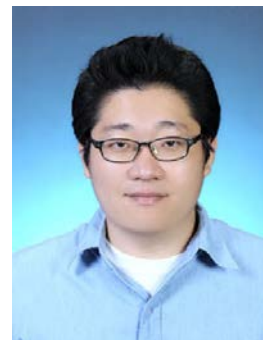


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EDUCATION and DEGREES

Mar. 2008 – Aug. 2011 **Ph.D.** in Pharmacy, Seoul National University, Seoul, Republic of Korea

Dissertation: Anti-proliferative constituents of *Juglans sinensis* leaves and twigs. Advisor: Young Choong Kim, Ph.D.

Mar. 2006 – Feb. 2008 **M.S.** in Pharmacy, Seoul National University, Seoul, Republic of Korea

Dissertation: Acetylcholinesterase inhibitory components from *Lycoris radiata* bulbs by On-line HPLC-biochemical activity detection system. Advisor: Jinwoong Kim, Ph.D.

Mar. 2002 – Feb. 2006 **B.S.** in Pharmacy, Seoul National University, Seoul, Republic of Korea

EXPERIENCES

Mar. 2014 – present **Assistant, associate Professor** College of Pharmacy, Kangwon National University, Chuncheon, Kangwon, Republic of Korea

Jun. 2018 – Aug. 2018 **Visiting scholar**, Skaggs School of Pharmacy, UCSD, San Diego, CA, USA

Nov. 2013 – Feb. 2014 **Visiting fellow**, National Cancer Institute/National Institutes of Health, Bethesda, MD, USA

Sep. 2012 – Oct. 2013 **Research Fellow**, Seoul National University R&DB Foundation, Seoul, Republic of Korea

Sep. 2011 – Oct. 2013 **Senior Researcher**, College of Pharmacy and Research Institute of Pharmaceutical Sciences, Seoul National University, Seoul, Republic of Korea

PUBLISHED PAPERS

<International journal>

1. Lee N, Yoo H, **Yang H**, Cluster Analysis of Medicinal Plants and Targets Based on Multipartite Network. *Front Pharmacol*. 2020 submitted
2. Nothias LF, Petras D, Schmid R, Dührkop K, Rainer J, Sarvepalli A, Protsyuk I, Ernst M, Tsugawa H, Fleischauer M, Aicheler F, Aksenov A, Alka O, Allard PM, Barsch A, Cachet X, Caraballo M, Da Silva RR, Dang T, Garg N, Gauglitz JM, Gurevich A, Isaac G, Jarmusch AK, Kameník Z, Kang KB, Kessler N, Koester I, Korf A, Gouellec AL, Ludwig M, Martin H C, McCall LI, McSayles J, Meyer SW, Mohimani H, Morsy M, Moyne O, Neumann S, Neuweger H, Nguyen NH, Nothias-Esposito M, Paolini J, Phelan VV, Pluskal T, Quinn RA, Rogers S, Shrestha B, Tripathi A, van der Hooft JJJ, Vargas F, Weldon KC, Witting M, **Yang H**, Zhang Z, Zubeil F, Kohlbacher O, Böcker S, Alexandrov T, Bandeira N, Wang M, Dorrestein PC, Feature-based molecular networking in the GNPS analysis environment. *Nature Methods* 2020 Sep;17(9):905-908 doi: 10.1038/s41592-020-0933-6.
3. Lee J, Park J, Kim J, Jeong B, Choi SY, Jang HS, **Yang H**, Targeted Isolation of Cytotoxic Sesquiterpene lactones from *Eupatorium fortunei* by the NMR annotation tool, SMART 2.0. *ACS Omega* 2020 Sep 9;5(37):23989-23995 doi: 10.1021/acsomega.0c03270.
4. Jang HS, Jeong BR, Choi SY, Lee J, Kwon YS, **Yang H**, The Rapid Discrimination and Quality Assessment of Three *Zanthoxylum* species using ¹H NMR Spectrometry. *Int J Anal Chem*. 2020 Aug 3830258 doi: 10.1155/2020/3830258.
5. Lee J, Yang HS, Jeong H, Kim JH, **Yang H**, Targeted Isolation of Lignans from *Trachelospermum asiaticum* Using Molecular Networking and Hierarchical Clustering Analysis. *Biomolecules*. 2020 Mar 1;10(3). pii: E378. doi: 10.3390/biom10030378.
6. Kim HW, Choi SY, Jang HS, Ryu B, Sung SH, **Yang H**, Exploring novel secondary metabolites from natural products using pre-processed mass spectral data. *Sci Rep*. 2019 Nov 22;9(1):17430
7. Ban YW, Roy NS, **Yang H**, Choi HK, Kim JH, Babu P, Ha KS, Ham JK, Park KC, Choi IY. Comparative transcriptome analysis reveals higher expression of stress and defense responsive genes in dwarf soybeans obtained from the crossing of *G. max* and *G. soja*. *Genes Genomics*. 2019 Nov;41(11):1315-1327.
8. Kim J, Ahn H, Han BC, Shin H, Kim JC, Jung EM, Kim J, **Yang H**, Lee J, Kang SG, Lee SH, Lee GS, Obovatol inhibits NLRP3, AIM2, and non-canonical inflammasome activation. *Phytomed*. 2019 Oct;63:153019
9. Lee J, Silva RR, Jang HS, Kim HW, Kwon YS, Kim JH, **Yang H**, *in silico* Annotation of Discriminative Markers of Three *Zanthoxylum* species Using Molecular Network derived Annotation Propagation. *Food Chem*. 2019 Oct 15; 295:368-376

