

Stanford



Yann Le Guen

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Bio

EDUCATION AND CERTIFICATIONS

- Master of Science, Imperial College London , Bioengineering with neurotechnology (2015)
- Diplome d'ingénieur, Télécom Paristech , Computer Science, Electronic (2015)
- Doctor of Philosophy, Neurospin, CEA, Université Paris-Saclay , MR imaging, Neuroscience, Imaging-genetic (2018)

Publications

PUBLICATIONS

- **APOE loss-of-function variants: Compatible with longevity and associated with resistance to Alzheimer's disease pathology.** *Neuron*
Chemparathy, A., Le Guen, Y., Chen, S., Lee, E. G., Leong, L., Gorzynski, J. E., Jensen, T. D., Ferrasse, A., Xu, G., Xiang, H., Belloy, M. E., Kasireddy, N., Peña-Tauber, et al
2024
- **Multiancestry analysis of the HLA locus in Alzheimer's and Parkinson's diseases uncovers a shared adaptive immune response mediated by HLA-DRB1*04 subtypes.** *Proceedings of the National Academy of Sciences of the United States of America*
Le Guen, Y., Luo, G., Ambati, A., Damotte, V., Jansen, I., Yu, E., Nicolas, A., de Rojas, I., Peixoto Leal, T., Miyashita, A., Bellenguez, C., Lian, M. M., Parveen, et al
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- **A 3' UTR Deletion Is a Leading Candidate Causal Variant at the TMEM106B Locus Reducing Risk for FTLD-TDP.** *medRxiv : the preprint server for health sciences*
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- **Association of African Ancestry-Specific APOE Missense Variant R145C With Risk of Alzheimer Disease.** *JAMA*
Le Guen, Y., Raulin, A., Logue, M. W., Sherva, R., Belloy, M. E., Eger, S. J., Chen, A., Kennedy, G., Kuchenbecker, L., O'Leary, J. P., Zhang, R., Merritt, V. C., Panizzon, et al
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- **Association of Rare APOE Missense Variants V236E and R251G With Risk of Alzheimer Disease.** *JAMA neurology*
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- **Common X-chromosome variants are associated with Parkinson's disease risk.** *Annals of neurology*
Le Guen, Y., Napolioni, V., Belloy, M. E., Yu, E., Krohn, L., Ruskey, J. A., Gan-Or, Z., Kennedy, G., Eger, S. J., Greicius, M. D.
2021
- **Genome-wide analysis of common and rare variants via multiple knockoffs at biobank scale, with an application to Alzheimer disease genetics.** *American journal of human genetics*

