Force of Pheromone and Healthy Behavior

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Chemical signals are important part of the social communication in many mammals including Homo sapiens. Nowadays the traditional point of view on chemo-communication, as a mechanism of the reproductive and hierarchic coordination, is extended over the whole behavioral and somatic functions. In present paper I will try to summarize modern data about interrelationships between chemical signals and neuroendocrine and immunological functions. Here is outline of the talk:

1. Mammal pheromones, its issues and chemical structure.
2. Perception of pheromones, main olfactory system and accessory olfactory system.
3. Modulation of the male immunity by means female scent signals.
   Behavioral and endocrine effects of the sexual signals;
   Sexual behavior and an infection risk;
   Dual effect of the female pheromones: enhancement of the innate immunity and suppression of the adaptive immunity;
   Sexual pheromones as factor of the resistance to respiratory infection (flu virus as an example).
4. Scent of disease:
   Scent attractiveness of infected animals;
   Immune response to strange antigens as factor, which modifies chemical signals under an infection.
5. Human and chemical signals
   Behavioral and physiological effects of human scents;
   Hypothalamic and cortical responses to the sexual pheromones;
   Social and psychophysiological factors of a subjective assessment of human scent;
   Scent of stress;
   Sexual pheromones and risk of the transmissive infection;
6. Applied perspectives:
   Volatile compounds and diagnostics
   Pheromones and correction of the sexual behavior and endocrine status.

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