CURRICULUM VITAE

Gyoonhee Han, Ph. D, FRSC
Fellow, Royal Society of Chemistry, UK
CEO, S2Cbio
Director, BMDRC
Director General, K-NIBRT

Professor
Department of Biotechnology
Department of Pharmacy
Department of Life Science and Biotechnology (UIC)
Yonsei University

Educational Background:

Aug. 1992 - June 1997 **Pennsylvania State University**
Department of Chemistry, Ph. D. in Chemistry
Thesis Advisor: Professor Steven M. Weinreb
"Development of New Amide Oxidation Methodology and Its Application to Enatioselective Total Synthesis of the *Securinega* Alkaloid: Approach to (+)-8,9- Dihydro- norsecurinine and (-)-Norsecurinine"

March 1988 - Feb. 1990 **Seoul National University**
College of Pharmacy, M.S. in Medicinal Chemistry
Thesis Advisor: Professor Deukjoon Kim

March 1984 - Feb. 1988 **Seoul National University**
College of Pharmacy, B.S. in Pharmacy

Professional Experience:

Feb, 2024 – Present **Director,** University-Industry Collaboration Park Project, Yonsei University

Jan. 2023 - Present **Director General & Director,** K-NIBRT Education Centre, Yonsei University

May 2021 - Present **Professor**, Department of Pharmacy, Yonsei University

Sep. 2009 - Present **Professor**, Department of the Integrated OMICS for Biomedical Sciences (WCU Program in Graduate School), Yonsei University

Mar. 2008 - Present **Professor**, Department of Biotechnology, Yonsei University

Mar. 2020 - Feb. 2021 **Director**, Research Institute of Integrated Biotechnology and

Translational Medicine

Mar. 2018 - Feb. 2020 **Chairperson**, Korea Association of Pharmacy Education

Mar. 2016 - Feb. 2018 **Senior Director**, Korea Association of Pharmacy Education

Feb. 2015 - Jan. 2021 **Dean**, College of Pharmacy, Yonsei University

Mar. 2014 - Feb. 2016 **Director,** Division of Integrated Science and Engineering, Underwood International College, Yonsei University

Sep. 2013 - Feb. 2015 **Associate Dean for Planning**, Underwood International College, Yonsei University

Sep. 2011 - Aug. 2013 **Head**, Department of Biotechnology, Yonsei University

Apr. 2010 - Jan. 2011 **Vice Chair**, Preparative Committee for College of Pharmacy, Yonsei University

Mar. 2008 - Feb. 2010 **Associate Dean**, College of Life Science and Biotechnology, Yonsei University

Sep. 2004 - Mar. 2008 **Associate Professor**, Department of Biotechnology, Yonsei University

Feb. 2002 - Aug. 2004 **Senior Research Scientist**, Korea Research Institute of Bioscience and Biotechnology

Sept. 1999 - Feb. 2002 **Senior Research Scientist**, Bayer Research Center Kyoto
"Development of New Chemical Entity for Asthma Therapy"

July 1997 - Aug. 1999 **Postdoctoral Fellow**, Department of Chemistry, Johns Hopkins University
Research Advisor: Professor Gary H. Posner
"Design, Development and Biological Evaluation of the Conceptually New Antiproliferative Analogs of 1α,25-dihydroxyvitamin D3"

Mar. 1991 - June 1992 **Commissioned Research Scientist**, Korea Institute of Science and Technology (KIST)

Awards and Honors

- ✓ **The Prime Minister's award for the Scientific Achievement and Promotion (in 43rd Korean National Science Day, 2010. 4. 23)**
- ✓ **The Best Teaching Award in 2008, Yonsei University**
- ✓ **The Outstanding Research Award in 2014 (Research Grant), Yonsei University**
- ✓ **The Outstanding Reviewer in 2014, Bioorganic & Medicinal Chemistry**
- ✓ **The Outstanding Reviewer in 2013, Journal of Medicinal Chemistry (2014. 7. 2)**
- ✓ **The Outstanding Reviewer in 2016, Journal of Medicinal Chemistry (2017. 2. 7)**
- ✓ **Cover Highlighted Article (The Journal of Organic Chemistry: 2000. 10. 8)**

