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## Research Areas

Health Sciences

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Visualizing hydrogen peroxide and nitric oxide dynamics in endothelial cells using multispectral imaging under controlled oxygen conditions**  
Altun H. Y., Secilmis M., Yang F., Akgul Caglar T., VATANDAŞLAR E., TOY M. F., VILAIN S. P. L., Mann G. E., ÖZTÜRK G., EROĞLU E.  
Free Radical Biology and Medicine, vol.221, pp.89-97, 2024 (SCI-Expanded)
- II. **Deficiency of parkin and PINK1 impairs age-dependent mitophagy in drosophila**  
Cornelissen T., VILAIN S. P. L., Vints K., Gounko N., Verstreken P., Vandenberghe W.  
eLife, vol.7, 2018 (SCI-Expanded)
- III. **The SAC1 domain in synaptojanin is required for autophagosome maturation at presynaptic terminals**  
Vanhouwaert R., Kuenen S., Masius R., Bademosi A., Manetsberger J., Schoovaerts N., Bounti L., Gontcharenko S., Swerts J., VILAIN S. P. L., et al.  
EMBO Journal, vol.36, no.10, pp.1392-1411, 2017 (SCI-Expanded)
- IV. **Tau association with synaptic vesicles causes presynaptic dysfunction**  
Zhou L., McInnes J., Wierda K., Holt M., Herrmann A. G., Jackson R. J., Wang Y., Swerts J., Beyens J., Miskiewicz K., et al.  
Nature Communications, vol.8, 2017 (SCI-Expanded)
- V. **A LRRK2-Dependent EndophilinA Phosphoswitch Is Critical for Macroautophagy at Presynaptic Terminals**  
Soukup S., Kuenen S., Vanhouwaert R., Manetsberger J., Hernández-Díaz S., Swerts J., Schoovaerts N., VILAIN S. P. L., Gounko N. V., Vints K., et al.  
Neuron, vol.92, no.4, pp.829-844, 2016 (SCI-Expanded)
- VI. **Glial  $\beta$ -Oxidation regulates drosophila energy metabolism**  
Schulz J. G., Laranjeira A., Van Huffel L., Gärtner A., VILAIN S. P. L., Bastianen J., Van Veldhoven P. P., Dotti C. G.  
Scientific Reports, vol.5, 2015 (SCI-Expanded)
- VII. **Fast and efficient drosophila melanogaster gene knock-ins using MiMIC transposons**  
VILAIN S. P. L., Vanhouwaert R., Maes I., Schoovaerts N., Soukup L. Z. S., da Cunha R., Lauwers E., Fiers M.,

Verstreken P.

G3: Genes, Genomes, Genetics, vol.4, no.12, pp.2381-2387, 2014 (SCI-Expanded)

- VIII. **PINK1 loss-of-function mutations affect mitochondrial complex I activity via NdufA10 ubiquinone uncoupling**  
Morais V. A., Haddad D., Craessaerts K., De Bock P., Swerts J., VILAIN S. P. L., Aerts L., Overbergh L., Gruiñewald A., Seibler P., et al.  
Science, vol.344, no.6180, pp.203-207, 2014 (SCI-Expanded)
- IX. **Mutations in the Intellectual Disability Gene Ube2a Cause Neuronal Dysfunction and Impair Parkin-Dependent Mitophagy**  
Haddad D. M., VILAIN S. P. L., Vos M., Esposito G., Matta S., Kalscheuer V. M., Craessaerts K., Leyssen M., Nascimento R. M., Vianna-Morgante A. M., et al.  
Molecular Cell, vol.50, no.6, pp.831-843, 2013 (SCI-Expanded)
- X. **Aconitase Causes Iron Toxicity in Drosophila pink1 Mutants**  
Esposito G., Vos M., VILAIN S. P. L., Swerts J., de Sousa Valadas J., van Meensel S., Schaap O., Verstreken P.  
PLoS Genetics, vol.9, no.4, 2013 (SCI-Expanded)
- XI. **LRRK2 Controls an EndoA Phosphorylation Cycle in Synaptic Endocytosis**  
Matta S., Van Kolen K., da Cunha R., van den Bogaart G., Mandemakers W., Miskiewicz K., De Bock P., Morais V. A., VILAIN S. P. L., Haddad D., et al.  
Neuron, vol.75, no.6, pp.1008-1021, 2012 (SCI-Expanded)
- XII. **Vitamin K2 is a mitochondrial electron carrier that rescues pink1 deficiency**  
Vos M., Esposito G., Edirisinghe J. N., VILAIN S. P. L., Haddad D. M., Slabbaert J. R., Van Meensel S., Schaap O., De Strooper B., Meganathan R., et al.  
Science, vol.336, no.6086, pp.1306-1310, 2012 (SCI-Expanded)
- XIII. **The yeast complex I equivalent NADH dehydrogenase rescues pink1 mutants**  
VILAIN S. P. L., Esposito G., Haddad D., Schaap O., Dobрева M. P., Vos M., van Meensel S., Morais V. A., de Strooper B., Verstreken P.  
PLoS Genetics, vol.8, no.1, 2012 (SCI-Expanded)
- XIV. **Conditional mutagenesis in drosophila**  
Choi C. M., VILAIN S. P. L., Langen M., Kelst S. V., Geest N. D., Yan J., Verstreken P., Hassan B. A.  
Science, vol.324, no.5923, pp.54, 2009 (SCI-Expanded)
- XV. **Integrating computational biology and forward genetics in Drosophila**  
Aerts S., VILAIN S. P. L., Hu S., Tranchevent L., Barriot R., Yan J., Moreau Y., Hassan B. A., Quan X.  
PLoS Genetics, vol.5, no.1, 2009 (SCI-Expanded)