## **Electronic Supplementary Material 2**

## Additional information regarding the pre-selection of similar and dissimilar odour pads

To test the effect of HLA-dissimilarity on attractiveness or pleasantness, we pre-selected 4 HLA-similar and 4 HLA-dissimilar body odour pads. To do so, we first calculated an HLA-Similarity-Index for each rater-donor pair. This Index was primarily based on the three most investigated loci in human studies (HLA-A, HLA-B and HLA-DRB1; Jacob, McClintock, Zelano, & Ober, 2002; Roberts, Gosling, Carter, & Petrie, 2008; Thornhill et al., 2003; Wedekind & Furi, 1997; Wedekind, Seebeck, Bettens, & Paepke, 1995) and secondarily on all loci samples (HLA-A, HLA-B, HLA-C, HLA-DRB1, HLA-DQA1, HLA-DQB1). Specifically, the HLA-Similarity-Index was computed as the total number of alleles shared across the loci. The three loci that are most commonly investigated in HLA-related odour preference research (HLA-A, HLA-B, HLA-DRB1) were considered first (technically, we multiplied similarity on these loci by 100). If they provided equal similarity, then the less well investigated loci (HLA-C, HLA-DQA1 und HLA-DQB1 were taken into account. Hence HLA-Similarity-Indices ranged from 0 (no alleles were shared between female odour donor and male rater) to 606 (all alleles were shared between female odour donor and male rater).

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