CURRECULUM VITAEMihue Jang

Personal information

▶**Name:** Mihue JANG (장미희)

▶**Current Position/Affiliation:** Principal Research Scientist/ Medicinal Materials Research Center, Biomedical Research Institute, Korea Institute of Science and Technology (KIST)

▶**E-mail address:** mihue@kist.re.kr

▶**Research field:**

» Strong background in molecular and cell biology

» Expertise in nucleic acid- or CRISPR system -based gene therapy

» Expertise in CAR (Chimeric antigen receptor)-NK therapy

» Expertise in cell engineering and gene modification

» Expertise in cancer therapy and immunotherapy

▶**Experience:**

1. Postdoctoral Fellow (2013 – 2015)
   -Principle investigator: Dr. Hyungjun Ahn
   Center for Theragnosis, Biomedical Research Institute,
   Korea Institute of Science and Technology (KIST)

2. Visiting Scholar (2009-2010)
   -Principle investigator: Prof. Paul Schulze-Lefert
   Department of Plant Microbe Interaction, Max Planck Institutes, Germany

▶**Education:**

1. Ph.D (M.S.-Ph.D. Integrative Program) (2006 – 2013)

- Principle investigator: Prof. Inhwan Hwang

Laboratory of Cellular Systems Biology, Division of Molecular and Life Science,

Pohang University of Science and Technology (POSTECH)

-Thesis title: Functional diversification of a plant protein trafficking pathway for nutrient storage and pathogen defense

2. B.S. (2002 – 2006)

Plant life science/ Genetic engineering

Kyungpook National University

▶Awards:

2016, Excellent Paper Chairman's Award, National Research Council of Science & Technology (NST)

▶Publications:

1. HN Yoon et al., **Empowering pancreatic tumor homing with augmented anti-tumor potency of CXCR2-tethered CAR-NK cells,** *Submitted*, Corresponding author.

2. YE Lee et al., **Synergistic therapeutic combination with a CAF inhibitor enhances CAR-NK-mediated cytotoxicity via reduction of CAF-released IL6**, *Journal for ImmunoTherapyof Cancer*, 2023;11:e006130, Corresponding author.

3. YE Lee et al., **Facile discovery of a therapeutic agent for NKmediated synergistic antitumor effects using apatient-derived 3D platform**, *Biomaterials Science*, 2022, 10, 678, Corresponding author.

4. B Kim et al., **A Novel Therapeutic Modality using CRISPR-Engineered Dendritic Cells to Treat Allergies.** *Biomaterials, 2021, 273,* Corresponding author.

5. YE Lee et al., **Rationally designed redirection of natural killer cells anchoring a cytotoxic payload for pancreatic cancer treatment.** *Journal of Controlled Release*, 2020, 326, 310-323, Corresponding author.

6. HY Lee et al., **Combinatorial Inhibition of Cell Surface Receptors Using Dual Aptamer-Functionalized Nanoconstructs for Cancer Treatment.** *Pharmaceutics*, 2020, 12.

7. J Cho et al., **USP47 promotes tumorigenesis by negative regulation of p53 through deubiquitinating ribosomal protein S2.** *Cancers*, 2020. 12, 1137.

8. KC Han et al., **Streamlined selection of cancer antigens for vaccine development through integrative multi-omicsand high-content cell imaging.** *Scientific reports, 2020 (10), 5885,* **Corresponding author**

9. DK Chae et al., **MiR-195 and miR-497 suppress tumorigenesis in lung cancer by inhibiting SMURF2-induced TGF-β receptor I ubiquitination.** *Molecular Oncology* 13, 2019, 2663-2678.

10. A Ju et al., **A carrier-free multiplexed gene editing system applicable for suspension cells.** *Biomaterials*, 2019, 217, 119298, Corresponding author.

