

## References

- Aouni, N., Linders, L., Robinson, D., Vandelaer, L., Wiezorek, J., Gupta, G., & Cavill, R. (2021). Interpreting multi-variate models with setPCA. *ArXiv:2111.09138 [Cs, q-Bio]*.  
<http://arxiv.org/abs/2111.09138>
- Collinge, J., Gorham, M., Hudson, F., Kennedy, A., Keogh, G., Pal, S., Rossor, M., Rudge, P., Siddique, D., Spyer, M., Thomas, D., Walker, S., Webb, T., Wroe, S., & Darbyshire, J. (2009). Safety and efficacy of quinacrine in human prion disease (PRION-1 study): A patient-preference trial. *The Lancet. Neurology*, 8(4), 334–344. [https://doi.org/10.1016/S1474-4422\(09\)70049-3](https://doi.org/10.1016/S1474-4422(09)70049-3)
- Daehee Hwang, Inyoul Y Lee, Hyuntae Yoo, Nils Gehlenborg, Ji-Hoon Cho, Brianne Petritis, David Baxter, Rose Pitstick, Rebecca Young, Doug Spicer, Nathan D Price, John G Hohmann, Stephen J DeArmond, George A Carlson, & Leroy E Hood. (2009). A systems approach to prion disease. *Molecular Systems Biology*, 5(1), 252. <https://doi.org/10.1038/msb.2009.10>
- Di Fede, G., Catania, M., Atzori, C., Moda, F., Pasquali, C., Indaco, A., Grisoli, M., Zuffi, M., Guaita, M. C., Testi, R., Taraglio, S., Sessa, M., Gusmaroli, G., Spinelli, M., Salzano, G., Legname, G., Tarletti, R., Godi, L., Pocchiari, M., ... Giaccone, G. (2019). Clinical and neuropathological phenotype associated with the novel V189I mutation in the prion protein gene. *Acta Neuropathologica Communications*, 7(1), 1. <https://doi.org/10.1186/s40478-018-0656-4>
- Eckland, T. E., Shikiya, R. A., & Bartz, J. C. (2018). Independent amplification of co-infected long incubation period low conversion efficiency prion strains. *PLOS Pathogens*, 14(10), e1007323. <https://doi.org/10.1371/journal.ppat.1007323>
- Frost, H. R., Li, Z., & Moore, J. H. (2015). Principal component gene set enrichment (PCGSE). *BioData Mining*, 8, 25. <https://doi.org/10.1186/s13040-015-0059-z>
- Garske, T., & Ghani, A. C. (2010). Uncertainty in the Tail of the Variant Creutzfeldt-Jakob Disease Epidemic in the UK. *PLOS ONE*, 5(12), e15626. <https://doi.org/10.1371/journal.pone.0015626>

- Gogia, N., Chimata, A. V., Deshpande, P., Singh, A., & Singh, A. (2020). Hippo signaling: Bridging the gap between cancer and neurodegenerative disorders. *Neural Regeneration Research*, 16(4), 643–652. <https://doi.org/10.4103/1673-5374.295273>
- Gomez-Gutierrez, R., & Morales, R. (2020). The prion-like phenomenon in Alzheimer's disease: Evidence of pathology transmission in humans. *PLOS Pathogens*, 16(10), e1009004. <https://doi.org/10.1371/journal.ppat.1009004>
- Hargrave, P. A., & McDowell, J. H. (1993). Rhodopsin and Phototransduction. In M. Friedlander & M. Mueckler (Eds.), *International Review of Cytology* (Vol. 137, pp. 49–97). Academic Press. [https://doi.org/10.1016/S0074-7696\(08\)62600-5](https://doi.org/10.1016/S0074-7696(08)62600-5)
- Hijazi, N., Kariv-Inbal, Z., Gasset, M., & Gabizon, R. (2005). PrPSc incorporation to cells requires endogenous glycosaminoglycan expression. *The Journal of Biological Chemistry*, 280(17), 17057–17061. <https://doi.org/10.1074/jbc.M411314200>
- Holman, R. C., Belay, E. D., Christensen, K. Y., Maddox, R. A., Minino, A. M., Folkema, A. M., Haberling, D. L., Hammett, T. A., Kochanek, K. D., Sejvar, J. J., & Schonberger, L. B. (2010). Human Prion Diseases in the United States. *PLOS ONE*, 5(1), e8521. <https://doi.org/10.1371/journal.pone.0008521>
- Huang, J., Wu, S., Barrera, J., Matthews, K., & Pan, D. (2005). The Hippo Signaling Pathway Coordinately Regulates Cell Proliferation and Apoptosis by Inactivating Yorkie, the Drosophila Homolog of YAP. *Cell*, 122(3), 421–434. <https://doi.org/10.1016/j.cell.2005.06.007>
- Imran, M., & Mahmood, S. (2011). An overview of animal prion diseases. *Virology Journal*, 8(1), 493. <https://doi.org/10.1186/1743-422X-8-493>
- Jackson, D. A. (1993). Stopping Rules in Principal Components Analysis: A Comparison of Heuristical and Statistical Approaches. *Ecology*, 74(8), 2204–2214. <https://doi.org/10.2307/1939574>
- Jolliffe, I. T., & Cadima, J. (2016). Principal component analysis: A review and recent developments. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 374(2065), 20150202. <https://doi.org/10.1098/rsta.2015.0202>