ACS Short Course:

"The Organic Chemistry of Drug Design and Drug Action"

by Professor Richard Silverman (Northwestern University)

Academic Affiliations

- ✓ Editorial Advisory Board: RSC Medicinal Chemistry
- ✓ Fellow of Royal Society of Chemistry (RSC)
- ✓ Executive Member: Asian Chemical Biology Initiatives
- ✓ Member:

  International: American Chemical Society

  Domestic: Korean Society of Pharmacy, Korean Chemical Society, Korean Society of Bioinformatics and Systems Biology, Korean Society of Biochemistry and Molecular Biology, Korean Society of Biotechnology and Bioengineering

Google Scholar h-index: 37

(https://scholar.google.com/citations?user=cXOTbo0AAAAJ&hl=en)

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Publications (Short list of 130 publications)

1. Development and Evaluation of Indole-Based Phospholipase D Inhibitors for Lung Cancer Immunotherapy. Doona Song, Seong Hun Lim, Yeji Kim, Hyesung Lee, Taehyun Kim, Hocheol Lim, Do Sik Min, Gyoonhee Han*. *Journal of Medicinal Chemistry*, **2024**, *ASAP* **(Selected for the Cover Highlighted Article)**
2. Pan-Transcriptional Enhanced Associated Domain Palmitoylation Pocket Covalent Inhibitor. Jinhyuk Kim, Hadong Kim, Jongwan Kim, Seon Yeon Cho, Sungho Moon, Youngki Yoo, Hanseong Kim, Jin Kwan Kim, Hyejin Jeon, Wan Namkung, Gyoonhee Han*, Kyoung Tai No*, *Journal of Medicinal Chemistry*, **2024**, *67*, 18957–18968.
3. Discovery of Protease-activated receptor 2 antagonists derived from phenylalanine for the treatment of breast cancer. Taegun Kim, Yechan Lee, Hocheol Lim, Yeonhwa Kim, Haeun Cho, Wan Namkung, Gyoonhee Han*, *Bioorganic Chemistry*, **2024**, *150,* 107,496.
4. Novel small molecule-mediated restoration of the surface expression and anion

exchange activity of mutated pendrin causing Pendred syndrome and DFNB4. Jinsei Jung, Shin Hye Noh, Sungwoo Jo, Doona Song, Min Jin Kang, Mi Hwa Shin, Hyun Jae Lee, Jae-Chul Pyun, Wan Namkung*, Gyoonhee Han*, Min Goo Lee*, Jae Young Choi*, *Biomedicine & Pharmacotherapy*, **2023**, *167*, 115445.