10. Huh J, Song JH, Kim SR, Cho HM, Ko HJ, **Yang H**^{*}, Sung SH. Dilignans from *Forsythia viridissima* Roots and Their Antiviral Effects. *J Nat Prod*. 2019 Feb 22;82(2):232-238
11. Ko KW, Wahyudi LD, Kwon YS, Kim JH, **Yang H**, Nuclear Factor Erythroid 2-Related Factor 2 Activating Triterpenoidal Saponins from *Camellia japonica* Roots. *J Nat Prod*. 2018 Nov;81(11):2399-2409
12. Lee J, Woo S, Sung SH, **Yang H**, A new phenolic compound from *Phedimus middendorffianus* with antiproliferative activity. *Nat Prod Res*, 2018 Nov; 23:1-6
13. Lee SY, Nam S, Kim S, Koo JS, Hong IK, Kim H, Han S, Kang M, **Yang H**, Cho HJ. Therapeutic Efficacies of *Artemisia capillaris* Extract Cream Formulation in Imiquimod-Induced Psoriasis Models. *Evid. Based Complement Alternat. Med*. 2018 Aug; 2018, Article ID 3610494
14. Lim JH, Lee H, Ahn J, Kim J, Jang J, Park Y, Jeong B, **Yang H**, Shin SS, Yoon M. The polyherbal drug GGE18 from *Laminaria japonica*, *Rheum palmatum*, and *Ephedra sinica* inhibits hepatic steatosis and fibroinflammation in high-fat diet-induced obese mice. *J. Ethnopharmacol*. 2018 Oct; 225:31-41
15. Jang HS, Kang KB, Yoo G, Kwon E, Yun JW, Kang BC, Hong IK, Kim SH, Sung SH, Cho HJ, Jang YP, **Yang H**. Simultaneous Determination and Stability Test of Two Phthalic Anhydride Derivatives, Senkyunolide A and Z-Ligustilide, in the Water Extract of *Cnidium* Rhizome from Different Geographical Regions and Species Using HPLC-UV Analysis. *Bull. Kor. Chem. Soc*. 2018 May; 39(6):784-8.
16. Jang HS, Choi SY, Jeong B, Min HJ, **Yang H**^{*}, Bae YS^{*}. Chemical Constituents of Branches and Barks of *Juglans mandshurica*. *Chem. Nat. Compd*. 2018 Apr; 54(2):342-343 *co-corresponding author
17. Wahyudi LD, Jeong J, **Yang H**, Kim JH. Amentoflavone-induced oxidative stress activates NF-E2-related factor 2 via the p38 MAP kinase-AKT pathway in human keratinocytes. *Int J Biochem Cell Biol*. 2018 Jun;99:100-108.
18. Jeong J, Wahyudi L, Keum YS, **Yang H**, Kim JH, E-p-Methoxycinnamoyl- α -L-rhamnopyranosyl ester, a phenylpropanoid isolated from *Scrophularia buergeriana*, increases nuclear factor erythroid-derived 2-related factor 2 stability by inhibiting ubiquitination in human keratinocytes. *Molecules*. 2018 Mar; 23(4) pii: E768.
19. Jeong B, Roh JS, Yoon M, Yoon Y, Shin SS, Cho HJ, Kwon YS, **Yang H**, Determination of Five Chemical Markers in DF formula, the herbal composition of *Ephedra intermedia*, *Rheum palmatum* and *Lithospermum erythrorhizon*, using High Performance Liquid Chromatography-Ultraviolet Detection. *Pharmacogn Mag*. 2018 Apr; 14(54):162-166

