Supplementary material to manuscript

***Klotho KL-VS haplotype does not improve cognition in a population-based sample of adults age 55 to 87 years***

Bernhard W. Müller1,2,\*, Anke Hinney3, Norbert Scherbaum1,4, Christian Weimar5,6, Christoph Kleinschnitz7, Triinu Peters3, Lara Hochfeld8, Sonali Pechlivanis6,9, Andreas Stang6, Martha Jokisch7, Bernd Kowall6

1 Department for Psychiatry and Psychotherapy, LVR-Hospital, University of Duisburg-Essen, University Hospital Essen, Essen, Germany

2 Department of Psychology, University of Wuppertal, Wuppertal, Germany

3Department of Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, University of Duisburg-Essen, University Hospital Essen, Essen, Germany

4 Department of Addictive Behavior and Addiction Medicine, LVR-Hospital, University of Duisburg-Essen, University Hospital Essen, Essen, Germany

5 BDH-Klinik Elzach gGmbH, Elzach, Germany

6 Institute for Medical Informatics, Biometry and Epidemiology, University Hospital of Essen, Essen, Germany;

7 Department of Neurology, University Hospital Essen, University of Duisburg-Essen, Essen, Germany

8 Institute of Human Genetics, University Hospital of Bonn, Bonn, Germany

9 Institute for Asthma and Allergy Prevention, Helmholtz Zentrum München, German Research Centre for Environmental Health, Munich, Germany

\* Correspondence: Bernhard W. Müller, Tel.: +49 201 7227 0, bernhard.mueller@uni-due.de

**Supplementary material table 1:**

Results in cognitive tests by KL-VS haplotype (KL wild-type vs. KL-VS homozygous subjects):
The Heinz Nixdorf Recall Study.

|  |  |  |  |
| --- | --- | --- | --- |
| Cognition tests \* | **KL Wild type** |  | **KL-VS homozygous** |
| **mean (95%- CI)** | ***N*** |  | **mean (95%- CI)** | ***N*** |
| Memory, immediate (n)  | 5.35 (5.29 - 5.42) | 1392 |  | 5.28 (4.87-5.70) | 46 |
| Memory, delayed (n) | 3.63 (3.52 - 3.73) | 1392 |  | 3.41 (2.78-4.04) | 46 |
| Verbal fluency, animals (n) | 23.24 (22.91 - 23.57) | 1393 |  | 24.26 (21.69-26.82) | 46 |
| Maze (sec.)  | 51.27 (49.87 - 52.67) | 1356 |  | 56.28 (43.61-70.03) | 46 |
| TMT A (sec.)  | 43.40 (42.41 - 44.39) | 1379 |  | 43.21 (37.77-48.64) | 46 |
| TMT B (sec.) | 109.46 (106.91 - 112.01) | 1289 |  | 130.97 (107.34-154.61) | 46 |
| Stroop interference (sec.) | 26.91 (25.85 - 27.97) | 1362 |  | 25.92 (20.58-31.26) | 46 |

\* cognition tests: memory: list of 8 words, number of immediate and delayed recalled items, verbal fluency: animal names produced within 1 minute, Maze: paper pencil Maze: time to solution, TMT A: Trail Making Test part A: time to solution in seconds, TMT B: Trail Making Test part B: time to solution in seconds, Stroop interference: Stroop test naming the color of different colored color-name minus naming colored bars in seconds.