5. Discovery of a novel NAMPT inhibitor that selectively targets NAPRT-deficient EMT-subtype cancer cells and alleviates chemotherapy-induced peripheral neuropathy. Minjee Kim, Hyeyoung Kim, Bu-Gyeong Kang, Jooyoung Lee, Taegun Kim, Hwanho Lee, Jane Jung, Myung Joon Oh, Seungyoon Seo, Myung-Jeom Ryu, Yeojin Sung, Yunji Lee, Jeonghun Yeom, Gyoonhee Han*, Sun-Shin Cha*, Hosung Jung*, Hyun Seok Kim*, *Theranostics*, **2023**, *13*, 5075.
6. Structural optimization of novel Ras modulator for treatment of Colorectal cancer by promoting β-catenin and Ras degradation. Seonghwi Choi, Hyuntae Kim, Won-Ji Ryu, Kang-Yell Choi, Taegun Kim, Doona Song, Gyoonhee Han*, *Bioorganic Chemistry*, **2023**, *130*, 106234.
7. Inhibition of phospholipase D1 induces immunogenic cell death and potentiates cancer immunotherapy in colorectal cancer. Won Chan Hwang, Doona Song, Hyesung Lee, Changmok Oh, Seong Hun Lim, Hyeon Jeong Bae, Nam Doo Kim, Gyoonhee Han*, Do Sik Min*, *Experimental & Molecular Medicine*, **2022**, *54*, 1563-1576.
8. Indirubin-3'-alkoxime derivatives for upregulation of Wnt signaling through dual inhibition of GSK-3β and the CXXC5-Dvl interaction. Doona Song, Yunja Lee, Min-Jeong Kang, Jae Won Kim, Soung-Hoon Lee, Kang-Yell Choi, Eun-Yeong Kim, Kiho Lee, Gyoonhee Han,* *Bioorganic Chemistry*, **2022**, *121*, 105664.
9. Development of a DABCO-Succinic Acid Based Catalytic System for the Aza-Michael Addition and Aza-Michael/Knoevenagel Tandem Reaction of Thiazolidine-2,4-dione to Electron Deficient Alkenes. Kilsoo Jung, Sunmi Kim, Seonghwi Choi, Ikyon Kim, Gyoonhee Han*, *Journal of Organic Chemistry*, **2021**, *86*, 16785.
10. Structure-based modification of pyrazolone derivatives to inhibit mTORC1 by targeting the leucyl-tRNA synthetase-RagD interaction. Jae Hyun Kim, Kilsoo Jung, Chulho Lee, Doona Song, Kibum Kim, Hee Chan Yoo, Seung Joon Park, Jong Soon Kang, Kyeong-Ryoon Lee, Sunghoon Kim, Jung Min Han, Gyoonhee Han*, *Bioorganic Chemistry*, **2021**, *112*, 104907.
11. Randomized, controlled trial to evaluate the effect of dapagliflozin on left ventricular diastolic function in patients with type 2 diabetes mellitus: the IDDIA trial. Chi Young Shim, Jiwon Seo, Iksung Cho, Chan Joo Lee, In-Jeong Cho, Purevjargal Lhagvasuren, Seok-Min Kang, Jong-Won Ha, Gyoonhee Han, Yangsoo

Jang, Geu-Ru Hong, *Circulati*on, **2021**, *143*, 510.

12. Discovery of Chemicals to Either Clear or Indicate Amyloid Aggregates by Targeting Memory-Impairing Anti-Parallel Aβ Dimers. Jinny Claire Lee, Hye Yun Kim, Sejin Lee, Jisu Shin, Hyunjin Vincent Kim, Kyeonghwan Kim, Seungyeop Baek, Donghee Lee, Hanna Jeon, DaWon Kim, Seung-Hoon Yang, Gyoonhee Han, Keunwan Park, Jaeho Choi, Jinwoo Park, Jason A Moss, Kim D Janda, YoungSoo Kim, *Angewandte Chemie*, **2020**, *132*, 11588.

13. Novel pendrin inhibitor attenuates airway hyperresponsiveness and mucin expression in experimental murine asthma. Jinhong Park, Hyun Jae Lee, Doona Song, Mia Gi, Sungwoo Jo, Dong-kyu Jeon, Yohan Seo, Bomin Kim, Ho Lee, Wan Namkung*, Gyoonhee Han*, Jae Young Choi*, *Journal of Allergy and Clinical Immunology*, **2019,** *144*, 1425.

14. Nontranslational function of leucyl-tRNA synthetase regulates myogenic differentiation and skeletal muscle regeneration. Kook Son, Jae-Sung You, Mee-Sup Yoon, Chong Dai, Jong Hyun Kim, Nidhi Khanna, Aditi Banerjee, Susan A Martinis, Gyoonhee Han, Jung Min Han, Sunghoon Kim, Jie Chen, *The Journal of Clinical Investigation*, **2019**, *129.* 2088.

