



•Field Virology

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## I Educational background

- 2007-2013 Icahn School of Medicine at Mount Sinai (Ph.D.-Microbiology)
- 1997-2005 Sungkyunkwan University (BS-Genetic Engineering)

## I Major careers

- 2024-Present Associate Professor, Department of Microbiology, College of Medicine, Hallym University
- 2018-2024 Assistant Professor, Department of Microbiology, College of Medicine, Hallym University
- 2013-2018 Research Instructor, Department of Microbiology, College of Medicine, Korea University
- 2013-2013 Postdoctoral Fellow, Department of Pathobiology, Veterinary School of Medicine, University of Pennsylvania
- 2010-2013 Visiting Scholar, Department of Pathobiology, Veterinary School of Medicine, University of Pennsylvania
- 2007 Research Assistant, Division of Hematology, School of Medicine, University of Utah
- 2006-2007 Research Assistant, Vaccine Research

## ■ Publications

1) Kyungmin Park, Minsoo Shin, Augustine Natasha, Jongwoo Kim, Juyoung Noh, Seong-Gyu Kim, Bohyeon Kim, Jieun Park, Ye-rin Seo, Hee-Kyung Cho, Kwan Soo Byun, Ji Hoon Kim, Young-Sun Lee, Jung Ok Shim, Won-Keun Kim and Jin-Won Song, Novel Human Coronavirus in an Infant Patient with Pneumonia, South Korea, *Emerging Microbes and Infection*, doi: 10.1080/22221751.2025.2466705 (2025)

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- 5) Hyungdon Lee, Md. Habibur Rahman, Sofian Abdul-Nasir, Cheol-Su Kim, Bohyeon Kim, Jieun Park, Taehun Lim, Shivani Rajoriya, **Won-Keun Kim** and Soo-Ki Kim, Elucidating the Biological Effects of Cell-Free DNA (cfDNA) Extracted from Septic Mice: *In Vitro* and *In Vivo* Investigations and Mechanistic Insights, *Molecular & Cellular Toxicology*, <https://doi.org/10.1007/s13273-024-00494-y> (2024)
  
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- 7) Augustine Natasha, Sarah E. Pye, Seung Hye Cho, Haryo Seno Pangestu, Jieun Park, Kyungmin Park, Sara P. Prayitno, Bohyeon Kim, Jong Sun Lee, Jongwoo Kim, Shailesh Budhathoki, Jin-Won Song, Carolina B. López, Jun Gyo Suh\*, **Won-Keun Kim**\*, Discovery and Genomic Characterization of the novel Jeilongviruses Samak *Micromys* paramyxovirus-1 and -2 in *Micromys minutus*, *Virology Journal*, 21(255); <https://doi.org/10.1186/s12985-024-02532-6> (2024) **\*Co-correspondence**
  
