

Curriculum Vitae



Name: JunMo Lee (Ph.D. in Science)

Nationality: Republic of Korea (South Korea)

Education and Affiliation

- 2019.09- Assistant Professor, Kyungpook National University, Daegu, Korea
- 2018.12-2019.08 Visiting Scientist, Rutgers University, New Jersey, US
- 2017.03-2019.08 Post-Doctor, Sungkyunkwan University, Suwon, Korea
- 2013.03-2017.02 Ph.D. Evolutionary Genomics, Sungkyunkwan University, Korea.
Red algal genome evolution: rapid radiation of multicellular species and their conserved gene inventory
- 2012.03-2013.02 Researcher, Korea Institute of Ocean Science and Technology (KIOST)
- 2010.03-2012.02 M.S. Marine Biology, Sangmyung University, Korea.
Taxonomic study of the genera *Cerataulina*, *Eucampia*, and *Hemiaulus* in the subfamily Hemiauloideae in Korean coastal waters
- 2006.01-2008.02 Military service
- 2004.03-2010.02 B.S. Life Science, Sangmyung University, Korea.

Current works

#1 Expansion of phycobilisome linker gene families in mesophilic red algae.

[First author, revision in *Nature Communications*, IF=12.353]

#2 Unknown to known: advancing knowledge of coral gene function.

[Co-first author, submitted to *Trends in Genetics*, IF=10.627]

Publications:

1. JunMo Lee*. 2019. Plasmid-associated organelle genome evolution in red algae. *Journal of Phycology* 54(6):772-774. [AlgaeHighlights; review/opinion article; 2019.01.05; IF=3.000]
2. Seon Young Park, Yuna Cho, JunMo Lee, Kyunglee Lee, Se Ra Lim, Seunghyun Seo, Wonmin Han, Hye Kwon Kim, Jee Eun Han, Ji Hyung Kim*. 2019. Determination of the haplotype and complete mitochondrial genome of the rough-toothed dolphin *Steno*

- bredeanensis* (Cetacea: Delphinidae) stranded in Korea. *Mitochondrial DNA Part B: Resources* 4(1):1572-1574. [2019.04.19; IF=0.488]
3. Md. Abdur Razzak, JunMo Lee, Dong Wook Lee, Jeong Hee Kim, Hwan Su Yoon, Inhwan Hwang*. 2019. Expression of seven carbonic anhydrases in red alga *Gracilariopsis chorda* and their subcellular localization in a heterologous system, *Arabidopsis thaliana*. *Plant Cell Reports* 38(2):147-159. [2018.11.16; IF=2.989]
 4. Dongseok Kim, JunMo Lee, Ji Won Choi, Ji Hyun Yang, Il-Ki Hwang, Hwan Su Yoon*. 2019. Flip-flop organization in the chloroplast genome of *Capsosiphon fulvescens* (Ulvoophyceae, Chlorophyta). *Journal of Phycology* 55:214-223. [2018.11.07; IF=3.000]
 5. JunMo Lee, Hae Jung Song, Seung In Park, Yu Min Lee, So Young Jeong, Tae Oh Cho, Ji Hee Kim, Han-Gu Choi, Chang Geun Choi, Wendy A. Nelson, Suzanne Fredericq, Debashish Bhattacharya, Hwan Su Yoon*. 2018. Mitochondrial and plastid genomes from coralline red algae provide insights into the incongruent evolutionary histories of organelles. *Genome Biology and Evolution* 10(11):2961-2972. [2018.10.26; IF=3.940]
 6. JunMo Lee, Eun Chan Yang, Louis Graf, Ji Hyun Yang, Huan Qiu, Udi ZelZion, Cheong Xin Chan, Timothy G. Stephens, Andreas P.M. Weber, Ga Hun Boo, Sung Min Boo, Kyeong Mi Kim, Younhee Shin, Myunghee Jung, Seung Jae Lee, Hyung-Soon Yim, Jung-Hyun Lee*, Debashish Bhattacharya*, Hwan Su Yoon*. 2018. Analysis of the draft genome of the red seaweed *Gracilariopsis chorda* provides insights into genome size evolution in Rhodophyta. *Molecular Biology and Evolution* 35(8):1869-1886. [2018.08.01; IF=10.217; 5-year IF:14.479]
 7. Debashish Bhattacharya*, Huan Qiu, JunMo Lee, Hwan Su Yoon, Andreas P. M. Weber, Dana C. Price. 2018. When less is more: Red algae as models for studying gene loss and genome evolution in eukaryotes. *Critical Reviews in Plant Sciences* 37(1):81-99. [review article; 2018.6.22; IF=6.162]
 8. Kyunglee Lee, JunMo Lee (co-first), Yuna Cho, Hyun Woo Kim, Young-Min Choi, Se Ra Lim, Hye Kwon Kim, Sun-Woo Yoon, Dae Gwin Jeong, Ji Hyung Kim*. 2018. Characterization of the complete mitochondrial genome and phylogenetic analysis of the common dolphin *Delphinus delphis* (Cetacea: Delphinidae). *Mitochondrial DNA Part B: Resources* 3(2):632-633. [2018.05.23; IF=0.488]
 9. Kyunglee Lee, JunMo Lee (co-first), Yuna Cho, Hyun Woo Kim, Kyum Joon Park, Hawsun Sohn, Young-Min Choi, Hye Kwon Kim, Dae Gwin Jeong, Ji Hyung Kim*. 2018. First report