20. Lee SY, Nam S, Hong IK, Kim H, **Yang H**, Cho HJ, Antiproliferation of keratinocytes and alleviation of psoriasis by the ethanol extract of *Artemisia capillaris*. *Phytother Res*, 2018 May;32(5):923-932.
21. Choi SY, Jeong B, Jang HS, Lee J, Ko K, Kim H, Hong J, Bae YS, **Yang H**, A New Dibenzofuran from the Barks of *Sorbus commixta*. *Rec Nat Prod*, 2018 Mar; 12:179-183.
22. Jang J, Jung Y, Chae S, Cho SH, Yoon M, **Yang H**^{*}, Shin SS^{*}, Yoon Y^{*}. Gangjihwan, a polyherbal composition, inhibits fat accumulation through the modulation of lipogenic transcription factors SREBP1C, PPAR γ and C/EBP α . *J Ethnopharmacol*. 2018 Jan;210:10-22. ^{*}co-corresponding author
23. Jang HS, Jeong B, Choi SY, Jang GH, Park KC, Kwon YS, **Yang H**. Condurotol F, the discriminant marker between *C. wilfordii* and *C. auriculatum* by 1H NMR spectroscopy. *Microchemical J*. 2017 Sep;135:153-157.
24. Roh JS, Lee H, Lim J, Kim J, **Yang H**, Yoon Y, Shin SS, Yoon M. Effect of Gangjihwan on hepatic steatosis and inflammation in high fat diet-fed mice. *J Ethnopharmacol*. 2017 Jun;206:315-326.
25. **Yang H**, Choi M, Lee DY, Sung SH. Anti-differentiation effect of B,D-seco limonoids of *Swietenia mahogany*. *Pharmacogn Mag*. 2017 Apr-Jun;13(50):293-299
26. **Yang H**, Kim HW, Kwon YS, Kim HK, Sung SH. Fast and Simple Discriminative Analysis of Anthocyanins-Containing Berries Using LC/MS Spectral Data. *Phytochem Anal*. 2017 Apr 25; 28(5):416-423.
27. Lee DY, Kim HW, **Yang H**, Sung SH. Hydrolyzable tannins from the fruits of *Terminalia chebula* Retz and their α -glucosidase inhibitory activities. *Phytochemistry*. 2017 May;137:109-116.
28. **Yang H**, Kim HW, Kim YC, Sung SH. Cytotoxic activities of Naturally Occurred Oleanane-, Ursane-, and Lupane-type Triterpenes on HepG2 and AGS cells. *Pharmacogn Mag*. 2017 Jan-Mar;13(49):118-122
29. Yoon S, Kim J, Lee H, Lee H, Lim J, **Yang H**, Shin SS, Yoon M, The effects of herbal composition Gambigyeongsinhwan (4) on hepatic steatosis and inflammation in Otsuka Long-Evans Tokushima fatty rats and HepG2 cells. *J Ethnopharmacol*. 2017 Jan 4;195:204-213
30. Lee DY, Kim HW, **Yang H**, Sung SH. New polyhydroxytriterpenoid derivatives from fruits of *Terminalia chebula* Retz. and their alpha-glucosidase and alpha-amylase inhibitory activity. *Bioorg Med Chem Lett*. 2017 Jan 1;27(1):34-39
31. Kim JW, **Yang H**, Kim HW, Kim HP, Sung SH. Lignans from *Opuntia ficus-indica* seeds protect rat primary hepatocytes and HepG2 cells against ethanol-induced oxidative stress. *Biosci Biotechnol Biochem*. 2017 Jan;81(1):181-183

