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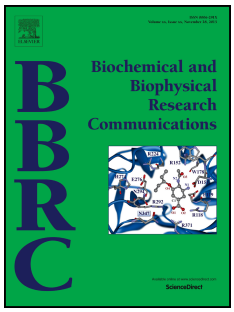

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PII: S0006-291X(17)31098-7

DOI: 10.1016/j.bbrc.2017.05.182

Reference: YBBRC 37903

To appear in: *Biochemical and Biophysical Research Communications*

Received Date: 24 May 2017

Accepted Date: 31 May 2017

Please cite this article as: C. Wang, P. Chen, X. He, Z. Peng, S. Chen, R. Zhang, J. Cheng, Q. Liu, Direct interaction between selenoprotein R and $A\beta_{42}$, *Biochemical and Biophysical Research Communications* (2017), doi: 10.1016/j.bbrc.2017.05.182.

Direct interaction between Selenoprotein R and $A\beta_{42}$

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Abstract Amyloid-β (Aβ) peptides have taken a central role in AD research, the aggregation of Aβ peptide is involved in the progression of Alzheimer's disease (AD). The 35th amino acid was methionine (Met) in Aβ peptides and it′s redox state is critical in determining the biological activity of Aβ. It has been suggested that oxidation of Met^{35} ($Met^{35}O$) plays a key role in the formation of paranuclei and in the control of oligomerization pathway choice. As an antioxidative selenoenzyme, Selenoprotein R (SelR) plays important roles in reducing the R-form of MetO to Met to maintain intracellular redox balance. However, the relationship between SelR and Aβ was little investigated.