- He, Z., Le Guen, Y., Liu, L., Lee, J., Ma, S., Yang, A. C., Liu, X., Rutledge, J., Losada, P. M., Song, B., Belloy, M. E., Butler, R. R., Longo, et al
2021
- **Enhancer Locus in ch14q23.1 Modulates Brain Asymmetric Temporal Regions Involved in Language Processing.** *Cerebral cortex (New York, N.Y. : 1991)*
Le Guen, Y., Leroy, F., Philippe, C., Mangin, J. F., Dehaene-Lambertz, G., Frouin, V.
2020; 30 (10): 5322-5332
 - **eQTL of KCNK2 regionally influences the brain sulcal widening: evidence from 15,597 UK Biobank participants with neuroimaging data.** *Brain structure & function*
Le Guen, Y., Philippe, C., Riviere, D., Lemaitre, H., Grigis, A., Fischer, C., Dehaene-Lambertz, G., Mangin, J., Frouin, V.
2018
 - **The chaotic morphology of the left superior temporal sulcus is genetically constrained** *NEUROIMAGE*
Le Guen, Y., Leroy, F., Auzias, G., Riviere, D., Grigis, A., Mangin, J., Coulon, O., Dehaene-Lambertz, G., Frouin, V.
2018; 174: 297–307
 - **Genetic Influence on the Sulcal Pits: On the Origin of the First Cortical Folds** *CEREBRAL CORTEX*
Le Guen, Y., Auzias, G., Leroy, F., Noulhiane, M., Dehaene-Lambertz, G., Duchesnay, E., Mangin, J., Coulon, O., Frouin, V.
2018; 28 (6): 1922–33
 - **TREM1 disrupts myeloid bioenergetics and cognitive function in aging and Alzheimer disease mouse models.** *Nature neuroscience*
Wilson, E. N., Wang, C., Swarovski, M. S., Zera, K. A., Ennerfelt, H. E., Wang, Q., Chaney, A., Gauba, E., Ramos Benitez, J. A., Le Guen, Y., Minhas, P. S., Panchal, M., Tan, et al
2024
 - **In silico identification of putative causal genetic variants.** *bioRxiv : the preprint server for biology*
He, Z., Chu, B., Yang, J., Gu, J., Chen, Z., Liu, L., Morrison, T., Belloy, M. E., Qi, X., Hejazi, N., Mathur, M., Le Guen, Y., Tang, et al
2024
 - **Multi-cohort cerebrospinal fluid proteomics identifies robust molecular signatures for asymptomatic and symptomatic Alzheimer's disease.** *Research square*
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 - **Proteo-genomics of soluble TREM2 in cerebrospinal fluid provides novel insights and identifies novel modulators for Alzheimer's disease.** *Molecular neurodegeneration*
Wang, L., Nykänen, N. P., Western, D., Gorijala, P., Timsina, J., Li, F., Wang, Z., Ali, M., Yang, C., Liu, M., Brock, W., Marquié, M., Boada, et al
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 - **A mitochondrial inside-out iron-calcium signal reveals drug targets for Parkinson's disease.** *Cell reports*
Bharat, V., Durairaj, A. S., Vanhauwaert, R., Li, L., Muir, C. M., Chandra, S., Kwak, C. S., Le Guen, Y., Nandakishore, P., Hsieh, C. H., Rensi, S. E., Altman, R. B., Greicius, et al
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 - **Organ aging signatures in the plasma proteome track health and disease.** *Nature*
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 - **APOE Genotype and Alzheimer Disease Risk Across Age, Sex, and Population Ancestry.** *JAMA neurology*
Belloy, M. E., Andrews, S. J., Le Guen, Y., Cuccaro, M., Farrer, L. A., Napolioni, V., Greicius, M. D.
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 - **Loop diuretics association with Alzheimer's disease risk.** *Frontiers in aging*
Graber-Naidich, A., Lee, J., Younes, K., Greicius, M. D., Le Guen, Y., He, Z.
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 - **Improving genetic risk prediction across diverse population by disentangling ancestry representations.** *Communications biology*
Gyawali, P. K., Le Guen, Y., Liu, X., Belloy, M. E., Tang, H., Zou, J., He, Z.
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- **APOE-#4 and BIN1 increase risk of Alzheimer's disease pathology but not specifically of Lewy body pathology.** *Acta neuropathologica communications*
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- **Sex- and APOE-specific genetic risk factors for late-onset Alzheimer's disease: Evidence from gene-gene interaction of longevity-related loci.** *Aging cell*
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- **APOE loss-of-function variants: Compatible with longevity and associated with resistance to Alzheimer's Disease pathology.** *medRxiv : the preprint server for health sciences*
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- **APOE - # 4 and BIN1 increase risk of Alzheimer's disease pathology but not specifically of Lewy body pathology.** *medRxiv : the preprint server for health sciences*
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2023
- **Bumetanide Exposure Association with Alzheimer's Disease Risk.** *Research square*
Graber-Naidich, A., Lee, J., Younes, K., Greicius, M. D., Le Guen, Y., He, Z.
2023
- **GhostKnockoff inference empowers identification of putative causal variants in genome-wide association studies.** *Nature communications*
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- **A Fast and Robust Strategy to Remove Variant-Level Artifacts in Alzheimer Disease Sequencing Project Data.** *Neurology. Genetics*
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Kassani, P. H., Lu, F., Le Guen, Y., Belloy, M. E., He, Z.
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- **Deep neural networks with controlled variable selection for the identification of putative causal genetic variants.** *Nature machine intelligence*
Kassani, P. H., Lu, F., Guen, Y. L., Belloy, M. E., He, Z.
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- **Confirming Pathogenicity of the F386L PSEN1 Variant in a South Asian Family With Early-Onset Alzheimer Disease.** *Neurology. Genetics*
Eger, S. J., Le Guen, Y., Khan, R. R., Hall, J. N., Kennedy, G., Zaharchuk, G., Couthouis, J., Brooks, W. S., Velakoulis, D., Napolioni, V., Belloy, M. E., Dalgard, C. L., Mormino, et al
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- **Challenges at the APOE locus: a robust quality control approach for accurate APOE genotyping.** *Alzheimer's research & therapy*
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- **Identification of putative causal loci in whole-genome sequencing data via knockoff statistics.** *Nature communications*
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- **Genome-wide haplotype association study in imaging genetics using whole-brain sulcal openings of 16,304 UK Biobank subjects** *EUROPEAN JOURNAL OF HUMAN GENETICS*
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- **KLVS heterozygosity reduces brain amyloid in asymptomatic at-risk APOE4 carriers.** *Neurobiology of aging*
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- **Association of Klotho-VS Heterozygosity With Risk of Alzheimer Disease in Individuals Who Carry APOE4.** *JAMA neurology*
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- **"Plis de passage" Deserve a Role in Models of the Cortical Folding Process** *BRAIN TOPOGRAPHY*
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2019
- **Heritability of surface area and cortical thickness: a comparison between the Human Connectome Project and the UK Biobank dataset**
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- **Shared genetic aetiology between cognitive performance and brain activations in language and math tasks** *SCIENTIFIC REPORTS*
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- **PyPNS: Multiscale Simulation of a Peripheral Nerve in Python.** *Neuroinformatics*
Lubba, C. H., Le Guen, Y., Jarvis, S., Jones, N. S., Cork, S. C., Eftekhar, A., Schultz, S. R.
2018
- **A study of feasibility for genome-wide haplotype association of complex traits in imaging genetics**
Karkar, S., Le Guen, Y., Philippe, C., Dandine-Roulland, C., Pierre-Jean, M., Mangin, J., Le Floch, E., Frouin, V., Zheng, H., Callejas, Z., Griol, D., Wang, H., Hu, et al
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- **Regional Study of the Genetic Influence on the Sulcal Pits**
Le Guen, Y., Auzias, G., Dehaene-Lambertz, G., Leroy, F., Mangin, J., Duchesnay, E., Coulon, O., Frouin, V., IEEE
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