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Last updated: 2025.09.

Previous posts

Korea Institute of Oriental Medicine Post-Doc. Advisor: Jeeyeon Jung, M.D.(KMD), Ph.D. TKM (Traditional Korean Medicine) approach for Healthy aging	2024-2025
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Education

Gachon University Ph.D. in Traditional Korean Medicine Advisor: Chang-Eop Kim, M.D.(KMD), Ph.D. Thesis: Combinatory Use of Herbs Can Increase Consistency of Herbal Medicine: Investigation by mathematical modeling and simulation approach	2020-2024
Gachon University M.S. in Traditional Korean Medicine Advisor: Chang-Eop Kim, M.D.(KMD), Ph.D. Thesis: Generating Synthetic Patient Records using Gaussian Mixture model	2018-2020
Korea National Open University B.S. in Statistics and Data Science	2018-2021
Dongshin University B.S. in Traditional Korean medicine	2012-2018

Research Interests

Metabolomics

Pharma Metabolomics (herbal medicines)

Clinical Metabolomics

Data science-based analysis for medicine

Discovering the rules inherent in acupuncture point selection

Mathematical modeling and in-silico simulation for combinatory use of herbal medicine

Application of machine learning to medical research

Application of large language models (GPT-4) in traditional Korean medicine

Synthetic patient data generation using topological data analysis

In silico drug analysis

Prediction of mechanisms of herbal medicine

Awards and Honors

7. Excellent Presentation Award, Korea Metabolomics Society	2024
6. Award for model graduate student, Graduate School of Gachon University, Korea	2024
5. Grand Prize at the Future Talent Awards, The Society of Korean Medicine	2024
4. Award for poster presentation, The 20th International Congress of Oriental Medicine	2023
3. Scholarship for academic excellence, Gachon University, Korea	2020
2. Excellence award in oral presentation, Annual Symposium of Society for Meridian and Acupoint, Korea	2019
1. Poster Award, Korean Medicine Big Concert of Korean Medical Information Corporation, Korea	2018

Workshops & Training

3. Seoul National University AI-BIO Researcher Training Program, Artificial Intelligence Institute, Seoul National University	2022
2. Genomic Analytics Specialist Advanced Course, Seoul National University	2021

1. Genomic Analytics Specialist Basic Course, Seoul National University	2020
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Research projects

4. Research on Technology Development for Quality Assessment of Korean Herbal Medicine (Herbal Medicine) Preparations, Korea Health Industry Development Institute - Candidate herbal medicine (herbal medicine) selection and bioinformatics analysis	2021-2023
3. Development of the virtual patient records generation methods in Korean Medicine based on the intrinsic manifold structure of the Korean medical records, National Research Foundation of Korea - Tabular clinical data analysis	2021-2022
2. Machine Learning-Based Decision-Making System Structure Analysis of Traditional Asian Medicine Literature, Korea Institute of Oriental Medicine - Text data analysis	2020-2020
1. Identification of neural network-based computational principles of Korean medicine diagnosis and treatment process and development of Korean clinical decision-making AI model, Korea Institute of Oriental Medicine - Text data analysis - Linear/nonlinear analysis framework development	2019-2019

Publications

The latest publication list can be found on [Google Scholar](#).

* Co-first author

14. D. Jang and C.-E. Kim. " GPT-4 can pass the Korean National Licensing Examination for Korean Medicine Doctors ". PLOS Digital Health. 2(12): e0000416.	2023
13. Lee, J. H.*, Jang, D.* , Lee, M. J., Shin, M. S., Kim, C. E., Park, J. Y., & Kang, K. S.. Regulation of appetite-related neuropeptides by herbal medicines: research using microarray and network pharmacology . Applied Biological Chemistry, 66(1), 68.	2023
12. M. Kim, M.-H. Kim, M. Lee, D. Jang and S.-Y. Park. " Survey and Suggestions on the Educational and Research Environment of Graduate	2023

[Students of Korean Medicine: Focusing on fostering of KMD-scientist".](#)

Journal of Korean Medicine. 44(3): 59-73.

