KIM, DONGWOOK

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CURRICULUM VITAE

Education

03/2019 - 02/2025	Ph.D. in Bioinformatics at Seoul National University
03/2019 - 02/2022	Completed Master's and Doctor's Integration Course in Bioinformatics at Seoul National University
03/2015 - 02/2019	B.Sc. in Biological Sciences, minor in Computer Sciences at Seoul National University, *cum laude*

Research experience

05/2025 -	Postdoctoral fellow at the Comparative Genomics Group, University of Lausanne. PI: *Prof. Christophe Dessimoz & Dr. Natasha Glover*
03/2025 - 04/2025	Postdoctoral fellow at the Steinegger Lab., Seoul National University. PI: *Prof. Martin Steinegger*
12/2021 - 02/2025	Ph.D. candidate at the Steinegger Lab., Seoul National University. Advisor: *Prof. Martin Steinegger*
03/2019 - 11/2021	Ph.D. candidate at the Laboratory of Evolutionary Bioinformatics, Seoul National University. Advisor: *Prof. Jongsik Chun*
06/2017 - 02/2019	Intern at the Laboratory of Evolutionary Bioinformatics, Seoul National University
06/2014 - 07/2014	Visiting student at the Neurovascular Research Laboratory, Department of Radiology, Massachusetts General Hospital, Harvard Medical School
03/2013 - 02/2014	Visiting student at Hyeon Soo Kim Lab., Department of Anatomy, College of Medicine, Korea University

TALKS, POSTERS, AND PUBLICATIONS

Talks

09/2025 RdRp Summit RNA Virus Journal Club, Virtual, Unicore: Scalable and Accurate Phylogenetics with Structural Core Genes *Invited*

02/2025 The 21st KOGO Winter Symposium, Hongcheon, Korea, Introducing Unicore: A Scalable and Accurate Method for Structural Core Gene Phylogenetics

07/2023 ISMB/ECCB 2023, Lyon, France, UFCG: database of universal fungal core genes and pipeline for genome-wide phylogenetic analysis of fungi

11/2021 IMBG Young Scientist Symposium, Seoul, Korea EzAAI - A High-Throughput Pipeline for Prokaryotic AAI Calculations

Posters

04/2025 RECOMB 2025, Seoul, Korea, Scalable and accurate structural core gene phylogeny with Unicore

02/2025 The 21st KOGO Winter Symposium, Hongcheon, Korea, Introducing Unicore: A Scalable and Accurate Method for Structural Core Gene Phylogenetics

07/2024 SMBE 2024, Puerto Vallarta, Mexico, Unicore Enables Ultra-fast and Accurate Phylogenetic Reconstruction with Structural Core Genes

07/2023 ISMB/ECCB 2023, Lyon, France, UFCG: database of universal fungal core genes and pipeline for genome-wide phylogenetic analysis of fungi

06/2020 ASM Microbe Online, Virtual UUCGf: Whole-Genome Profiling Pipeline of Fungi with Fungal Core Gene Set for High-Resolution Phylogenetics

Publications

* *Correspondence.* † *Equal contributions.*

[1] [Preprint] **Kim D.***, Gil M., Katoh K. and Dessimoz C. (2026), AmpliPhy improves gene trees by adding homologs without affecting alignments, *bioRχiv*, doi: 10.64898/2026.01.26.701724

[2] **Kim D.**†, Park S†. and Steinegger M*. (2025), Unicore enables scalable and accurate phylogenetic reconstruction with structural core genes, *Genome Biol. Evol.*, doi: 10.1093/gbe/evaf109

[3] Park J.†, Lee G.†, Han Y.†, **Kim D.**, Heo K. et al. (2025), Structural basis of the catalytic and allosteric mechanism of bacterial acetyltransferase PatZ, *Proc. Natl. Acad. Sci. U. S. A.*, doi: 10.1073/pnas.2419096122

[4] **Kim D.**, Gilchrist C.L.M., Chun J*. and Steinegger M*. (2023), UFCG: database of universal fungal core genes and pipeline for genome-wide phylogenetic analysis of fungi, *Nucleic Acids Res.*, doi: 10.1093/nar/gkac894

[5] Kim J.†, Na S.†, **Kim D.** and Chun J*. (2022), UBCG2: Up-to-date bacterial core genes and pipeline for phylogenomic analysis, *J. Microbiol.*, doi: 10.1007/s12275-021-1231-4

[6] **Kim D.**†, Park S.† and Chun J*. (2021), Introducing EzAAI: a pipeline for high throughput calculations of prokaryotic average amino acid identity, *J. Microbiol.*, doi: 10.1007/s12275-021-1154-0

ACHIEVEMENTS AND QUALIFICATIONS

Awards, Fellowships and Achievements

2025	KOGO Young Scientist Award, KRW 150,000 (~USD 106)
2021	IMBG Young Scientist Award, KRW 300,000 (~USD 262)
2017	Samsung Convergence Software Course Scholarship, KRW 1,000,000 (~USD 886)
2015	National Science & Technology Scholarship (KOSAF), KRW 24,033,000 (~USD 21,250)

Certificates

2019	Advanced english proficiency, Test of English Proficiency (Score 492/600, percentile rank 94.65%)

Technical Strengths

Programming	Java, Rust, Python, LaTeX, Nextflow, R, C/C++, Linux, Bash
Databases	SQL, MySQL
Distribution	GitHub, Conda, Docker
Cloud	Amazon AWS, CloudFlare R2
Design	Figma

Languages

Korean	Native proficiency
English	Full professional proficiency
French	Elementary proficiency

TEACHING EXPERIENCES

Fall 2025	Guest lecturer, Reviews in Quantitative Biology, University of Lausanne
Fall 2021	Teaching assistant, Microbial Systematics, Seoul National University
Fall 2020	Teaching assistant, Microbial Systematics, Seoul National University

PUBLIC SORUCE CODES

AmpliPhy	https://github.com/dessimozlab/ampliphy
Unicore	https://github.com/steineggerlab/unicore
UFCG	https://github.com/steineggerlab/ufcg
EzAAI	https://github.com/endixk/ezaai