



## Short Curriculum Vitae: Katerina Paleologou

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<b>Current Position:</b>	Assistant Professor
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<b>Undergraduate Education:</b>	<b>BSc Hons in Biochemistry with Biomedicine</b> Biological Sciences, Lancaster University, UK
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<b>Post-graduate Education:</b>	<ul style="list-style-type: none"><li>• <b>MSc (by research) in Biomedicine</b> Biological Sciences, Lancaster University, UK Thesis Project “<i>Alzheimer’s Disease and <math>\gamma</math>-Secretase Inhibitors</i>”</li><li>• <b>PhD in Biological Sciences</b> Biological Sciences, Lancaster University, UK Thesis Project “<i>Inhibitors of <math>\alpha</math>-Synuclein Aggregation as a novel Treatment for Parkinson’s disease</i>”</li><li>• <b>Postdoctoral Research Fellow</b> Laboratory of Molecular Neurobiology and Neuroproteomics (LMNN), <i>Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland</i> <i>Research associated with the elucidation of the role of <math>\alpha</math>-synuclein phosphorylation in Parkinson’s disease.</i></li></ul>
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<b>Areas of Interest</b>	<ul style="list-style-type: none"><li>• The physiological function <math>\alpha</math>-synuclein in the brain</li><li>• The role of amyloid aggregation (<math>\alpha</math>-synuclein &amp; <math>\beta</math>-amyloid) in neurodegenerative diseases</li><li>• Identification of <math>\alpha</math>-synuclein aggregation inhibitors</li></ul>
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<b>Distinctions</b>	<ul style="list-style-type: none"><li>• <b>Latsis Foundation –Young Investigator Award 2014</b> <i>A novel approach to define the role of <math>\alpha</math>-synuclein, the protein that promotes Parkinson’s disease, in the cell nucleus</i> Funding: 12.000 €</li></ul>
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<b>Funding</b>	<ul style="list-style-type: none"><li>• <b>Operational Programme “Competitiveness, Entrepreneurship and Innovation” 2014-2020</b> <i>Synthetic biology: from omics technologies to genomic engineering (OMIC-ENGINE)</i> Total Funding: 4.000.000 € Research group Funding: 480.000 € Member of research group</li></ul>
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<b>Representative publications</b>	<ul style="list-style-type: none"><li>• N.N. Vaikath, N.K. Majbour, K.E. <b>Paleologou</b>, M.T. Ardah, E. van Dam, W.D. van de Berg, S.L. Forrest, L. Parkkinen, W.P. Gai, N. Hattori, M. Takamashi, S.J. Lee, D.M. Mann, Y. Imai, G.M. Halliday, J.Y. Li, O.M. El-</li></ul>
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Agnaf. (2015) Generation and characterization of novel conformation-specific monoclonal antibodies for  $\alpha$ -synuclein pathology. *Neurobiol. Dis* **79**: 81-99.

- M.K. Mbefo, M.B. Fares, **K.E. Paleologou**, A. Oueslati, G. Yin, S. Tenreiro, M. Pinto, T. Outeiro, M. Zweckstetter, E. Masliah, H.A. Lashuel. (2015) Parkinson disease mutant E46K enhances  $\alpha$ -synuclein phosphorylation in mammalian cell lines, in yeast, and *in vivo*. *J Biological Chemistry* **290**: 9412-9427.
  - A. Oueslati, **K.E. Paleologou**, B.L. Schneider, P. Aebischer, H.A. Lashuel. (2012) Mimicking phosphorylation at serine 87 inhibits the aggregation of human  $\alpha$ -synuclein and protects against its toxicity in a rat model of Parkinson's disease. *J Neuroscience* **32**: 1536-1544.
  - S. Di Giovanni, S. Eleuteri, **K.E. Paleologou**, G. Yin, M. Zweckstetter, P.A. Carrupt, H.A. Lashuel. (2010) Entacapone and tolcapone, two catechol O-methyltransferase inhibitors, block fibril formation of alpha-synuclein and beta-amyloid and protect against amyloid-induced toxicity. *J Biological Chemistry* **285**: 14941-14954.
  - **K.E. Paleologou\***, A. Oueslati\*, G. Shakked, C.C. Rospigliosi, H.-Y. Kim, G.R. Lamberto, C.O. Fernandez, A. Schmid, F. Chegini, W. P. Gai, D. Chiappe, M. Moniatte, B.L. Schneider, P. Aebischer, D. Eliezer, M. Zweckstetter, E. Masliah, H.A. Lashuel. (2010) Phosphorylation at S87P is enhanced in synucleinopathies, inhibits  $\alpha$ -synuclein oligomerisation and influences synuclein-membrane interactions. *J Neuroscience* **30**: 3184-3198. \*equal contribution
  - **K.E. Paleologou\***, M.K. Mbefo\*, A. Boucharaba, A. Oueslati, D. Olschewski, H. Hirling, and H.A. Lashuel (2010) Phosphorylation of synucleins ( $\alpha$ ,  $\beta$  and  $\gamma$ ) by members of the Polo like family of kinases. *J Biological Chemistry* **285**: 2807-2822. \*equal contribution
  - **K.E. Paleologou**, C.L. Kragh, D.M.A. Mann, S.A. Salem, R. Al-Shami, D. Allsop, A.H. Hassan, P.A. Jensen and O.M.A. El-Agnaf (2009) Detection of elevated levels of soluble  $\alpha$ -synuclein oligomers in post-mortem brain extracts from patients with dementia with Lewy bodies. *Brain*, **132 (Pt 4)**: 1093-1101.
  - **K.E. Paleologou**, A.W. Schmid, C.C. Rospigliosi, H.Y. Kim, G.R. Lamberto, R.A. Fredenburg, P.T. Lansbury Jr, C.O. Fernandez, D. Eliezer, M. Zweckstetter and H.A. Lashuel (2008) Phosphorylation at Ser-129 but not the phosphomimics S129E/D inhibits the fibrillation of  $\alpha$ -synuclein. *J Biological Chemistry*, **283**: 16895-16905.
  - O.M.A. El-Agnaf, S.A. Salem, **K.E. Paleologou**, A.M. Abogrein, M.D. Curran, O.A. Ross, M.J. Gibson, J.A. and D. Allsop. (2006) Detection of oligomeric forms of  $\alpha$ -synuclein protein in cerebrospinal fluid and plasma as a potential biomarker for Parkinson's disease. *FASEB Journal* **18**: 1315-1317.
  - O.M.A. El-Agnaf, **K.E. Paleologou**, B. Greer, A.M. Abogrein, J.E. King,
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S.A. Salem, N.J. Fullwood, F.E. Benson, R. Hewitt, K.J. Ford, F.L. Martin, P. Harriott, M.R. Cookson and D. Allsop. (2004) A strategy for designing inhibitors of  $\alpha$ -synuclein aggregation and toxicity as a novel treatment for Parkinson's disease and related disorders. *FASEB Journal*, 18: 1315-1317.

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