32. Han S, Jeong AJ, **Yang H**, Bin Kang K, Lee H, Yi EH, Kim BH, Cho CH, Chung JW, Sung SH, Ye SK. Ginsenoside 20(S)-Rh2 exerts anti-cancer activity through targeting IL-6-induced JAK2/STAT3 pathway in human colorectal cancer cells. *J Ethnopharmacol*. 2016 Dec 24;194:83-90
33. Yoo G, Park SJ, Lee TH, **Yang H**, Baek YS, Kim N, Kim YJ, Kim SH. Flavonoids isolated from *Lespedeza cuneata* G. Don and their inhibitory effects on nitric oxide production in lipopolysaccharide-stimulated BV-2 microglia cells. *Pharmacogn Mag*. 2015 Jul-Sep;11(43):651-6.
34. **Yang H**, Sung SH, Kim YC. The ethanolic extract of *Juglans sinensis* leaves and twigs attenuates CCl4-induced hepatic oxidative stress in rats. *Pharmacogn Mag*. 2015 Jul-Sep;11(43):533-9
35. Hong EH, Song JH, Kang KB, Sung SH, Ko HJ, **Yang H**. Anti-Influenza Activity of Betulinic Acid from *Zizyphus jujuba* on Influenza A/PR/8 Virus. *Biomol Ther (Seoul)*. 2015 Jul;23(4):345-9
36. **Yang H**, Lee DY, Kang KB, Kim JY, Kim SO, Yoo YH, Sung SH. Identification of ginsenoside markers from dry purified extract of Panax ginseng by a dereplication approach and UPLC-QTOF/MS analysis. *J Pharm Biomed Anal*. 2015 Feb 25;109:91-104
37. Cheong JH, Kim H, Hong MJ, Yang MH, Kim JW, Yoo H, **Yang H**, Park JH, Sung SH, Kim HP, Kim J. Stereoisomer-Specific Anticancer Activities of Ginsenoside Rg3 and Rh2 in HepG2 Cells: Disparity in Cytotoxicity and Autophagy-Inducing Effects Due to 20(S)-Epimers. *Biol Pharm Bull* 2015 Jan 38(1):102-108
38. Kim JW, **Yang H**, Cho N, Kim B, Kim YC, Sung SH. Hepatoprotective constituents of Firmiana simplex stem bark against ethanol insult to primary rat hepatocytes. *Pharmacogn. Mag*. 2015 Jan 11(41):55-60
39. Cho N, **Yang H**, Kim JW, Kim YC, Sung SH. Chemical constituents isolated from *Disporum viridescens* leaves and their inhibitory effect on nitric oxide production in BV2 microglial cells. *Bioorg Med Chem Lett*. 2014 Dec 15;24(24):5675-8.
40. Lee JY, **Yang H**, Yoon IS, Kim SB, Ko SH, Shim JS, Sung SH, Cho HJ, Kim DD. Nanocomplexes based on amphiphilic hyaluronic acid derivative and polyethylene glycol-lipid for ginsenoside rg3 delivery. *J Pharm Sci*. 2014 Oct;103(10):3254-62.
41. **Yang H**, Moon E, Choi M, Kim JY, Kim SO, Yoo YH, Sung SH. Complete 1H and 13C NMR spectral analysis of the pairs of 20(S) and 20(R)-ginsenosides. *J Ginseng Res*. 2014 Jul;38(3):194-202
42. **Yang H**, Lee DY, Jeon M, Suh Y, Sung SH. Simultaneous Determination of Five Active Compounds in *Artemisia princeps* and *A. capillaris* based on UPLC-DAD and