- of the complete mitochondrial genome and phylogenetic analysis of Fraser's dolphin *Lagenodelphis hosei* (Cetacea: Delphinidae). *Conservation Genetics Resources* 11(1):47-50. [2018.01.09; IF=0.742]
10. Huan Qiu*, JunMo Lee (co-first), Hwan Su Yoon, Debashish Bhattacharya. 2017. Hypothesis: Gene-rich plastid genomes in red algae may be an outcome of nuclear genome reduction. *Journal of Phycology* 53(3):715-719. [2017.02.16; IF=3.000]
 11. Kyunglee Lee, JunMo Lee (co-first), Yuna Cho, Hyun Woo Kim, Kyum Joon Park, Hawsun Sohn, Young-Min Choi, Hye Kwon Kim, Dae Gwin Jeong, Ji Hyung Kim*. 2017. Characterization of the complete mitochondrial genome of Stejneger's beaked whale, *Mesoplodon stejnegeri* (Cetacea: Ziphiidae). *Conservation Genetics Resources* 10:839-842. [2017.11.28; IF=0.742]
 12. Kyunglee Lee, JunMo Lee (co-first), Hawsun Sohn, Yuna Cho, Young-Min Choi, Hye Kwon Kim, Ji Hyung Kim*, Dae Gwin Jeong*. 2017. Complete mitochondrial genome of the Pacific white-sided dolphin *Lagenorhynchus obliquidens* (Cetacea: Delphinidae). *Conservation Genetics Resources* 10:201-204. [2017.06.26; IF=0.742]
 13. Ji Hyung Kim, JunMo Lee, Md-Abu Affan, Dae-Won Lee, Do-Hyung Kang*. 2017. Characterization of coccoid cyanobacterium *Myxosarcina* sp. KIOST-1 isolated from mangrove forest Chuuk state, Federated states of Micronesia. *Ocean Science Journal* 52(3):359-366. [2017.05.17; IF=0.614]
 14. JunMo Lee, Chung Hyun Cho, Seung In Park, Ji Won Choi, Hyun Suk Song, John A. West, Debashish Bhattacharya*, Hwan Su Yoon*. 2016. Parallel evolution of highly conserved plastid genome architecture in red seaweeds and seed plants. *BMC Biology* 14:75. [2016.09.02; IF=5.770]
 15. JunMo Lee, Kyeong Mi Kim, Eun Chan Yang, Kathy Ann Miller, Sung Min Boo, Debashish Bhattacharya, Hwan Su Yoon*. 2016. Reconstructing the complex evolutionary history of mobile plasmids in red algal genomes. *Scientific Reports* 6:23744. [2016.03.31; IF=4.122]
 16. Hae Jung Song, JunMo Lee, Louis Graf, Mina Rho, Huan Qiu, Debashish Bhattacharya, Hwan Su Yoon*. 2016. A novice's guide to analyzing NGS-derived organelle and metagenome data. *Algae* 31(2):137-154. [2016.06.29; IF=1.556]
 17. JunMo Lee, Sung Min Boo, Andres Mansilla, Hwan Su Yoon*. 2015. Unique repeat and plasmid sequences in the mitochondrial genome of *Gracilaria chilensis* (Gracilariales, Rhodophyta). *Phycologia* 54(1):20-23. [2015.01.27; IF=1.798]

