Profiling of carnitine shuttle system intermediates in gliomas using solid-phase microextraction (SPME)

Joanna Bogusiewicz1, Katarzyna Burlikowska1, Karol Jaroch1, Paulina Zofia Gorynska1, Krzysztof Gorynski1, Marcin Birski2, Jacek Furtak2, Dariusz Paczkowski2#,Marek Harat2,3, Barbara Bojko1\*

1. Department of Pharmacodynamics and Molecular Pharmacology, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun, Bydgoszcz, Poland
2. Department of Neurosurgery, 10th Military Research Hospital and Polyclinic, Bydgoszcz, Poland
3. Department of Neurosurgery and Neurology, Faculty of Health Sciences, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun, Bydgoszcz, Poland

\*Corresponding author: Barbara Bojko, bbojko@cm.umk.pl

Department of Pharmacodynamics and Molecular Pharmacology

Jurasza 2 Street, 85089 Bydgoszcz, Poland

# current affiliation: Department of Neurosurgery and Neurology, Jan Biziel University Hospital Collegium Medicum Nicolaus Copernicus University, Bydgoszcz, Poland

Table S1 Detailed description of samples included in the study

*LGG – low-grade glioma; HGG – high-grade glioma; IDHm – IDH mutation, IDHw – IDH wildtype; del – presence of 1p/19q co-deletion; n-del – absence of 1p/19q co-deletion; SD – standard deviation; F – female; M – male*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Grade** | **IDH1 mutation status** | **1p/19q co-deletion status** | **Age** | **Gender** |
| **01** | LGG | IDHm | del | 33 | F |
| **02** | LGG | IDHm | n-del | 32 | M |
| **03** | LGG | IDHm | n-del | 40 | F |
| **04** | LGG | IDHm | del | 52 | F |
| **05** | LGG | IDHm | del | 59 | M |
| **06** | LGG | IDHw | n-del | 29 | F |
| **07** | LGG | IDHm | del | 71 | F |
| **08** | HGG | IDHw | n-del | 52 | F |
| **09** | HGG | IDHw | n-del | 64 | M |
| **10** | HGG | IDHw | n-del | 71 | M |
| **11** | HGG | IDHm | del | 31 | M |
| **12** | HGG | IDHw | n-del | 50 | M |
| **13** | HGG | IDHm | n-del | 30 | F |
| **14** | HGG | IDHw | n-del | 69 | M |
| **15** | HGG | IDHw | n-del | 24 | M |
| **16** | HGG | IDHm | del | 42 | M |
| **17** | HGG | IDHw | n-del | 78 | F |
| **18** | HGG | IDHw | n-del | 60 | M |
| **19** | HGG | IDHm | del | 39 | F |

**Table S2 Aylcarnitines which could be identified using LipidSearch**

AC – acylcarnitine; m/z – mass-to-charge ratio

|  |  |
| --- | --- |
| **AC** | **M/Z [M+H+]** |
|
| AC C8:0 | 288.2169 |
| AC C9:0 | 302.2326 |
| AC C10:4 | 308.1856 |
| AC C10:3 | 310.2013 |
| AC C10:2 | 312.2169 |
| AC C10:1 | 314.2326 |
| AC C10:0 | 316.2482 |
| AC C11:4 | 322.2013 |
| AC C11:3 | 324.2169 |
| AC C11:2 | 326.2326 |
| AC C11:1 | 328.2482 |
| AC C11:0 | 330.2639 |
| AC C12:4 | 336.2169 |
| AC C12:3 | 338.2326 |
| AC C12:2 | 340.2482 |
| AC C12:1 | 342.2639 |
| AC C12:0 | 344.2795 |
| AC C13:0 | 358.2952 |
| AC C14:4 | 364.2482 |
| AC C14:3 | 366.2639 |
| AC C14:2 | 368.2795 |
| AC C14:1 | 370.2952 |
| AC C14:0 | 372.3108 |
| AC C15:0 | 386.3265 |
| AC C16:1 | 398.3265 |
| AC C16:0 | 400.3421 |
| AC C17:1 | 412.3421 |
| AC C17:0 | 414.3578 |
| AC C18:4 | 420.3108 |
| AC C18:3 | 422.3265 |
| AC C18:2 | 424.3421 |
| AC C18:1 | 426.3578 |
| AC C18:0 | 428.3734 |
| AC C19:1 | 440.3734 |
| AC C19:0 | 442.3891 |
| AC C20:5 | 446.3265 |
| AC C20:4 | 448.3421 |
| AC C20:3 | 450.3578 |
| AC C20:2 | 452.3734 |
| AC C20:1 | 454.3891 |
| AC C20:0 | 456.4047 |
| AC C21:1 | 468.4047 |
| AC C21:0 | 470.4204 |
| AC C22:6 | 472.3421 |
| AC C22:5 | 474.3578 |
| AC C22:4 | 476.3734 |
| AC C22:3 | 478.3891 |
| AC C22:2 | 480.4047 |
| AC C22:1 | 482.4204 |
| AC C22:0 | 484.4360 |
| AC C23:1 | 496.4360 |
| AC C23:0 | 498.4517 |
| AC C24:2 | 508.4360 |
| AC C24:1 | 510.4517 |
| AC C24:0 | 512.4673 |