11. SM Kim et al., **Simple in Vivo Gene Editing via Direct Self-Assembly of Cas9 Ribonucleoprotein Complexes for Cancer Treatment.** *ACS NANO*, 2018, 12, 7750-7760, Corresponding author.

12. MS Seo et al.**, A Novel Secretory Vesicle from Deer Antlerogenic Mesenchymal Stem Cell-Conditioned Media (DaMSC-CM)Promotes Tissue Regeneration.** *Stem Cells International*, 2018, 3891404, Corresponding author.

14. MS Seo et al.**, Stemness-Attenuating miR-503-3p as a Paracrine Factor to Regulate Growth of Cancer Stem Cells.** *Stem Cells International*, 2018, 4851949, Corresponding author.

15.SM Kim et al., **Cancer-derived exosomes as a delivery platform of CRISPR/Cas9 confer cancer cell tropism-dependent targeting.** *Journal of Controlled Release*, 2017, 266, 8-16. Corresponding author.

16.M JANG et al., **Rolling Circle Transcription for the Self-Assembly of Mu ltimeric RNAi Structures and Its Applications in Nanomedicine**, *RNA Nanostructures: Methods and Protocols,*2017 vol. 1632, First author.

17. M JANG et al, **A RNA nanotechnology platform for a simultaneous two-in-one siRNA delivery and its application in synergistic RNAi therapy**, *Scientific Reports*, 6:32363, First author.

18. M JANG et al, **Design of a platform-technology for systemic delivery of siRNA to tumors using rolling circle transcription.** *Nature communications, 2015, 6:7930*, first author..

19. JH KIM et al., **Design and Application of Rolling Circle Amplification for a Tumor-Specific Drug Carrier**, *Journal of Medicinal Chemistry*, 2015, 58:7863, Co-first author.

20. K Choi et al. , **Tumor-specific delivery of siRNA using supramolecular assembly of hyaluronic acid nanoparticles and 2b RNA-binding protein/siRNA complexes.** *Biomaterials.* 2014 Aug; 35(25):7121-32.

21. EY Park et al., **Genetically modified Tomato aspermy virus 2b protein as a tumor-targeting siRNA delivery carrier.** *Acta Biomater.* 2014 Nov; 10 (11):4778-86.

22. MK Min., **Recruitment of Arf1-GDP to Golgi by Glo3p-type ArfGAPs is crucial for Golgi maintenance and plant growth.** *Plant physiology* Feb. 2013 Vol. 161 pp. 676-691, Co-first author

23. Y Lee et al., **Functional identification of sorting receptors involved in trafficking of soluble lytic vacuolar proteins in vegetative cells of Arabidopsis.** *Plant physiology* Jan. 2013, Vol. 161, pp. 121–133.

24. K Song et al,. **An A/ENTH Domain-Containing Protein Functions as an Adaptor for Clathrin-Coated Vesicles on the Growing Cell Plate in Arabidopsis Root Cells.** *Plant Physiol*ogy, July 2012, Vol. 159, pp. 1013–1025.

25. C Jung et al., **Identification of Sorting Motifs of AtβFruct4 for Trafficking from the ER to the Vacuole Through the Golgi and PVC.** *Traffic* 2011; 12: 1774–1792.

26. CH Dong et al., **Molecular Association of the *Arabidopsis* ETR1 Ethylene Receptor and a Regulator of Ethylene Signaling, RTE1.** *THE JOURNAL OF BIOLOGICAL CHEMISTRY(JBC),* 285 (52), 40706–40713, 2010.

27. H Kim et al., **Homomeric Interaction of AtVSR1 Is Essential for Its Function as a Vacuolar Sorting Receptor.** *Plant Physiology*, September 2010, Vol. 154, pp. 134–148.

28. Gil-Je Lee et al. **EpsinR2 Interacts with Clathrin, Adaptor Protein-3, AtVTI12, and Phosphatidylinositol-3-Phosphate.** *Plant Physiology*, April 2007, Vol. 143, pp. 1561–1575.