**Supplementary Table 8. Metabolites related with the conversion from** **mild****cognitive****impairment** **to** **Alzheimer's****disease** **in previous prospective studies**

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| --- | --- | --- | --- |
| **Number** | **Metabolite Name** | **HMDB ID** | **Frequencya** |
| 1 | Creatine | HMDB0000064 | 1[51] |
| 2 | L-Histidine | HMDB0000177 | 1[33] |
| 3 | L-Lactic acid | HMDB0000190 | 1[35] |
| 4 | Pyruvic acid | HMDB0000243 | 1[35] |
| 5 | Xanthine | HMDB0000292 | 1[33] |
| 6 | 2,4-Dihydroxybutanoic acid | HMDB0000360 | 1[35] |
| 7 | L-Arginine | HMDB0000517 | 1[51] |
| 8 | 4-Aminobutyraldehyde | HMDB0001080 | 1[51] |
| 9 | 5'-Methylthioadenosine | HMDB0001173 | 1[51] |
| 10 | Spermine | HMDB0001256 | 1[51] |
| 11 | Spermidine | HMDB0001257 | 1[51] |
| 12 | Putrescine | HMDB0001414 | 1[51] |
| 13 | D-Ribose 5-phosphate | HMDB0001548 | 1[35] |
| 14 | PC(o-22:0/18:3(6Z,9Z,12Z)) | HMDB0013445 | 1[65] |
| 15 | PC(o-22:0/20:4(8Z,11Z,14Z,17Z)) | HMDB0013448 | 1[65] |
| 16 | PC(o-22:1(13Z)/22:3(10Z,13Z,16Z)) | HMDB0013453 | 1[65] |
| 17 | PC(o-18:0/18:2(9Z,12Z)) | HMDB0013418 | 1[65] |
| 18 | PC(16:0/20:5(5Z,8Z,11Z,14Z,17Z)) | HMDB0007984 | 1[35] |
| 19 | lysoPC (16:0) | / | 1[35] |
| 20 | PC (18:0/20:4)  | / | 1[35] |
| 21 | PC (O-18:1/16:0) | / | 1[35] |
| 22 | N1 or N8-acetyl-spermidine | / | 1[51] |
| 23 | SM (OH) C14:1 | / | 1[65] |
| 24 | SM C16:0 | / | 1[65] |
| 25 | SM C20:2 | / | 1[65] |
| 26 | PC (16:0/16:0) | / | 1[35] |

areference number are same as in Supplementary Table 2.