15. Simultaneous Suppression of Multiple Programmed Cell Death Pathways by miRNA-105 in Cardiac Ischemic Injury. unhye Shin, Jung-Won Choi, Hanbyeol Moon, Chang Youn Lee, Jun-Hee Park, Jiyun Lee, Hyang-Hee Seo, Gyoonhee Han, Soyeon Lim, Seahyoung Lee, Sang Woo Kim, Ki-Chul Hwang, *Molecular Therapy-Nucleic Acids*, **2019**, *14*, 438-449.

16. RNA-dependent chaperone (chaperna) as an engineered pro-region for the folding of recombinant microbial transglutaminase. Jinhee Lee, Ahyun Son, Paul Kim, Soon Bin Kwon, Ji Eun Yu, Gyoonhee Han, Baik L Seong, *Biotechnology and bioengineering*, **2019**, *116*, 490-502.

17. Glycosylation of hemagglutinin and neuraminidase of influenza a virus as signature for ecological spillover and adaptation among influenza reservoirs, Paul Kim, Yo Jang, Soon Kwon, Chung Lee, Gyoonhee Han, Baik Seong, *Viruses*, 2018, 10, 183

18. Control of leucine-dependent mTORC1 pathway through chemical intervention of leucyl-tRNA synthetase and RagD interaction. Jong Hyun Kim, Chulho Lee, Minji Lee, Haipeng Wang, Kibum Kim, Seung Joon Park, Ina Yoon, Jayun Jang, Hanchao Zhao, Hoi Kyoung Kim, Nam Hoon Kwon, Seung Jae Jeong, Hee Chan Yoo, Jae Hyun Kim, Jee Sun Yang, Myeong Youl Lee, Chang Woo Lee, Jieun Yun, Soo Jin Oh, Jong Soon Kang, Susan A. Martinis, Kwang Yeon Hwang, Min Guo, Gyoonhee Han, Jung Min Han & Sunghoon Kim *Nature Communications* **2017**, 732.

19. Synthetic strategy for increasing solubility of potential FLT3 inhibitor thieno[2,3-d]pyrimidine derivatives through structural modifications at the C2 and C6 positions. Changmok Oh, Hyuntae Kim, Jong Soon Kang, Jieun Yun, Jaejun Sim, Hwan-Mook Kim, Gyoonhee Han *Bioorganic & Medicinal Chemistry Letters* **2017**, *27*, 496–500.

20. Improving potency and metabolic stability by introducing an alkenyl linker to pyridine-based histone deacetylase inhibitors for orally available RUNX3 modulators. Doona Song, Chulho Lee, Yoon Jeong Kook, Soo Jin Oh, Jong Soon Kang, Hyun-Jung Kim, Gyoonhee Han *European Journal of Medicinal Chemistry* **2017**, *126*, 997-1010.

21. Small-molecule binding of the axin RGS domain promotes β-catenin and Ras degradation. Pu-Hyeon Cha, Yong-Hee Cho, Sang-Kyu Lee, JaeHeon Lee, Woo-Jeong Jeong, Byoung-San Moon, Ji-Hye Yun, Jee Sun Yang, Sooho Choi, Juyong Yoon, Hyun-Yi Kim, Mi-Yeon Kim, Saluja Kaduwal, Weontae Lee, Do Sik Min, Hoguen Kim, Gyoonhee Han, Kang-Yell Choi *Nature Chemical Biology* **2016**, *12*, 593-600.

22. Structural modifications at the 6-position of thieno[2,3-d]pyrimidines and their effects on potency at FLT3 for treatment of acute myeloid leukemia. Hyuntae Kim, Chulho Lee, Jee Sun Yang, Seonghwi Choi, Chun-Ho Park, Jong Soon Kang, Soo Jin O, Jieun Yun , Myung-Hwa Kim, Gyoonhee Han *European Journal of Medicinal Chemistry* **2016**, *120* 74-85.

23. M1 RNA is important for the in-cell solubility of its cognate C5 protein: Implications for RNA-mediated protein folding. Ahyun Son, Seong Il Choi, Gyoonhee Han, Baik L Seong *RNA Biology*, **2015**, *12:11*, 1198-1208.