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- 11) Taehun Lim, Shivani Rajoriya, Bohyeon Kim, Augustine Natasha, Hyeonjoo Im, Hyun Soo Shim, Junsang Yoo, Jong Woo Kim, Eun-Woo Lee, Hye Jin Shin, Soon Ha Kim, **Won-Keun Kim**, *In vitro* broad-spectrum antiviral activity of MIT-001, a mitochondria-targeted reactive oxygen species scavenger, against severe acute respiratory syndrome coronavirus 2 and multiple zoonotic viruses, *Virus Research*, 324; <https://doi.org/10.1016/j.virusres.2024.199325> (2024)
- 12) Kyungmin Park, Jongwoo Kim, Juyoung Noh, Kijin Kim, Eunyoung Yang, Seong-Gyu Kim, Hee-Kyung Cho, Kwan Soo Byun, Ji Hoon Kim, Young-Sun Lee, Jung Ok Shim, Minsoo Shin, **Won-Keun Kim**, and Jin-Won Song, First detection and characterization of hepatitis E virus (Rocahepevirus ratti) from urban Norway rats (*Rattus norvegicus*) in the Republic of Korea, *Journal of Medical Virology*, 96:e29401; <https://doi.org/10.1002/jmv.29401> (2024)
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- 14) Yeonsu Oh, Dongseob Tark, Gwang-Seon Ryoo, Dae-Sung Yoo, Woo H. Kim, Won-Il Kim, Choi-Kyu, Park, **Won-Keun Kim**, Ho-Seong Cho, Decadal analysis of livestock tuberculosis in Korea (2013~2022): Epidemiological patterns and trends, *Korean Journal of Veterinary Service*, 46(4):293-302 (2023)
- 15) Soo Yong Shin, Joo Hee Lee, Jin Woo Kim, Wonkyun Im, Kongara Damodar, Hyung Ryeol Woo, **Won-Keun Kim**, Jeong Lee, Sung-Ho Jeon, Evaluation of the antiviral activity of Tabamide A and its structural derivatives against influenza virus, *International Journal of Molecular Sciences*, 24(24), 17296; <https://doi.org/10.3390/ijms242417296> (2023)
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- 17) Geum-Young Lee, Young-Sun Lee, Ji Hoon Kim, Kwan Soo Byun, Seung Ho Lee, Kyungmin Park, Jongwoo Kim, **Won-Keun Kim** and Jin-Won Song, Molecular Diagnosis of Patients with Hepatitis A Virus Infection Using Amplicon-based Nanopore Sequencing, *PLoS One*, 18(7): e0288361. <https://doi.org/10.1371/journal.pone.0288361> (2023)
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- 21) Kyungmin Park, Seung-Ho Lee, Jongwoo Kim, Jingyeong Lee, Geum-Young Lee, Seungchan Cho, Seung Ho Lee, Jeewan Choi, Juwon Park, Dong-Hyun Song, Se Hun Gu, Hyeongseok Yun, Jeong Eun Kim, Daesang Lee, Gyeong Haeng Hur, Seong Tae Jeong, Won-Keun Kim, and Jin-Won Song, A portable diagnostic assay, genetic diversity, and isolation of Seoul virus from *Rattus norvegicus* collected in Gangwon Province, Republic of Korea, *Pathogens*, 11(9), 1047; <https://doi.org/10.3390/pathogens11091047> (2022)
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- 31) Kyungmin Park\*, **Won-Keun Kim**\*, Seung-Ho Lee, Jongwoo Kim, Jingyeong Lee, Seungchan Cho, Geum-Young Lee, Jin Sun No, Keun Hwa Lee, and Jin-Won Song, A novel genotype of Hantaan Orthohantavirus harbored by *Apodemus agrarius chejuensis* as a potential etiologic agent of Hemorrhagic Fever with Renal Syndrome in Republic of Korea, *PLoS Neglected Tropical Diseases*, 15(5):e0009400 (2021) **\*Equal contribution**
- 32) Kyungmin Park, Seung-Ho Lee, Jongwoo Kim, Jingyeong Lee, Geum-Young Lee, Seungchan Cho, Seung Ho Lee, Kkothanahreum Park, Jin Sun No, Shailesh Budhathoki, Yu-Jin Kim, Young-Su Kim, Heung-Chul Kim, Terry A. Klein, **Won-Keun Kim**, and Jin-Won Song, Multiplex PCR-based Nanopore Sequencing and Epidemiological Surveillance of Hantaan orthohantavirus in *Apodemus agrarius*, Republic of Korea, *Viruses*, 13(5), 847 (2021)
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- 34) Seungchan Cho, Jon C. Allison, Kkothanahreum Park, Jin Sun No, Seung-Ho Lee, Kyungmin Park, Jongwoo Kim, Terry A. Klein, Heung-Chul Kim, **Won-Keun Kim**, Jin-Won Song, A Clinical Case of Scrub typhus in The United States Forces Korea Patient with Eschar and Genetic Identification of *Orientia tsutsugamushi* using Multiplex PCR-based Next-generation Sequencing, *Pathogens*, 10(4), 424, <https://doi.org/10.3390/pathogens10040424> (2021)
- 35) Byoung Kwon Park, Jinsoo Kim, Sangkyu Park, Dongbum Kim, Minyoung Kim, Kyeongbin Baek, Joon-Yong Bae, Man-Seong Park, **Won-Keun Kim**, Younghee Lee, Hyung-Joo Kwon, MERS-CoV and SARS-CoV-2 replication can be inhibited by targeting the interaction between the viral spike protein and the nucleocapsid protein, *Theranostics*, 11(8):3853-3867 (2021)
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- 38) **Won-Keun Kim**, Coronavirus disease COVID-19 *Journal of Disaster Prevention*, ISSN 1976-4294, 22 (2), 20-31 (2020) [http://www.kodipa.or.kr/HyAdmin/view.php?&bbs\\_id=bo01&page=&doc\\_num=131](http://www.kodipa.or.kr/HyAdmin/view.php?&bbs_id=bo01&page=&doc_num=131)
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- 43) Heung-Chul Kim\*, **Won-Keun Kim\***, Jin Sun No, Seung-Ho Lee, Se Hun Gu, Sung-Tae Chong, Terry A. Klein, and Jin-Won Song, Urban Rodent Surveillance, Climatic Association and Genomic Analysis of Seoul Virus Collected at U.S. Army Garrison, Seoul, Republic of Korea, 2006-2010, *American Journal of Tropical Medicine and Hygiene*, 99(2): 470-476 (2018) **\*Equal contribution**
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## ■ Research Interests

- 1) Development of antivirals
- 2) Next-generation sequencing: Comparative genomics
- 3) Virus-host interaction: Virology, Immunology, Epidemiology
- 4) Metagenomic analysis of virome

## ■ Patents

- 1) Anti-virus compound and anti-virus composition (Patent number: 10-2732649, Application number: 10-2021-0106354, Issue date: 2024.11.18), 항바이러스 활성의 화합물 및 이를 포함하는 항바이러스 조성물(국문제목)
- 2) Composition for detecting Hepatitis A virus comprising multiplex primer set, kit for diagnosing Hepatitis A and method for obtaining Hepatitis A virus whole genome sequence (Patent number: 10-2207348) '다중 복합 프라이머

세트를 포함하는 A형 간염 바이러스 검출용 조성물, A형 간염 진단용 키트 및 A형 간염 바이러스의 전장 유전체 서열 획득 방법'

3) Hantavirus Whole Genome Sequence Identification Methods Using a Multiplex PCR-based Next-Generation Sequencing and Uses Thereof (Patent number: 10-1815105) '멀티플렉스 PCR-기반된 차세대 시퀀싱을 이용한 한타바이러스 전장 유전체 서열 획득 방법 및 이의 용도'