**SUPPLEMENTARY MATERIAL**

**Table.** Programming by early weaning and sex effects on all analyzed parameters in offspring at PN180.

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| PARAMETERS | PROGRAMMING EFFECT | SEX EFFECT | INTERACTION |
| Total food intake | **Yes** *F* (1,31) =50.7; *p <* 0.0001 | **Yes** *F* 1,31) = 849.1; *p <* 0.0001 | **Yes** *F* (1,31) = 21.8; *p <* 0.0001 |
| Body mass gain (g) | **Yes** *F* (1,34) = 23.3; *p <* 0.0001 | **Yes** *F* (1,34) = 538.4; *p <* 0.0001 | **No** *F* (1,34) = 4.0; *p* =0.054 |
| Visceral fat (g/100g BW) | **Yes** *F*(1,33) = 35.3; *p <* 0.0001 | **No** *F*(1,33) = 3.2; *p* =0.081 | **No** *F*(1,33) = 0.2; *p >* 0.1 |
| Food preference 30 min (sugar diet) | **No** *F* (1,92) = 1.4; *p >* 0.1 | **Yes** *F* (1,92) = 41.9; *p <* 0.0001 | **No** *F* (1,92) < 0.1); *p >* 0.1 |
| Food preference 30 min (fat diet) | **No** *F* (1,92) = 2.8; *p* =0.097 | **Yes** *F* (1,92) = 66.4; *p <* 0.0001 | **No** *F* (1,92) = 4.6; *p* =0.035 |
| Food preference 12 h (sugar diet) | **Yes** *F* (1,92) = 6.7; *p* = 0.011 | **Yes** *F* (1,92) =46.5; *p <* 0.0001 | **No** *F* (1,92) = 3.0; *p* =0.084 |
| Food preference 12 h (fat diet) | **No** *F* (1,92) = 1.1; *p >* 0.1 | **Yes** *F* (1,92) =254.3; *p <* 0.0001 | **Yes** *F* (1,92) =9.2; *p* =0.003 |
| TH (VTA) | **No** *F* (1,24) = 0.6; *p >* 0.1 | **Yes** *F* (1,24) *=* 4.6; *p* =0.043 | **Yes** *F* (1,24) 4.6; *p* =0.043 |
| TH (NAc) | **No** *F* (1,27) = 0.5; *p >* 0.1 | **No** *F* (1,27) = 3.1; *p* =0.092 | **No** *F* (1,27) = 3.1; *p* =0.092 |
| DAT (NAc) | **No** *F* (1,27) = 1.1; *p >* 0.1 | **No** *F* (1,27) = 0.2; *p >* 0.1 | **No** *F* (1,27) = 0.2; *p >* 0.1 |
| D1r (NAc) | **No** *F* (1,19) = 2.6; *p >* 0.1 | **No** *F* (1,19) = 2.2; *p >* 0.1 | **No** *F* (1,19) = 2.2; *p >* 0.1 |
| D2r (NAc) | **No** *F* (1,25) = 0.5; *p >* 0.1 | **No** *F* (1,25) = 3.4; *p* =0.077 | **No** *F* (1,25) = 3.8; *p* = 0.061 |
| TH (PFC) | **No** *F* (1,26) < 0.1; *p >* 0.1 | **No** *F* (1,26) = 0.3; *p >* 0.1 | **No** *F* (1,26) = 0.4; *p >* 0.1 |
| DAT (PFC) | **No** *F* (1,27) < 0.1; *p >* 0.1 | **No** *F* (1,27) = 0.1; *p >* 0.1 | **No** *F* (1,27) = 0.1; *p >* 0.1 |
| D1r (PFC) | **No** *F* (1,28) = 1.5; *p >* 0.1 | **No** *F* (1,28) = 0.1; *p >* 0.1 | **No** *F* (1,28) = 0.1; *p >* 0.1 |
| D2r (PFC) | **No** *F* (1,22) = 1.1; *p >* 0.1 | **No** *F* (1,22) = 1.1; *p >* 0.1 | **No** *F* (1,22) = 1.1; *p >* 0.1 |
| TH (DS) | **No** *F* (1,26) = 0.8; *p >* 0.1 | **No** *F* (1,26) < 0.1; *p* =0.9 | **No** *F* (1,26) < 0.1; *p* =0.9 |
| DAT (DS) | **No** *F* (1,27) = 0.2; *p >* 0.1 | **No** *F* (1,27) = 0.3; *p >* 0.1 | **No** *F* (1,27) = 0.3; *p >* 0.1 |
| D1r (DS) | **No** *F* (1,27) < 0.1; *p >* 0.1 | **No** *F* (1,27) < 0.1; *p >* 0.1 | **No** *F* (1,27) < 0.1; *p >* 0.1 |
| D2r (DS) | **No** *F* (1,28) = 0.2; *p >* 0.1 | **No** *F* (1,28) = 4.1; *p* =0.053 | **No** *F* (1,28) = 4.1; *p* =0.053 |
