

Ki Jun Jeong

Affiliation: Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea

Research title for the award: Antibody engineering and production in bacterial hosts

Prof. Jeong earned his doctor's degree from Korea Advanced Institute of Science and Technology (KAIST) in 2001. From 2002 to 2008, he worked in Prof. George Georgiou's Lab (Univ. of Texas at Austin, USA) as a research associate. Prof. Jeong joined KAIST (Dept. Chemical and Biomolecular Eng) and has been serving as an Assistant Professor since August, 2008.



Achievements:

Prof. Jeong's achievements can be classified into two areas. 1) As the most significant achievement, he developed new protein display platforms (APEX and Plasmid display platform) useful for antibody/protein engineering. With both protein display systems, he successfully demonstrated engineering of various antibodies including small scFv, Fab and full-length IgG. 2) As another significant achievement, he developed new bacterial host strains based on *Escherichia coli* and *Corynebacterium glutamicum* for the enhanced production of various antibodies and industrial enzymes. In particular, he engineered secretion machinery for the efficient secretory production of recombinant proteins in *E. coli* and *C. glutamicum*. Dr. Jeong has achieved (i) production of over one gram of scAb (antibody fragment) per liter, and (ii) secretory production of full-length IgG in *E. coli* with high productivity (~ 16 g/L/h). His extraordinary research ability has been demonstrated by his publications in almost 50 papers in peer-reviewed journals.

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