

REFERENCES

- [1] I. F. Martins. A. L. Teixeira. L. Pinheiro. and A. O. Falcao. “A Bayesian approach to in Silico blood-brain barrier penetration modeling.” *J Chem Inf Model.* vol. 52. no. 6. pp. 1686–1697. Jun. 2012. doi: 10.1021/ci300124c.
- [2] M. A. Erickson. E. M. Rhea. R. C. Knopp. and W. A. Banks. “Interactions of sars-cov-2 with the blood–brain barrier.” *International Journal of Molecular Sciences.* vol. 22. no. 5. MDPI AG. pp. 1–28. Mar. 01. 2021. doi: 10.3390/ijms22052681.
- [3] Y. Chen and L. Liu. “Modern methods for delivery of drugs across the blood-brain barrier.” *Advanced Drug Delivery Reviews.* vol. 64. no. 7. pp. 640–665. May 15. 2012. doi: 10.1016/j.addr.2011.11.010.
- [4] Q. He et al.. “Towards improvements for penetrating the blood-brain barrier—recent progress from a material and pharmaceutical perspective.” *Cells.* vol. 7. no. 4. MDPI. Apr. 01. 2018. doi: 10.3390/cells7040024.
- [5] S. Alsenan. I. Al-Turaiki. and A. Hafez. “A Recurrent Neural Network model to predict blood–brain barrier permeability.” *Comput Biol Chem.* vol. 89. Dec. 2020. doi: 10.1016/j.compbiolchem.2020.107377.
- [6] Z. Wu et al.. “Artificial neural network approach for predicting blood brain barrier permeability based on a group contribution method.” *Comput Methods Programs Biomed.* vol. 200. Mar. 2021. doi: 10.1016/j.cmpb.2021.105943.
- [7] F. Plisson and A. M. Piggott. “Predicting blood–brain barrier permeability of marine-derived kinase inhibitors using ensemble classifiers reveals potential hits for neurodegenerative disorders.” *Mar Drugs.* vol. 17. no. 2. Jan. 2019. doi: 10.3390/md17020081.
- [8] B. Mazumdar. P. K. Deva Sarma. H. J. Mahanta. and G. N. Sastry. “Machine learning based dynamic consensus model for predicting blood-brain barrier permeability.” *Comput Biol Med.* vol. 160. p. 106984. Jun. 2023. doi: 10.1016/J.COMPBIMED.2023.106984.
- [9] R. Kumar. A. Sharma. A. Alexiou. A. L. Bilgrami. M. A. Kamal. and G. M. Ashraf. “DeePred-BBB: A Blood Brain Barrier Permeability Prediction Model With Improved Accuracy.” *Front Neurosci.* vol. 16. May 2022. doi: 10.3389/fnins.2022.858126.
- [10] R. Y. Sun. “Optimization for Deep Learning: An Overview.” *Journal of the Operations Research Society of China.* vol. 8. no. 2. pp. 249–294. Jun. 2020. doi: 10.1007/s40305-020-00309-6.
- [11] J. A. Castillo -Garit. G. M. Casanola-Martin. H. Le-Thi-Thu. H. Pham-The. and S. J. Barigye. “A Simple Method to Predict Blood-Brain Barrier Permeability of Drug- Like Compounds Using Classification Trees.” *Med Chem (Los Angeles).* vol. 13. no. 7. pp. 664–669. 2017.
- [12] [H. Li. C. W. Yap. C. Y. Ung. Y. Xue. Z. W. Cao. and Y. Z. Chen. “Effect of selection of molecular descriptors on the prediction of blood-brain barrier penetrating and nonpenetrating agents by statistical learning methods.” *J Chem Inf Model.* vol. 45. no. 5. pp. 1376–1384. 2005. doi: 10.1021/CI050135U.

- [13] L. Zhang. H. Zhu. T. I. Oprea. A. Golbraikh. and A. Tropsha. “QSAR modeling of the blood-brain barrier permeability for diverse organic compounds.” *Pharm Res.* vol. 25. no. 8. pp. 1902–1914. Aug. 2008. doi: 10.1007/S11095-008-9609-0.
- [14] S. Doniger. T. Hofmann. and J. Yeh. “Predicting CNS permeability of drug molecules: Comparison of neural network and support vector machine algorithms.” *Journal of Computational Biology.* vol. 9. no. 6. pp. 849–864. 2002. doi: 10.1089/10665270260518317.
- [15] Y. H. Zhao et al.. “Predicting penetration across the blood-brain barrier from simple descriptors and fragmentation schemes.” *J Chem Inf Model.* vol. 47. no. 1. pp. 170–175. 2007. doi: 10.1021/CI600312D.
- [16] A. Y. Al-Bakri and M. Sazid. “Application of Artificial Neural Network (ANN) for Prediction and Optimization of Blast-Induced Impacts.” *Mining.* vol. 1. no. 3. pp. 315–334. Nov. 2021. doi: 10.3390/mining1030020.
- [17] S. Mirjalili. “SCA: A Sine Cosine Algorithm for solving optimization problems.” *Knowl Based Syst.* vol. 96. pp. 120–133. Mar. 2016. doi: 10.1016/j.knosys.2015.12.022.
- [18] R. Talaei Pashiri. Y. Rostami. and M. Mahrami. “Spam detection through feature selection using artificial neural network and sine–cosine algorithm.” *Mathematical Sciences.* vol. 14. no. 3. pp. 193–199. Sep. 2020. doi: 10.1007/s40096-020-00327-8.
- [19] M. Gajevic et al.. “Artificial Neural Network Tuning by Improved Sine Cosine Algorithm for HealthCare 4.0.” in Proceedings of the 1st International Conference on Innovation in Information Technology and Business (ICIITB 2022). Atlantis Press International BV. 2023. pp. 289–305. doi: 10.2991/978-94-6463-110-4_21.