Supplementary material to the manuscript " Reduced levels of lacrimal glial cell line-derived neurotrophic factor (GDNF) in patients with focal epilepsy and focal epilepsy with comorbid depression: A biomarker candidate?" by Alexander A. Shpak, Flora K. Rider, Tatiana A. Druzhkova, Marina Y. Zhanina, Sofya B. Popova, Alla B. Guekht, Natalia V. Gulyaeva

|  |  |
| --- | --- |
| **Изображение выглядит как текст, снимок экрана, Шрифт, число  Автоматически созданное описание****(a)** | **Изображение выглядит как текст, снимок экрана, Шрифт, число  Автоматически созданное описание****(b)** |
| **Изображение выглядит как текст, снимок экрана, Шрифт, число  Автоматически созданное описание****(c)** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| parameter | estimate | Std error | statistic | p-value |
| GDNF in LF | 0.987 | 0.004 | -3.29 | 0.001 |
| BDNF in BS | 0.762 | 0.12 | -2.31 | 0.02 |

**(d)** |
| **Изображение выглядит как текст, снимок экрана, График, линия  Автоматически созданное описание** | **Изображение выглядит как текст, снимок экрана, График, диаграмма  Автоматически созданное описание** |
| **(e)** | **(f)** |
| *Изображение выглядит как диаграмма, текст, График, линия  Автоматически созданное описание***(g)** |
| **Figure 1S.** Predictors of focal epilepsy development. Model involving all predictors (a); model involving only significant predictors (b); Pseudo R squared for model with only significant predictors (c); Odds ratio of predictors for model with only significant predictors (d); Dependence of changes in GDNF in LF (e) and BDNF (f) levels on the likelihood of developing epilepsy. Vertical lines along the x-axis indicate observations; A grey bar along the blue line indicates a 95% confidence interval; Determination of the accuracy of the selected model with a cut-off point of 0.5 for the binary classification (85%). Determination the optimal value of the cut-off point, depending on the accuracy for the model that predicts focal epilepsy development (0.68) (g). |

|  |  |
| --- | --- |
|  |  |
| **(a)** | **(b)** |
|  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| parameter | estimate | Std error | statistic | p-value |
| GDNF in LF | 0.983 | 0.0064 | -2.64 | 0.0083 |
| cortisol in BS | 1.01 | 0.0060 |  2.44 | 0.015 |
| TNF-α in BS | 1.8 | 0.23 |  2.50 | 0.013 |

 |
| **(c)** | **(d)** |
|  |  |
| **(e)** | **(f)** |
|  |  |
| **(g)** | **(h)** |
| **Figure 2S.** Predictors of depression development. Model involving all predictors (a); model involving only significant predictors (b); Pseudo R squared for model with only significant predictors (c); Odds ratio of predictors for model with only significant predictors (d); Dependence of changes in GDNF in LF (e), cortisol (f) and TNF-α (g) levels on the likelihood of developing depression. Vertical lines along the x-axis indicate observations; A grey bar along the blue line indicates a 95% confidence interval; Determination of the accuracy of the selected model with a cut-off point of 0.5 for the binary classification (93%). Determination the optimal value of the cut-off point, depending on the accuracy for the model that predicts depression development (0.35). (h). |

|  |  |
| --- | --- |
|  |  |
| **(a)** | **(b)** |
|  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| parameter | estimate | Std error | statistic | p-value |
| GDNF in LF | 0.99 | 0.0055 | -2.46 | 0.014 |
| BDNF in BS | 0.59 | 0.181 | -2.96 | 0.0031 |
| TNF-α in BS | 1.77 | 0.199 |  2.87 | 0.0041 |

 |
| **(c)** | **(d)** |
|  |  |
| **(e)** | **(f)** |
|  |  |
| **(g)** | **(h)** |
| **Figure 3S.** Predictors of development of comorbid depression and epilepsy. Model involving all predictors (a); model involving only significant predictors (b); Pseudo R squared for model with only significant predictors (c); Odds ratio of predictors for model with only significant predictors (d); Dependence of changes in GDNF in LF (e), TNF-α (f) and BDNF (g) levels on the likelihood of developing comorbid depression and epilepsy. Vertical lines along the x-axis indicate observations; A grey bar along the blue line indicates a 95% confidence interval; Determination of the accuracy of the selected model with a cut-off point of 0.5 for the binary classification (92%). Determination the optimal value of the cut-off point, depending on the accuracy for the model that predicts focal depression and epilepsy (0.75). (h). |