18. Eun Chan Yang, Kyeong Mi Kim, Su Yeon Kim, JunMo Lee, Ga Hun Boo, Jung-Hyun Lee, Wendy A. Nelson, Gangman Yi, William E. Schmidt, Suzanne Fredericq, Sung Min Boo, Debashish Bhattacharya, Hwan Su Yoon*. 2015. Highly conserved mitochondrial genomes among multicellular red algae of the Florideophyceae. *Genome Biology and Evolution* 7(8):2394-2406. [2015.08.04; IF=3.940]
19. Huan Qiu, Dana C. Price, Andreas P.M. Weber, Valérie Reeb, Eun Chan Yang, JunMo Lee, Su Yeon Kim, Hwan Su Yoon*, Debashish Bhattacharya*. 2013. Adaptation through horizontal gene transfer in the cryptoendolithic red alga *Galdieria phlegrea*. *Current Biology* 23(19):R865-R866. [2013.10.07; IF=9.251]
20. JunMo Lee, Jin Hwan Lee*. 2012. Morphological study of the genus *Eucampia* (Bacillariophyceae) in Korean coastal waters. *Algae* 27(4): 235-247. [2012.12.05; IF=1.556]

Conference presentations

- 2019.02. 2019 Symposium Microbiology at Rutgers University [poster] JunMo Lee, Hwan Su Yoon, Debashish Bhattacharya. Analysis of the red alga *Gracilariopsis chorda* genome provides insights into genome size evolution.
- 2018.07. Phycological Society of America (PSA) and the International Society of Protistologists (ISOP) Conference 2018 [oral] JunMo Lee, Wendy A. Nelson, Suzanne Fredericq, Hwan Su Yoon. Mitochondrial and plastid genome evolution of coralline red algae.
- 2018.07. Society for Molecular Biology and Evolution (SMBE) meeting [poster] JunMo Lee, Debashish Bhattacharya, Hwan Su Yoon. Analysis of the red seaweed *Gracilariopsis chorda* genome provides insights into genome size evolution in Rhodophyta.
- 2018.01. Korea-Japan Joint Symposium in Okinawa Institute of Science and Technology (OIST) [oral] JunMo Lee, Debashish Bhattacharya, Hwan Su Yoon. Analysis of the draft genome of the red seaweed *Gracilariopsis chorda*.
- 2017.11. The Korean Society of Phycology [oral] JunMo Lee, Suzanne Fredericq, Wendy A. Nelson, Tae Oh Cho, Han-Gu Choi, Hwan Su Yoon. What is the real species tree?
- 2017.08. International Congress of Protistology [poster] JunMo Lee, Hwan Su Yoon. Genome study of single cellular red alga *Rhodella*.
- 2017.03. The Marine Genome 100+ Korea Conference [poster] JunMo Lee, Hwan Su Yoon. Genome study of non-geniculate coralline red algae.

