Author's response to reviews

**Title:** Proteinase-activated receptor 2 and disease biomarkers in cerebrospinal fluid in cases with autopsy-confirmed prion diseases and other neurodegenerative diseases.

**Authors:**

Zdenek Rohan (zdenek.rohan@ftn.cz)
Magdalena Smetakova (magdalena.smetakova@ftn.cz)
Jaromir Kukal (jaromir.kukal@fjfi.cvut.cz)
Robert Rusina (robert.rusina@lf1.cuni.cz)
Radoslav Matej (radoslav.matej@ftn.cz)

**Version:** 2  **Date:** 18 November 2014

**Author's response to reviews:** see over
Dear Editor,

We would like to submit our manuscript entitled “PAR-2 and triplet in CSF of TSEs and other neurodegeneration”, by authors Zdenek Rohan, Magdalena Smetakova, Robert Rusina, Jaromir Kukal and Radoslav Matej, to be considered for publication in the BMC Neurology as a Research Article.

Our results are in agreement with recent studies that confirmed that high values of CSF T-tau and protein 14-3-3 positivity are important markers of prion diseases, moreover, the level of T-tau is more sensitive and specific than 14-3-3. We showed that elevated PAR-2 CSF levels did not differ among prion diseases nor did they differ relative to other neurodegenerative diseases (mainly Alzheimer’s disease and frontotemporal lobar degeneration), which suggests that it plays a disease-nonspecific modulatory role in neurodegeneration processes.

The strength of our study is that all cases were neuropathologically examined and thus provided optimal feedback for CSF biomarker analysis. Moreover, in the subgroup of definite Alzheimer’s disease patients compared to other neurodegenerations, elevated CSF tau and phospho-tau levels were strongly associated with a decrease in amyloid beta, which confirms previous reports.

We believe that our findings validate the importance of clinical and neuropathological correlations in atypical cases of neurodegenerative dementias.

Our study contains original data, which have not been published previously. The article is not being considered for publication elsewhere. The article has a length of 1553 words and contains one picture and one table.

All authors contributed to the work and have agreed to submit the article and declare that there are no conflicts of interest in relation to this study.

The work was partly supported by grants IGA MZ NT12094-5/2011 and NT14145-3/2013 of the Grant Agency of the Ministry of Health of the Czech Republic and grant P303/12/1791 of the Grant Agency of the Czech Republic.

The study protocol was approved by the Ethics committee of our institution, Thomayer Hospital, Prague, Czech Republic.

Yours sincerely,

Radoslav Matej