| D2r (ARC) | **No** *F* (1,27) = 0.1; *p >* 0.1 | **No** *F* (1,27) = 1.6; *p >* 0.1 | **No** *F* (1,27) = 1.6; *p >* 0.1 |
| NAPE-PLD (LH) | **No** *F* (1,23) = 3.7; *p* =0.067 | **No** *F* (1,23) = 0.6; *p >* 0.1 | **No** *F* (1,23) = 0.6; *p >* 0.1 |
| FAAH (LH) | **No** *F* (1,21) < 0.1; *p* =0.067 | **Yes** *F* (1,21) = 10.5; *p* =0.004 | **Yes** *F* (1,21) = 10.5; *p* =0.004 |
| DAGL (LH) | **No** *F* (1,21) < 0.1; *p >* 0.1 | **No** *F* (1,21) = 0.2; *p >* 0.1 | **No** *F* (1,21) = 0.2; *p >* 0.1 |
| MAGL (LH) | **Yes** *F* (1,20) = 5.9; *p* =0.002 | **No** *F* (1,20) = 0.7; *p >* 0.1 | **Yes** *F* (1,20) = 5.9; *p* =0.025 |
| CB1r (LH) | **No** *F* (1,22) = 0.2; *p >* 0.1 | **No** *F* (1,22) < 0.1; *p >* 0.1 | **No** *F* (1,22) < 0.1; *p >* 0.1 |
| CB2r (LH) | **No** *F* (1,17) < 0.1; *p >* 0.1 | **No** *F* (1,17) < 0.1; *p >* 0.1 | **No** *F* (1,17) < 0.1; *p >* 0.1 |
| NAPE-PLD (VAT) | **No** *F* (1,17) = 0.7; *p >* 0.1 | **No** *F* (1,17) = 0.7; *p >* 0.1 | **No** *F* (1,17) = 0.7; *p >* 0.1 |
| FAAH (VAT) | **No** *F* (1,23) = 0.6; *p >* 0.1 | **No** *F* (1,23) = 1.3; *p >* 0.1 | **No** *F* (1,23) = 1.3; *p >* 0.1 |
| DAGL (VAT) | **No** *F* (1,25) = 0.3; *p >* 0.1 | **No** *F* (1,25) = 0.2; *p >* 0.1 | **No** *F* (1,25) = 0.2; *p >* 0.1 |
| MAGL (VAT) | **No** *F* (1,20) < 0.1; *p >* 0.1 | **No** *F* (1,20) < 0.1; *p >* 0.1 | **No** *F* (1,20) < 0.1; *p >* 0.1 |
| CB1r (VAT) | **No** *F* (1,19) = 0.1; *p >* 0.1 | **No** *F* (1,19) = 1.1; *p >* 0.1 | **No** *F* (1,19) = 1.1; *p >* 0.1 |
| CB2r (VAT) | **No** *F* (1,17) < 0.1; *p >* 0.1 | **No** *F* (1,17) = 0.6; *p >* 0.1 | **No** *F* (1,17) = 0.6; *p >* 0.1 |
| NAPE-PLD (Liver) | **No** *F* (1,26) = 1.7; *p >* 0.1 | **No** *F* (1,26) = 0.1; *p >* 0.1 | **No** *F* (1,26) = 0.1; *p >* 0.1 |
| FAAH (Liver) | **No** *F* (1,27) < 0.1; *p >* 0.1 | **No** *F* (1,27) = 0.1; *p >* 0.1 | **No** *F* (1,27) = 0.1; *p >* 0.1 |
| DAGL (Liver) | **No** *F* (1,22) = 0.9; *p >* 0.1 | **No** *F* (1,22) < 0.1; *p >* 0.1 | **No** *F* (1,22) < 0.1; *p >* 0.1 |
| MAGL (Liver) | **No** *F* (1,24) < 0.1; *p >* 0.1 | **No** *F* (1,24) = 0.3; *p >* 0.1 | **No** *F* (1,24) = 0.1; *p >* 0.1 |
| CB1r (Liver) | **No** *F* (1,25) < 0.1; *p >* 0.1 | **No** *F* (1,25) = 1.3; *p >* 0.1 | **No** *F* (1,25) = 1.3; *p >* 0.1 |
| CB2r (Liver) | **Yes** *F* (1,24) = 10.3; *p* =0.003 | **No** *F* (1,24) = 0.4; *p >* 0.1 | **No** *F* (1,24) = 0.4; *p >* 0.1 |

Legend: CB1r: cannabinoid receptor type 1; CB2r: cannabinoid receptor type 2; D1r: dopamine receptor type 1; D2r: dopamine receptor type 2; DAGL: diacylglycerol-lipase; DS: dorsal striatum; FAAH: fatty acid amide hydrolase; LH: lateral hypothalamus; MAGL: monoacylglycerol lipase; NAc: nucleus accumbens; NAPE-PLD: N-arachidonyl-phosphatidylethanolamine phospholipase-D; PFC: prefrontal cortex; TH: tyrosine hydroxylase; VAT: visceral adipose tissue; VTA: ventral tegmental area.