Discrimination of Two Species with Multivariate Analysis. *Arch. Pharm. Res.* 2014 May;37(5):617-625

43. Cho N, **Yang H**, Lee M, Huh J; Kim HW, Kim HP, Sung SH. Neuroprotective Benzyl Benzoate Glycosides from *Disporum viridescens* Roots in HT22 Hippocampal Neuronal Cells. *J Nat Prod.* 2013 Dec. 76(12):2291-7
44. Lee M, Lee SH, Kang J, **Yang H**, Jeong EJ, Kim HP, Kim YC, Sung SH. Salicortin-derivatives from *Salix pseudo-lasiogyne* twigs inhibit adipogenesis in 3T3-L1 cells via modulation of C/EBP α and SREBP1c dependent pathway. *Molecules.* 2013 Aug. 18(9):L10484-96.
45. **Yang H**, Kim HS, Jeong EJ, Khiev P, Chin Y, Sung SH. Plant-derived juvenile hormone III analogues from the stem barks of *Cananga latifolia*. *Phytochemistry.* 2013 Oct 94:277-83.
46. Cho N, Lee KY, Huh J, Choi JH, **Yang H**, Jeong EJ, Kim HP, Sung SH. Cognitive-enhancing effects of *Rhus verniciflua* bark extract and its active flavonoids with neuroprotective and anti-inflammatory activities. *Food Chem. Toxicol.* 2013 Aug 58:355-61.
47. **Yang H**, Lee S, Sung SH, Kim J, Kim YC. Neuroprotective compounds from twigs of *Salix pseudo-lasiogyne* and their anti-amnesic effects on scopolamine-induced memory deficit in mice. *Planta Med.* 2013 Jan. 79(1):78-82.
48. **Yang H**, Yoo G, Kim HS, Kim JY, Kim SO, Yoo YH, Sung SH. Implication of the stereoisomers of ginsenoside derivatives in anti-proliferative effect of HSC-T6 cells. *J Agric. Food Chem.* 2012 Nov. 60(47):11759-64.
49. Nhiem NX, Lee HY, Kim NY, Park SJ, Kim ES, Han JE, **Yang H**, Kim SH. Stereochemical assignment of five new lignan glycosides from *Viscum album* by NMR study combined with CD spectroscopy. *Magn. Reson. Chem.* 2012 Nov 50(11):772-7
50. Cho N, Choi JH, **Yang H**, Jeong EJ, Lee KY, Kim YC, Sung SH. Neuroprotective and anti-inflammatory effects of flavonoids isolated from *Rhus verniciflua* in neuronal HT22 and microglial BV2 cell lines. 2012 Jun. *Food Chem. Toxicol.* 2012 Jun 50(6):1940-5
51. **Yang H**, Cho HJ, Sim SH, Chung YK, Kim DD, Sung SH, Kim J, Kim YC. Cytotoxic terpenoids from *Juglans sinensis* leaves and twigs. *Bioorg. Med. Chem. Lett.* 2012. Mar 22(5):2079-83.
52. Jeong EJ, Seo H, **Yang H**, Kim J, Sung SH, Kim YC. Anti-inflammatory phenolics isolated from *Juniperus rigida* leaves and twigs in lipopolysaccharide-stimulated RAW264.7 macrophage cells. *J. Enzyme Inhib. Med. Chem.* 2012 Dec 27(6):875-9.

