



• Field Molecular immunology
• Name Sung Ho Jeon
• Title Professor

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Education background

1990, Seoul National University; Zoology (B.S)
1992, Seoul National University; Molecular Biology (M.S)
1998, Seoul National University; Immunology (Ph.D)

Major careers

90. 3 ~ 92. 2, Seoul National University; Dept. of Molecular Biology (Grad. Student)
92. 3 ~ 93. 2, Seoul National University; Dept. of Molecular Biology (T. A.)
97. 3 ~ 99. 12, Seoul National University; Research Center for Cell Differentiation (Post -Doc)
00. 1 ~ 01. 12, Weizmann Institute of Science (Israel); Dept. of Immunology (Post-DoC)
02. 1 ~ 03. 1, Mount Sinai School of Medicine (NewYork); Dept. of Microbiology (Post-DoC)
03. 5 ~ 05. 2, Seoul National University ; BK21 (Assiatant Prof.)
05. 3 ~ 09. 2, Hallym University ; Dept. of Life Science (Assistant Prof.)
09. 3 ~ present, Hallym University ; Dept. of Life Science (Associate Prof.)

Studies & Books

Theses

- Fisetin-rich extracts of *Rhus verniciflua* stokes improve blood flow rates in mice fed both normal and high-fat diets. 2016. *J Med Food*. 19(2):120-6.
- IL32 γ activates natural killer receptor-expressing innate immune cells to produce IFN γ via dendritic cell-derived IL12. 2015. *Biochem Biophys Res Commun*.461(1):86-94.
- The HIF-1/glia1/TIM-3 axis controls inflammation associated brain damage under hypoxia. 2015. *Nat Commun*.6:6340. doi: 10.1038/ncomms7340.
- Nanobody-targeted E3-ubiquitin ligase complex degrades nuclear proteins. 2015. *Sci Rep*.5:14269.
- Application of in utero electroporation of G-protein coupled receptor (GPCR) genes, for subcellular localization of hardly identifiable GPCR in mouse cerebral cortex. 2014. *Mol cells*.37(7):554-561.
- nc886, a non-coding RNA of anti-proliferative role, is suppressed by CpG DNA methylation in human gastric cancer. 2014. *Oncotarget*5(11):3944-3955.
- TopBP1 deficiency impairs V(D)J recombination during lymphocyte development. 2014. *EMBO J*. 33(3):217-228.
- Cell death/proliferation roles for nc886, a non-coding RNA, in the protein kinase R pathway in cholangiocarcinoma. 2013. *Oncogene*32(32):3722-31.
- Compartmentalized, functional role of angiogenin during spotted fever group rickettsia-induced endothelial barrier dysfunction: evidence of possible mediation by host tRNA-derived small noncoding RNAs. 2013. *BMC Infect Dis*.23:13:285.
- Involvement of the cAMP response element binding protein, CREB, and Cyclin D1 in LPA-induced proliferation of P19 embryonic carcinoma cells. 2012. *Mol cells*.34(3):323-328.
- A tumor surveillance model: A non-coding RNA senses neoplastic cells and its protein partner signals cell death. 2012. *Int. J. Mol. Sci*.13(10):13134-13139.
- Characterization of the direct physical interaction of nc886, a cellular non-coding RNA, and PKR. 2012. *FEBS Lett*.586(19):3477-3484.
- DNA Aptamers against the Receptor Binding Region of Hemagglutinin Prevent Avian Influenza Viral Infection. 2011. *Mol. cells*32(6):527-533.
- Activation of natural killer T cells inhibits the development of induced regulatory T cells via IFN γ . 2011. *Biochem. Biophys. Res. Commun*.411(3):599-606.
- Gold nanoparticle-based colorimetric detection of kanamycin using a DNA aptamer. 2011. *Anal. Biochem*.415(2):175-81.
- Precursor miR-886, a novel noncoding RNA repressed in cancer, associates with PKR and modulates its activity. 2011. *RNA* 17(6):1076-89.
- Galectin-3 exerts cytokine-like regulatory actions through the JAK-STAT pathway. 2010. *J Immunol*.185(11):7037-46.
- Twist2 regulates CD7 expression and galectin-1-induced apoptosis in mature T-cells. 2009. *Mol Cells*.28(6):553-558.
- The Effect of CD28 Stimulation on in vitro Generation of Regulatory T Cells with IL2 and TGF β . 2008. *GENES & GENOMICS*. 30(6): 555-561.
- Down-Regulation of the SWI/SNF Chromatin Remodeling Activity by TCR Signaling Is Required for Proper Thymocyte Maturation. 2007. *J Immunol*.178(11):7088-96.
- SRG3 interacts directly with the major components of the SWI/SNF chromatin remodeling complex and protects them from proteasomal degradation. 2007. *J Biol Chem*.282(14):10614-24.
- Notch1 Confers Thymocytes a Resistance to GC-induced Apoptosis via Deltex1 by Blocking the Recruitment of p300 to E2A/HEB and Regulating the