- Kanyongo, G. (2005). Determining The Correct Number Of Components To Extract From A Principal Components Analysis: A Monte Carlo Study Of The Accuracy Of The Scree Plot. *Journal of Modern Applied Statistical Methods*, 4, 120–133.  
<https://doi.org/10.22237/jmasm/1114906380>
- Kara, D. (2009). Evaluation of trace metal concentrations in some herbs and herbal teas by principal component analysis. *Food Chemistry*, 114(1), 347–354.  
<https://doi.org/10.1016/j.foodchem.2008.09.054>
- Lenahan, C., Sanghavi, R., Huang, L., & Zhang, J. H. (2020). Rhodopsin: A Potential Biomarker for Neurodegenerative Diseases. *Frontiers in Neuroscience*, 14, 326.  
<https://doi.org/10.3389/fnins.2020.00326>
- Liang, K.-H. (2013). 3—Transcriptomics. In K.-H. Liang (Ed.), *Bioinformatics for Biomedical Science and Clinical Applications* (pp. 49–82). Woodhead Publishing.  
<https://doi.org/10.1533/9781908818232.49>
- Liu, A., Zhang, Y., Gehan, E., & Clarke, R. (2002). Block principal component analysis with application to gene microarray data classification. *Statistics in Medicine*, 21(22), 3465–3474.  
<https://doi.org/10.1002/sim.1263>
- Mao, W., Zaslavsky, E., Hartmann, B. M., Sealfon, S. C., & Chikina, M. (2019). Pathway-level information extractor (PLIER) for gene expression data. *Nature Methods*, 16(7), 607–610.  
<https://doi.org/10.1038/s41592-019-0456-1>
- McKintosh, E., Tabrizi, S. J., & Collinge, J. (2003). Prion diseases. *Journal of Neurovirology*, 9(2), 183–193. <https://doi.org/10.1080/13550280390194082>
- Mead, S. (2006). Prion disease genetics. *European Journal of Human Genetics*, 14(3), 273–281.  
<https://doi.org/10.1038/sj.ejhg.5201544>
- Melit Devassy, B., & George, S. (2020). Dimensionality reduction and visualisation of hyperspectral ink data using t-SNE. *Forensic Science International*, 311, 110194.  
<https://doi.org/10.1016/j.forsciint.2020.110194>
- Mubeen, S., Hoyt, C. T., Gemünd, A., Hofmann-Apitius, M., Fröhlich, H., & Domingo-Fernández, D. (2019). The Impact of Pathway Database Choice on Statistical Enrichment Analysis and