53. Jeong EJ, Kim TB, **Yang H**, Kang SY, Kim SY, Sung SH, Kim YC. Neuroprotective iridoid glycosides from *Cornus officinalis* fruits against glutamate-induced toxicity in HT22 hippocampal cells. *Phytomedicine*. 2012 Feb 19(3-4):317-21.
54. Cho N, Huh J, **Yang H**, Jeong EJ, Kim YC, Kim J, Sung SH. Chemical constituents of *Polygala tenuifolia* roots and their inhibitory activity on lipopolysaccharide-induced nitric oxide production in BV2 microglia. *J. Enzyme Inhib. Med. Chem.* 2012 Feb 27(1):1-4.
55. Jeong EJ, **Yang H**, Kim SH, Kang SY, Sung SH, Kim YC. Inhibitory constituents of *Euonymus alatus* leaves and twigs on nitric oxide production in BV2 microglia cells. *Food Chem. Toxicol.* 2011 Jun 49(6):1394-8.
56. **Yang H**, Jeong EJ, Kim J, Sung SH, Kim YC. Antiproliferative triterpenes from the leaves and twigs of *Juglans sinensis* on HSC-T6 cells. *J. Nat. Prod.* 2011 Apr 74(4):751-6.
57. **Yang H**, Sung SH, Kim J, Kim YC. Neuroprotective diarylheptanoids from the leaves and twigs of *Juglans sinensis* against glutamate-induced toxicity in HT22 cells. *Planta Med.* 2011 May 77(8):841-5.
58. **Yang H**, Cho YW, Kim SH, Kim YC, Sung SH. Triterpenoidal saponins of *Pulsatilla koreana* roots. *Phytochemistry*. 2010 Nov 71(16):1892-9.

<Domestic journal>

1. Kang D, Kim G, Kim S, Kim Y, Lee N, **Yang H**, Kim MJ, Chun W, Kwon Y. 2020 Chemical Constituents of the Aerial Parts of *Lespedeza juncea*, *Kor. J. Pharmacogn.* 51(1):65~69
2. Choi SY, Jeong B, Jang HS, Lee J, Kwon YS, Yoon YS, Shin SS, **Yang H**. 2019. Simultaneous Analysis of Four Standards of The Herbal Formula, DF-02, of Ephedra intermedia and Rheum palmatum, using by High Performance Liquid Chromatography-Ultraviolet Detector (HPLC-UVD). *Nat. Prod. Sci.* 25(2):111-114.
3. Ko K, Hong IK, Cho HJ, Kim YH, **Yang H**. 2018. Simultaneous Determination of Four Compounds from *Artemisia capillaris* using High Performance Liquid Chromatography-Ultraviolet Detector (HPLC-UVD) and Their Quantitative Study in Artemisia Genus. *Nat. Prod. Sci.* 24(2):109-114.
4. Kwon Y, Yoo JH, Yoo NH, Kim JM, Kim HP, **Yang H**, Chun W. 2018. Chemical Constituents of *Oplopanax elatus* Stem, *Kor. J. Pharmacogn.* 49(1):23-27.
5. Lee YJ, Hong IK, Kim H, Heo SI, Kwon DJ, Ahn WG, Kim YH, Seo EJ, Han SI, Cho HJ, Kim SY, **Yang H**, 2018. The amelioration effect of the ethanolic extract of *Cnidium officinale* in mice with Imiquimod-induced psoriasis-like skin lesion. *Nat. Prod. Sci.* 24(1):21-27.

6. Park SY, Lee N, Lee S, Kim MJ, Chun W, Kim HP, **Yang H**, Lee H, Kwon Y, 2017. A new 3, 4-epoxyfurocoumarin from *Heracleum moellendorffii* Roots. *Nat. Prod. Sci.* 23(3):213-216.
7. Kang KB, Jun JB, Yoo G, Kwon E, Yun JW, Kang BC, Kim SH, Sung SH, Jang YP, **Yang H**, 2017. Simultaneous Determination of gastrodin and gastrodigenin in *Gastrodia elata* by HPLC–UV, *Kor. J. Pharmacogn.* 48(3):232-236.
8. Baek SY, Lee HR, Park JH, Yoon M, Yoon Y, **Yang H**, Choi YH, Shin SS, 2017. Gangjihwan Reduces Body Weight Gain in a ob/ob Female Mice, *Herb. Formula Sci.* 25(2):193-207.
9. Jeong B, Yoon Y, Shin SS, Kwon YS, **Yang H**, 2017. Simultaneous Determination of (+)-Pseudoephedrine and (-)-Ephedrine in *Ephedra intermedia* by HPLC-UV, *Kor. J. Pharmacogn.* 48(1):93-96.
10. Jeong B, Choi SY, Jang HS, Yoo G, Kim SH, Kim J, Kwon YS, Roh JS, Yoon Y, Shin SS, **Yang H**, 2017. Optimization of Extraction Conditions for Active Compounds of Herbal Medicinal Formula, DF, by Response Surface Methodology. *Nat. Prod. Sci.* 23(1):9-15.
11. Kim JW, Kim TB, **Yang H**, Sung SH. 2016. Phenolic Compounds Isolated from *Opuntia ficus-indica* Fruits. *Nat. Prod. Sci.* 22(2):117-121.
12. Kim MA, **Yang H**, Kim MJ, Chun WJ, Kwon YS. 2016. A New stereoisomeric Monoterpene Glycoside from *Clematis heracleifolia* leaves. *Nat. Prod. Sci.* 22(2):107-110.
13. Kim SM, Won YH, Jeong K, Kim MJ, Chun WJ, **Yang H**, Kwon YS. 2016. Chemical Constituents of *Lonicera maackii* Leaves. *Kor. J. Pharmacogn.* 47(2):128-136.
14. **Yang H**, Yoon KD, Chin YW, Kim YC, Kim J. 2010. The isolation of acetylcholinesterase inhibitory constituents from *Lycoris radiata* using On-line HPLC-biochemical detection system. *Nat. Prod. Sci.* 16(4):228-232.

