|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Milk | | Feces | | Urine | |
| HMO groups | | Abs | % | Abs | % | Abs | % |
| Total | | ↑ | NA | ↑ | NA | ↑ | NA |
| Fucosylated | | ↑↑ | - | ↑↑↑ | ↑↑↑ | ↑↑ | ↑↑↑ |
| Sialylated | | - | ↓↓↓ | - | ↓ | ↓ | ↓↓↓ |
| Fucosylated and sialylated | |  | ↓ | ↑ | ↑ | ↑ | - |
| Total fucosylated | | ↑ | - | ↑↑↑ | ↑↑↑ | ↑↑ | ↑↑↑ |
| Total sialylated | | - | ↓↓ | - |  |  | ↓↓ |
| Undecorated | | ↑ | ↑ | - | ↓↓↓ | ↑ | - |
|  | | | | | | | |
| Individual HMO structures | |  |  |  |  |  |  |
| Name | Group |  |  |  |  |  |  |
| 3FL | Fuco | ↑↑ | ↑ | \* |  | \* |  |
| 2’FL | Fuco |  |  |  | - | - | - |
| LDFT | Fuco | - |  | - | - | - | - |
| LNT | Undec | ↑↑ | ↑↑↑ | - | ↓ | ↑ | ↑ |
| LNnT | Undec | \* |  | \* |  | \* |  |
| LNFP II | Fuco | ↑↑↑ | ↑↑↑ |  | - | \* |  |
| LNFP I + III | Fuco |  | - | ↑ | - | ↑↑ | ↑ |
| 3120 | Fuco | ↑ | - | \* |  |  |  |
| LNH | Undec |  |  |  | - | - | - |
| LNnH | Undec |  |  |  | - | - | - |
| p-LNH | Undec | - | ↓ | \* |  | \* |  |
| MFpLNH IV | Fuco |  | - | ↑ | ↑ | \* |  |
| 4120a | Fuco |  | - | \* |  | - | ↑↑ |
| MFLNH I + III | Fuco | ↑↑ | ↑↑↑ |  | - | ↑↑ | ↑↑↑ |
| IFLNH III | Fuco | ↑ |  |  | - | - | - |
| IFLNH I | Fuco | ↓ | ↓↓ |  | - | - | - |
| DFpLNH II | Fuco |  | ↓ |  | - | - | - |
| DFLNH b | Fuco | ↑↑ | ↑ | ↑ | ↑ | ↑↑ | ↑ |
| DFLNH a | Fuco | - | - | ↑ | ↑↑ | ↑ | ↑↑ |
| DFLNH c | Fuco | ↑ | ↑ | \* |  | \* |  |
| TFLNH | Fuco |  | - | ↑ | - | ↑ | ↑ |
| 4320a | Fuco |  | - | \* |  | \* |  |
| 5130a | Fuco | ↑ | ↑ | \* |  | ↑↑ | ↑ |
| 5130b | Fuco |  | - |  | - | \* |  |
| F-LNO | Fuco |  | - | \* |  | \* |  |
| 5130c | Fuco |  | - | \* |  | \* |  |
| DFLNO I | Fuco | ↑↑ | ↑↑ | \* |  | ↑↑ | ↑↑ |
| DFLNnO II | Fuco | ↑ | ↑↑ |  | ↑ | \* |  |
| 5230a | Fuco |  | - | \* |  | \* |  |
| DFLNnO I/DFLNO II | Fuco | ↑↑↑ | ↑↑↑ | \* |  | ↑ | - |
| 5230b | Fuco |  | - | \* |  | \* |  |
| 5300a | Fuco |  | - |  |  |  |  |
| 6’SL | Sial | ↑↑↑ | ↑↑ | \* |  |  |  |
| 3'SL | Sial | ↓↓↓ | ↓↓ |  | - | - | - |
| LSTb + LSTc | Sial | ↓↓↓ | ↓↓↓ | \* |  | - | ↑ |
| LSTa | Sial |  | - | \* |  | \* |  |
| 3111 | Fuco + Sial | ↓↓ | ↓↓↓ |  |  |  |  |
| S-LNH | Sial | ↑↑↑ | ↑↑↑ | \* |  |  |  |
| 4021a + S-LNnH II | Sial |  | - | \* |  |  |  |
| 4100a | Fuco | ↓↓ | ↓↓↓ | \* |  |  |  |
| 4100b | Fuco | ↓↓ | ↓↓↓ | \* |  | - | - |

**Supplemental digital content Table 2 Changes in HMOs over time.** For each specimen type, changes over time are reported for both absolute numbers of HMOs and percentages of HMOs with arrows for significant increases or decreases comparing specimen one to specimen two. One arrow = p< 0.01, two arrows = p< 0.001, three arrows = p<0.0001, dash p>0.01 (based on paired t-tests, N = 28 paired samples for milk, 25 paired samples for feces, and 28 paired samples for urine), \* = structure found in less than 50% of samples. Fuco = fucosylated, Sial = Sialylated, Undec = no fucose or sialic acid. Four number designations refer to the number of monosaccharides in this order: Hex\_Fuc\_HexNAc\_Sialic acid