11. **Jang, D.**, et al. "[Network Pharmacological Analysis on the Herbal Combinations for Mitigating Inflammation in Respiratory Tracts and Experimental Evaluation.](#)" Healthcare. 11.1 2023
10. **Jang, D.**, Lee, E., Lee, S., Kwon, Y., Kang, K. S., Kim, C. E., & Kim, D. (2022). [System-level investigation of anti-obesity effects and the potential pathways of Cordyceps militaris in ovariectomized rats.](#) BMC Complementary Medicine and Therapies, 22(1), 1-13. 2022
9. HM Phung*, **D Jang***, TA Trinh, D Lee, QN Nguyen, CE Kim, KS Kang. "[Regulation of appetite-related neuropeptides by Panax ginseng: A novel approach for obesity treatment.](#)" Journal of Ginseng Research (2022). 2022
8. **D Jang**, H Jeong, CE Kim, J Leem. "[A System-Level Mechanism of Anmyungambi Decoction for Obesity: A Network Pharmacological Approach.](#)" Biomolecules 11.12 (2021): 1881. 2021
7. J Park*, **D Jang***, HM Phung, TJ Choi, CE Kim, S Lee, KS Kang, SH Choi. "[The potential of pharmacological activities of the multi-compound treatment for GERD: literature review and a network pharmacology-based analysis.](#)" Applied Biological Chemistry 64.1 (2021): 1-17. 2021
6. **D Jang**, NH Cho, KE Lee, YK Kwon, CE Kim. "[Traditional Korean Medicine Research Using Methods in Complexity Science: Current Status and Prospect.](#)" Journal of Physiology & Pathology in Korean Medicine 35.5 (2021): 151-161. 2021
5. **D Jang**, KC Oh, ES Jung, SJ Cho, JY Lee, YJ Lee, CE Kim, IJ Yang. "[Diversity of Acupuncture Point Selections According to the Acupuncture Styles and Their Relations to Theoretical Elements in Traditional Asian Medicine: A Data-Mining-Based Literature Study.](#)" Journal of Clinical Medicine 10.10 (2021): 2059. 2021
4. HM Phung, H Lee, S Lee, **D Jang**, CE Kim, KS Kang, CS Seo, YK Choi. "[Analysis and anticancer effects of active compounds from Spatholobi caulis in human breast cancer cells.](#)" Processes 8.9 (2020): 1193. 2020
3. **D Jang**, Y Ha, CY Lee, CE Kim. "[Analysis of Symptoms-Herbs Relationships in Shanghanlun Using Text Mining Approach.](#)" Journal of Physiology & Pathology in Korean Medicine 34.4 (2020): 159-169. 2020
2. YC Yun*, **D Jang***, SB Yoon, D Kim, DH Choi, O Kwon, YM Lee, D Youn. "[Laser acupuncture exerts neuroprotective effects via regulation of Creb, Bdnf, Bcl-2, and Bax gene expressions in the hippocampus.](#)" Evidence-Based Complementary and Alternative Medicine 2017 (2017). 2017

1. **D Jang**, H Shin. "[The Phenomenological Study on the Health and Life of Low-income Seniors who live in Poverty Area in Metropolitan City.](#)" Journal of Society of Preventive Korean Medicine 21.2 (2017): 79-94. 2017

Presentations (Talks / Posters, International)

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3. Current Status and Future of Network Pharmacology for Traditional Herbal Medicine Research, The 67th Annual Meeting and International Symposium of Korean Society of Life Science 2025
 2. **(Awarded)** Application of molecular networking for comparing multiple LC/MS profiles from herbal medicines, The 20th International Congress of Oriental Medicine 2023
 1. Generation of Synthetic Patient Data Using Topological Data Analysis, Conference on Health, Inference, and Learning 2023

Teaching

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| Basic Programming in Medicine, Dong-Eui University | 2025~ |
| Physiology in Korean Medicine, Dong-Eui University | 2025~ |
| Seminar on Basic Research Papers in Korean Medicine, Dong-Eui University | 2025~ |
| Introduction to Traditional Korean Medicine, Dong-Eui University | 2025~ |
| Physiology, Gachon University | 2023 |
| The Basics of Analysis of Natural Product Data, National Institute of the Korean Medicine Development | 2023 |
| The Basics of Network Pharmacology, The Korean Society of Pharmacognosy | 2023 |
| Practical Workshop on Traditional Korean Medicine Data Analytics, National Institute of the Korean Medicine Development | 2022 |