HONORS AND AWARDS

1. Scholarship from Brain Korea 21 (Mar. 2006 - Aug. 2011)
2. Namgang Academy Award – Korea Society of Pharmacognosy (2011)
3. Excellent Research Award - Applied Pharmaceutical Life Sciences Research Division, Brain Korea 21, College of Pharmacy, Seoul National University (2011)
4. 제 30 회 과학기술우수논문상 – 한국과학기술단체총연합회 (2020)

PRESENTATIONS

<Oral presentation>

1. **Yang H**, The strategic use of the clusters constructed by mass spectral patterns in natural product studies, The Pharmaceutical Society of Korea (2016.10.20).
2. **Yang H**, Anti-Proliferative Constituents of *Juglans sinensis* leaves and twigs on HSC-T6 Cells, Korea Society of Pharmacognosy (2011.11.30).

<Poster presentation (international)>

1. Jeong EJ, **Yang H**, Lee KY, Kim SH, Kim YC, KD-501, a standardized extract of *Scrophularia buergeriana* have both cognitive-enhancing and antioxidant activities in mice given scopolamine. 7th Joint Meeting of AFERP, ASP, GA, PSE & SIF, Athenes, Greece (2008.8.3-8)
2. Jeong EJ, **Yang H**, Lee KY, Yang HK, Kim SH, Sung SH, Kim YC, Cognitive-enhancing and antioxidant activities of iridoid glycosides from *Scrophularia buergeriana* in scopolamine-treated mice. 7th Joint Meeting of AFERP, ASP, GA, PSE & SIF, Athenes, Greece (2008.8.3-8)
3. **Yang H**, Yang HK, Yoon JS, Sung SH, Kim SY, Jang YP, Oh TH, Kim YC, Limonoids of *Dictamnus dasycarpus* protect neuronal cells against glutamate-induced toxicity in primary cultures of rat cortical cells. Neuroscience 2008, Washington DC, USA, (2008.11.15-19)
4. Jeong EJ, **Yang H**, Sung SH, Kim YC, Diterpenoids from *Biota Orientalis* attenuate oxidative glutamate toxicity in HT22 cells. American Society of Pharmacognosy 50th Annual Meeting, Honolulu, Hawaii, USA, (2009.6.27-7.1)
5. Choi Y, Lee MK, Lim SY, **Yang H**, Sung SH, Kim YC. Inhibition of inducible NO synthase, cyclooxygenase-2 and interleukin-1beta by torilin is mediated by mitogen-activated protein kinases in microglial BV2 cells. 57th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research, Geneva, Switzerland, (2009.8.16-20)
6. **Yang H**, Yang HJ, Lee M., Sung SH., Chung KH., Kim YC. Phenanthrenes isolated from *Dendeobium nobile* stem attenuate fibrosis in rat hepatic stellate cells. 70th FIP World Congress of Pharmacy/Pharmaceutical Sciences, Lisbon, Portugal, (2010.8.28-9.2.)
7. **Yang H**, Kim J., Sung SH., Kim YC. Antifibrotic Triterpenes from *Juglans sinensis* Leaves and Twigs. Phytochemical Society of Europe (PSE) International Symposium on "Terpenes- Application, Activity and Analysis", Istanbul, Turkey, (2010.9.26-29)
8. **Yang H**, Jeong EJ, Sung SH, Kim J, Kim YC. Minor Terpenoids from *Juglans sinensis* Leaves and Twigs. 2011 American Society of Pharmacognosy Annual Meeting, San Diego, California, USA. (2011.7.30-8.4)
9. **Yang H**. De-replication study of Natural Products using Mass Spectral Pattern. Austria, (2017.9.20~23)