- SRG3 Expression. 2006. Cell death differ. 13:1495-1505.
- Expression of SRG3, a Core Component of Mouse SWI/SNF Chromatin Remodeling Complex, Is Regulated by Cooperative Interactions between Sp1/Sp3 and Ets Transcription Factors. 2005. Biochem. Biophys. Res. Commun. 338:1435-1446.
 - Ecto- and exo-protein kinases in Schistosoma mansoni: regulation of surface phosphorylation by acetylcholine and identification of the alpha subunit of CKII as a major secreted protein kinase. 2005. J. Parasitol. 91:756-63.
 - Modulation of androgen receptor/transactivation by the SWI3-related gene product (SRG3) in multiple ways. 2005. Mol. Cell Biol. 25(12) 4841-4852.
 - A DNA aptamer prevents influenza infection by blocking the receptor binding region of the viral haemagglutinin. 2004. J. Biol. Chem. 279(46): 48410-48419.
 - Nitric oxide inhibits glucocorticoid-induced apoptosis of thymocytes by down-regulating the SRG3 expression. 2004. J. Biol. Chem. 279(33): 34373-34379.
 - E2A/HEB and Id3 proteins control the sensitivity to glucocorticoid-induced apoptosis in thymocytes by regulating the SRG3 expression. 2004. J. Biol. Chem. 279(21): 21916-23.
 - T-cell receptor signaling inhibits glucocorticoid-induced apoptosis by repressing the SRG3 expression via Ras activation. 2004. J. Biol. Chem. 279(21): 21903-15.
 - Twist2, a novel ADD1/SREBP1c interacting protein, represses the transcriptional activity of ADD1/SREBP1c. 2003. Nucleic Acids Res. 31(24):7165-74.
 - Overexpression of SRG3/SWI3 protein disrupts the cell cycle progression in mature T cells and yeast. 2002. Korean J. Biol. Sci. 6:335-339.
 - Intranasal immunization with synthetic recombinant vaccine containing multiple epitopes of influenza virus. 2002. Vaccine 20: 2772-2780.
 - Immunization with Influenza Virus Hemagglutinin Globular Region Containing the Receptor-Binding Pocket. 2002. Viral Immunol. 15: 165-176.
 - Notch1 confers developing thymocytes a resistance to glucocorticoid induced apoptosis by down-regulating SRG3 expression. 2001. Proc. Natl. Acad. Sci. U.S.A. 98:10267-72.
 - Two species of mRNAs for the fyn proto-oncogene are produced by an alternative polyadenylation. 1998. Mol. & Cells 8:746-749.
 - Down-regulation of Tcf-1 expression by activation-induced apoptosis of T cell hybridoma. 1998. Korean J. Biol. Sci. 2:403-410.
 - Expression of Tcf-1 mRNA and surface TCR/CD3 complexes are reduced during apoptosis of T-cells. 1998. Int. Immunol. 10:1519-1527.
 - A new mouse gene, SRG3, related to the SWI3 of Saccharomyces cerevisiae, is required for apoptosis induced by glucocorticoids in thymoma cell line. 1997. J. Exp. Med. 185:1827-1836.
 - Overexpressed RAD4 protein required for excision repair of Saccharomyces cerevisiae is toxic to the host Escherichia coli. 1994. In Vitro Toxicol. 7:269-275.
 - Expression of RAD4 gene of Saccharomyces cerevisiae that can be propagated in Escherichia coli without inactivation. 1993. Biochem. Biophys. Res. Commun. 193:191-197.
 - The isolated RAD4 gene required for nucleotide excision repair in Saccharomyces cerevisiae does not contain a suppressor gene. 1990. Korean J. Genetics. 12:147-155.

■ Books

- 세균과 세균바이러스의 유전학. 2015. 필수 유전학 6판. by D.L. Hartl (ed. 양재섭 외). chap. 7, pp 226-259. 바이오사이언스 출판
- 번역, 조절 RNA, 2014. 왓슨 분자생물학 7판 by J. Watson (ed. 양재섭 외). chap. 15, pp. 509-571; chap. 20, pp. 701-732 바이오사이언스 출판
- 세포생물학, 2014. by G. Plopper 범문 에듀케이션
- 전이. 2013. 분자생물학 5판 by R.F. Weaver, (ed. 최준호 외). chap. 23, pp. 677-701. 라이프사이언스
- 필수세포생물학 2판. 2003. by B. Alberts (ed. 박상대 외) 교보문고
- Apoptosis in immune system. 1998. 유전. 2: 129-146.

■ Patent

- DNA aptamers and their mixture for the prevention of infection and detection of avian influenza virus, H9N2. 2008. Korea 10-2008-0039199.
- Nucleic acid molecules, polypeptides, antibodies and compositions for treating and detecting influenza virus infection. 2010. US 7786279 B2
- DNA aptamer binding to kanamycin with specificity. 2010. Korea 10-1263450
- DNA aptamer binding to ampicillin with specificity. 2010. Korea 10-1258600
- DNA aptamer binding to sulfadimethoxine with specificity. 2010. Korea 10-1263449
- Functional health food composition using color food for anti-oxidative and anti-inflammatory effect and method for manufacturing the same. 2015. Korea 10-2015-0024442

I Others

■ Academy Activity

- 한국세포분자생물학회 재무위원
- 대한면역학회 경희원
- 한국유전학회 경희원

■ Major Research Topics

- non-coding RNA에 의한 면역세포의 분화 및 암 조절 기전 연구: 단백질을 암호화하지 않는 비번역 RNA가 면역기능을 담당하는 대식세포의 분화와 활성 조절에 관여하는 신호전달과 유전자 발현에 중요한 조절자로서 기능할 가능성에 대한 연구. 이 RNA는 세포의 증식과 암세포의 발병과정에서도 중요한 역할을 한다는 것을 밝힘으로써, 암암 또는 면역질환의 치료제 발굴에 관한 단서를 제공한다.
- 항-바이러스 치료제 및 백신 개발: 인플루엔자 바이러스 감염을 억제하는 치료제 및 백신 후보물질의 발굴과 관련된 연구
- 기능성 천연소재의 면역활성 효능평가 및 조절기전 분석: 국내외 다양한 식물에서 유래한 면역조절 후보물질의 효능평가를 통한 기능성 식품, 화장품, 면역조절 치료제 발굴과 관련된 연구