

Sun Choi

Global AI Drug Discovery Center; College of Pharmacy and Graduate School of Pharmaceutical Sciences, Ewha Womans University

Professor

sunchoi@ewha.ac.kr



Website

<http://caddsc.ewha.ac.kr/>

Social Media Channel

Research Field(s)

Computer-Aided Drug Design (CADD), Molecular Modeling, Drug Discovery

Academic Career

B.S., 1987, Ewha Womans University.; Ph.D., 1999, State University of New York at Buffalo; Post-doc, 1997-2001, Northwestern University (supervisor: Prof. Richard B. Silverman); Molecular Modeler/Computational Chemist, 2001-2005, Tripos, Inc.; Assistant Professor, 2005-2011, Ewha Womans University.; Associate Professor, 2011-2016, Ewha Womans University; Professor, 2016-present, Ewha Womans University; Chair, 2015-2017, Department of Pharmacy, College of Pharmacy, Ewha Womans University; Director, 2020-present, "Global AI Drug Discovery Center"; President, 2022-present, the Korean Biophysical Society; Chair of the Expert Committee on Life Sciences and Medicine, 2021-present, Presidential Advisory Council on Science and Technology of Korea; Associate Editor, 2023-present, ACS Medicinal Chemistry Letters

Selected Publications

1. "Albumin-binding photosensitizer capable of targeting glioma via the SPARC pathway" X. Li, J. S. Oh, Y. Lee, E. C. Lee, M. Yang, N. Kwon, T. W. Ha, D-Y. Hong, Y. Song, H. K. Kim, B. H. Song, S. Choi*, M. R. Lee*, J. Yoon*, Biomaterials Research, 2023, 27, 6412-6423
2. "Dynamic allosteric networks drive adenosine A1 receptor activation and G-protein" M.A.M.Solano*, S. Choi* eLife, 2023, 12:RP90773
3. "GPCR Agonist-to-Antagonist Conversion: Enabling the Design of Nucleoside Functional Switches for the A2A Adenosine Receptor" A. Shiriaeva, D. Park, G. Kim, Y. Lee, X. Hou, D. B. Jarhad, G. Kim, J. Yu, Y. E. Hyun, W. Kim, Z-G. Gao, K. A. Jacobson, G. W. Han, R. C. Stevens, L. S. Jeong*, S. Choi*, V. Cherezov* Journal of Medicinal Chemistry, 2022, 65(17), 11648-11657 (Cover)
4. "N-terminus-independent activation of c-Src via binding to a tetraspan(in) TM4SF5 in hepatocellular carcinoma is abolished by the TM4SF5 C-terminal peptide application" H. E. Song*, Y. Lee*, E. Kim*, C. Y. Cho, O. Jung, D. Lee, E.G. Lee, S. H. Nam, M. Kang, S. J. Y. Macalino, J. E. Kim, J. W. Jung, S. W. Kwon, S. Choi*, J. W. Lee*, Theranostics, 2021, 11(16), 8092-8111
5. " Subtle Chemical Changes Cross the Boundary between Agonist and Antagonist: New A3 Adenosine Receptor Homology Models and Structural Network Analysis Can Predict This Boundary;" Y. Lee, X. Hou, J. H. Lee, A. Nayak, V. Alexander, P. K. Sharma, H. Chang, K. Phan, Z.-G. Gao, K. A. Jacobson, S. Choi*, L. S. Jeong*, Journal of Medicinal Chemistry, 2021, 64(17), 12525-12536 (Cover)
6. "Discovery of Benzopyridone-based Transient Receptor Potential Vanilloid 1 (TRPV1) Agonists and Antagonists and the Structural Elucidation of Their Activity Shift" S. A. Thorat, Y. Lee, A. Jung, J. Ann, S. Ahn, J. Baek, D. Zuo, N. Do, J. J. Jeong, P. M. Blumberg, T.E. Esch, N.A. Turcios, L.V. Pearce, H-J. Ha, Y. D. Yoo, S. Hong, S. Choi*, J. Lee*, Journal of Medicinal Chemistry, 2021, 64(1), 370-384
7. "Transmembrane 4 L Six Family Member 5 Senses Arginine for mTORC1 Signaling" J. W. Jung, S. J. Y. Macalino, M. Cui, J. E. Kim, H. J. Kim, D. G. Song, S. H. Nam, S. Kim, S. Choi*, J. W. Lee*, Cell Metabolism, 2019, 29(6), 1306-1319
8. "In Vivo Albumin Traps Photosensitizer Monomers from Self-Assembled Phthalocyanine Nanovesicles: A Facile and Switchable Theranostic Approach" X. Li, S. Yu, Y. Lee, T. Guo, N. Kwon, D. Lee, S. C. Yeom, Y. Cho, G. Kim, J.-D. Huang*, S. Choi*, K. T. Nam*, J. Yoon*, Journal of the American Chemical Society, 2019, 141(3), 1366-1372 (Cover)
9. "Water-Soluble Phthalocyanines Selectively Bind to Albumin Dimers: A Green Approach Toward Enhancing Tumor-Targeted Photodynamic Therapy" X. Li, K. Jeong, Y. Lee, T. Guo, D. Lee, J. Park, N. Kwon, J.-H. Na, S. K. Hong, S.-S. Cha, J.-D. Huang*, S. Choi*, S. Kim*, J. Yoon*, Theranostics, 2019, 9(22), 6412-6423