- 2017.02. BK21 Symposium [oral] JunMo Lee, Hwan Su Yoon. Multicellular red algal genome size growth is explained primarily by transposon accumulation.
- 2017.01. The KOGO Winter Symposium [poster] JunMo Lee, Eun Chan Yang, Louis Graf, Hwan Su Yoon. Red seaweed genome size growth is explained primarily by transposon accumulation.
- 2016.09. The Korean Society of Phycology [oral] JunMo Lee, Eun Chan Yang, Louis Graf, Hwan Su Yoon. The evolution of transposable elements in red algae.
- 2016.06. The Marine Genome 100+ Korea Conference [poster] JunMo Lee, Eun Chan Yang, Louis Graf, Hwan Su Yoon. The genome study of red alga *Gracilariopsis chorda*.
- 2016.06. International Society of Protistologists [oral] JunMo Lee, Eun Chan Yang, Louis Graf, Hwan Su Yoon. The genome study of red alga *Gracilariopsis chorda*.
- 2016.02. The KOGO Winter Symposium [poster] JunMo Lee, Hwan Su Yoon. Genomic approaches in a threaten marine ecosystem.
- 2015.10. The Korean Society of Phycology [oral] JunMo Lee, Chung Hyun Cho, Ji Won Choi, Seung In Park, Hwan Su Yoon. Red algal plastid genome evolution.
- 2015.08. Phycological Society of America [oral] JunMo Lee, Chung Hyun Cho, Ji Won Choi, Hyun Suk Song, Seung In Park, Hwan Su Yoon. Evolution of red algal plastid genomes with a wide range genomic comprehension.
- 2014.12. Global Ph.D. Fellowship Winter Conference [poster] JunMo Lee, Hwan Su Yoon. Genomics in a threaten marine ecosystem: approaches and solutions.
- 2014.10. The Korean Society of Protistology [poster] JunMo Lee, Suzanne Fredericq, Hwan Su Yoon. The comparative genomic study of coralline red algae.
- 2014.05. Phycological Society of America [oral] JunMo Lee, Kyeong Mi Kim, Eun Chan Yang, Hwan Su Yoon. Evolution in red algal plastid genomes caused by horizontal gene transfer events.
- 2014.04. The Korean Society of Phycology [oral] JunMo Lee, Kyeong Mi Kim, Eun Chan Yang, Hwan Su Yoon. The chloroplast genome evolution in red algae by the horizontal gene transfer.
- 2013.10. The Korean Society of Protistology [poster] JunMo Lee, Kyeong Mi Kim, Eun Chan Yang, Hwan Su Yoon. The evidence of horizontal gene transfer in the plastid of *Sporolithon durum* (Sporolithales, Rhodophyta).

2013.09. The Korean Society of Phycology [poster] JunMo Lee, Kyeong Mi Kim, Eun Chan Yang, Hwan Su Yoon. Plastid genome evolution of *Sporolithon durum* (Sporolithales, Rhodophyta).

Awards & fellowships

2019.04. Human Frontier Science Program (HFSP) fellowship, Long-Term Fellowship (144,360 euro for 3 years; LT000317/2019-L): Evolution of functional organization of the eukaryotic genome, the International Human Frontier Science Program Organization (HFSPPO)

2018.04. “Han-Bit-Sa” (= Korean Scientist Award), Journal: *Molecular Biology and Evolution*

[Link:

http://www.ibric.org/myboard/read.php?Board=hbs_treatise&id=53595&idauthorid=23775&ttype=0&ksr=1&FindText=%C0%CC%C1%D8%B8%F0], BRIC (Biology Research Information Center) in POSTECH (Pohang University of Science and Technology, Korea)

2017.11. “Ba-Dang Phycology” (= Marine Phycology) award; The Korean Society of Phycology

2013.03. Global Ph.D. Fellowship (90 million won for 3 years; 2013–034853): Genome study of nongeniculate coralline red algae, National Research Foundation of Korea (NRF).