10. Jang HS, Ko KW, Lee JH, Jeong BR, Yang H. New pregnane glycosides isolated from *Stapelia gigantea*. 2018 Annual Meeting of the ASP, Lexington, USA. (2018.7.21 – 25)
11. Ko KW, Choi SY, Kwon YS, Yang H. Triterpenoidal saponins isolated from *Camellia japonica* roots with nrf2-mediated antioxidant activation. 2018 Annual Meeting of the ASP, Lexington, USA. (2018.7.21 – 25)
12. Lee JH, Jang HS, Jeong BR, Ko KW, Yang H. Cytotoxic compounds from *Sedum middendorffianum*. 2018 Annual Meeting of the ASP, Lexington, USA. (2018.7.21 – 25)

PATENTS

1. 능수버들 추출물을 포함하는 비만의 예방 또는 치료용 조성물 (Composition for preventing or treating an obesity comprising *Salix pseudo-lasiogyne* extract), 등록 (1013539440000), 2014.01.15
2. 호도나무 잎과 잔가지의 추출물 또는 그로부터 분리된 화합물을 포함하는 간섬유화 억제용 조성물 (Compositions comprising the extract of *Juglans sinensis* Dode or the compound derived therefrom as an active ingredient for inhibiting hepatic fibrosis), 출원 (1020110062492), 2013.01.04
3. 진세노사이드 알지 3 및 알에이치 2 를 유효성분으로 하는 인삼 또는 홍삼의 가공물을 함유하는 간섬유증 또는 간경화증의 치료 또는 예방용 조성물 (A composition comprising processed ginseng or red ginseng having ginsenoside Rg3 and Rh2 for treating or preventing of liver cirrhosis or liver cirrhosis), 등록 (1014934130000), 2015.02.09
4. 생약재 및 가용화제를 포함하는 고체분산체 및 그 제조방법 (Solid dispersion comprising herb medicine and solubilizer, and method for preparing thereof), 출원 (1020140179643), 2014.12.12, 등록 (10-1722568), 2017.03.28
5. 질량분석 스펙트럼을 이용한 안토시아닌의 정성 및 정량 분석 방법, 출원 10-2015-01111501, 2015-08-07
6. 천궁 에탄올 추출물을 포함하는 건선 완화용 조성물. 출원 1020170051770, 2017.04.21

7. 곤드레 추출물을 포함하는 항바이러스 활성을 갖는 조성물, 출원 10-2017-0077500, 2017-06-19, 등록 1019281950000
8. 인진호 추출물을 유효성분으로 함유하는 건선 예방 또는 치료용 약학적 조성물, 출원 1020180098872, 2018. 08. 23
9. 핵자기 공명법을 이용한 백수오와 이엽우피소의 감별방법 및 핵자기 공명법을 이용한 백수오 품질평가방법, 출원 10-2017-0054793, 2017.04.28, 등록 1018944410000, 2018.08.28
10. 동백나무 뿌리 유래 화합물 및 이를 포함하는 항산화 조성물, 출원 10-2019-0003002, 2019-01-09
11. 바이오메디컬 정보의 계층 및 유사성을 이용한 바이오메디컬 정보제공방법, 출원 10-2020-0076508, 2020.06.23