- Predictive Modeling. *Frontiers in Genetics*, 10, 1203.  
<https://doi.org/10.3389/fgene.2019.01203>
- Porta, M., & Morabia, A. (2004). Editorial: Why Aren't We More Ahead? The Risk of Variant Creutzfeldt-Jakob Disease from Eating Bovine Spongiform Encephalopathy-Infected Foods: Still Undetermined. *European Journal of Epidemiology*, 19(4), 287–289.
- Prasad, K. N., & Bondy, S. C. (2018). Oxidative and Inflammatory Events in Prion Diseases: Can they Be Therapeutic Targets? *Current Aging Science*, 11(4), 216–225.  
<https://doi.org/10.2174/1874609812666190111100205>
- Rai, S., Singh, P., Steinbusch, H., Vamanu, E., Ashraf, G., & Singh, M. (2021). The Role of Vitamins in Neurodegenerative Disease: An Update. *Biomedicines*.  
<https://doi.org/10.3390/biomedicines9101284>
- Reimand, J., Isser, R., Voisin, V., Kucera, M., Tannus-Lopes, C., Rostamianfar, A., Wadi, L., Meyer, M., Wong, J., Xu, C., Merico, D., & Bader, G. D. (2019). Pathway enrichment analysis and visualization of omics data using g:Profiler, GSEA, Cytoscape and EnrichmentMap. *Nature Protocols*, 14(2), 482–517. <https://doi.org/10.1038/s41596-018-0103-9>
- Ringnér, M. (2008). What is principal component analysis? *Nature Biotechnology*, 26(3), 303–304.  
<https://doi.org/10.1038/nbt0308-303>
- Sahab, U., Md, & Shah, A., Md. (2018). *Handbook of Research on Critical Examinations of Neurodegenerative Disorders*. IGI Global.
- Sahu, M. R., & Mondal, A. C. (2020). The emerging role of Hippo signaling in neurodegeneration. *Journal of Neuroscience Research*, 98(5), 796–814. <https://doi.org/10.1002/jnr.24551>
- Silva, J. L., Vieira, T. C. R. G., Gomes, M. P. B., Rangel, L. P., Scapin, S. M. N., & Cordeiro, Y. (2011). Experimental approaches to the interaction of the prion protein with nucleic acids and glycosaminoglycans: Modulators of the pathogenic conversion. *Methods*, 53(3), 306–317.  
<https://doi.org/10.1016/j.ymeth.2010.12.002>
- Soto, C., & Satani, N. (2011). The intricate mechanisms of neurodegeneration in prion diseases. *Trends in Molecular Medicine*, 17(1), 14–24. <https://doi.org/10.1016/j.molmed.2010.09.001>
- Stafford, P. (2008). *Methods in Microarray Normalization*. CRC Press.

- Todorov, H., Fournier, D., & Susanne, G. (2018). Principal components analysis: Theory and application to gene expression data analysis. *Genomics and Computational Biology*, 4, 100041. <https://doi.org/10.18547/gcb.2018.vol4.iss2.e100041>
- Tsuyuzaki, K., Sato, H., Sato, K., & Nikaido, I. (2020). Benchmarking principal component analysis for large-scale single-cell RNA-sequencing. *Genome Biology*, 21(1), 9. <https://doi.org/10.1186/s13059-019-1900-3>
- University of Edinburgh. (2015, August 4). *Brain infection study reveals how disease spreads from gut: Research could enable earlier detection of prion diseases*. ScienceDaily. <https://www.sciencedaily.com/releases/2015/08/150804103448.htm>
- Vallabh, S. M., Minikel, E. V., Schreiber, S. L., & Lander, E. S. (2020). Towards a treatment for genetic prion disease: Trials and biomarkers. *The Lancet. Neurology*, 19(4), 361–368. [https://doi.org/10.1016/S1474-4422\(19\)30403-X](https://doi.org/10.1016/S1474-4422(19)30403-X)
- Verhaak, R. G., Staal, F. J., Valk, P. J., Lowenberg, B., Reinders, M. J., & de Ridder, D. (2006). The effect of oligonucleotide microarray data pre-processing on the analysis of patient-cohort studies. *BMC Bioinformatics*, 7(1), 105. <https://doi.org/10.1186/1471-2105-7-105>
- Wagner, F. (2015). *GO-PCA: An Unsupervised Method to Explore Biological Heterogeneity Based on Gene Expression and Prior Knowledge* (p. 018705). <https://doi.org/10.1101/018705>
- Yang, D., Zhao, D., Shah, S. Z. A., Wu, W., Lai, M., Zhang, X., Li, J., Guan, Z., Zhao, H., Li, W., Gao, H., Zhou, X., & Yang, L. (2020). Implications of gut microbiota dysbiosis and metabolic changes in prion disease. *Neurobiology of Disease*, 135, 104704. <https://doi.org/10.1016/j.nbd.2019.104704>