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**Graduate Institute of Natural Products**  
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***Academic Qualifications:***

- 1999-2006 PhD, Graduate Institute of Life Sciences, National Defense Medical Center, Taipei, Taiwan.
- 1997-1999 Master of Science, Graduate Institute of Physiology, National Defense Medical Center, Taipei Taiwan
- 1994-1997 Bachelor of Science, School of Public Health, Taipei Medical University, Taipei, Taiwan

***Personal Experiences:***

- 2006-2008 Postdoctoral Fellow, Institute of Biomedical Science, Academia Sinica, Taipei, Taiwan
- 2006-2008 Concurrently Assistant Professor, School of public health, National Defense Medical Center, Taipei, Taiwan
- 2008-2013 Assistant Professor, Graduate Institute of Natural Products, College of Pharmacy, KMU, Kaohsiung, Taiwan
- 2013- Associate Professor, Graduate Institute of Natural Products, College of Pharmacy, KMU, Kaohsiung, Taiwan

***Research Interests:***

Our goal is to seek potential lead drugs from natural products to support chemoprevention and chemotherapy against cancers. Using molecular biological approaches, we hope to establish cell-based models to identify modulators which target genes related to malignancy and apply them to animal model according to their molecular mechanisms.

***Awards:***

- 2008 AACR-ITO EN, Ltd. Scholar-in-Training Award, USA
- 2011 Merit Mentors Award, KMU
- 2012 Outstanding Research Award, KMU
- 2013 Outstanding Research Award, KMU
- 2014 The Faculty Teaching Award, KMU
- 2014 Award of Patent Approval, KMU
- 2015 Outstanding Research Award, KMU

***Teaching Courses in Graduate Institute of Natural Products:***

1. Special Topics in Biotechniques of Natural Products
2. Special Topics in Biomedical Sciences
3. Special Topics in Biochemistry

### **Membership:**

1. Member of the Chinese Natural Medicine Society of Taiwan since 2008
2. Active member of the American Association for Cancer Research since 2008

### **Publications:**

1. **Wang HC**, Chou WC, Shieh SY, Shen CY\*. Ataxia telangiectasia mutated and checkpoint kinase 2 regulate BRCA1 to promote the fidelity of DNA end-joining. *Cancer Res.* 2006;66:1391-400. {SCI} (IF=7.517)
2. Easton DF *et al.* (**Wang HC** is listed as the 27th among 105 authors). Genome-wide association study identifies novel breast cancer susceptibility loci. *Nature* 2007;447:1087-93. {SCI} (IF=31.434)
3. Hsu HM, **Wang HC**, Chen ST, Hsu GC, Shen CY, Yu JC. Breast cancer risk is associated with the genes encoding the DNA double-strand break repair Mre11/Rad50/Nbs1 complex. *Cancer Epidemiol Biomarkers Prev.* 2007;16:2024-32. {SCI} (IF=4.123; Rank 11/157=7.0%)
4. Chou WC, **Wang HC**, Wong FH, Ding SL, Wu PE, Shieh SY\*, Shen CY\*. Chk2-dependent phosphorylation of XRCC1 in the DNA damage response promotes base excision repair. *EMBO J.* 2008; 27:3140-1450. {SCI} (IF=8.662; Ranking/ BIOCHEMISTRY & MOLECULAR BIOLOGY: 19/263=7.22%) (the 5th. *TienTe Lee* Biomedical Foundation Best Thesis Award, 2009.)
5. Udler MS *et al.* (**Wang HC** is listed as the 25th among 35 authors). FGFR2 variants and breast cancer risk: fine-scale mapping using African American studies and analysis of chromatin conformation. *Hum Mol Genet.* 2009; 18:1692-1703. {SCI} (IF=7.249; Ranking/ GENETICS & HEREDITY: 13/138=9.42%)
6. Gaudet MM *et al.* (**Wang HC** is listed as the 96th among 119 authors). Five polymorphisms and breast cancer risk: results from the Breast Cancer Association Consortium. *Cancer Epidemiol Biomarkers Prev.* 2009; 18:1610-1616. {SCI} (IF=4.770; Ranking/PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH: 8/105=7.62%)
7. Milne R. *et al.* (**Wang HC** is listed as the 86th among 95 authors). Risk of estrogen receptor-positive and -negative breast cancer and single-nucleotide polymorphism 2q35-rs13387042. *J Natl Cancer Inst.* 2009; 101:1012-1018. {SCI} (IF=14.933; Ranking/ONCOLOGY: 5/143=3.50%)
8. Lee CL, Huang CH, **Wang HC**, Chuang DW, Wu MJ, Wang SY, Hwang TL, Wu CC, Chen YL, Chang FR\*, Wu YC\*. First total synthesis of antrocamphin A and its analogs as anti-inflammatory and anti-platelet aggregation agents. *Org Biomol Chem.* 2011; 9:70-73. {SCI} (IF=3.451; Ranking/ CHEMISTRY, ORGANIC 12/56=21.43%)
9. Lai WC, **Wang HC**, Chen GY, Yang JC, Korinek M, Hsieh CJ, Nozaki H, Hayashi KI, Wu CC\*, Wu YC, Chang FR\*. Using the pER8:GUS Reporter System to Screen for Phytoestrogens from *Caesalpinia sappan*. *J Nat Prod.* 2011;74:1698-1706. {SCI} (IF=2.872; Ranking/PLANT SCIENCES: 28/188=14.89%)
10. Chung YM, **Wang HC**, El-Shazly M, Leu YL, Cheng MC, Lee CL, Chang FR\*, Wu YC\*. Antioxidant

- and Tyrosinase Inhibitory Constituents from the Desugared Sugarcane Extract, a By-Product of Sugar Production. *J Agric Food Chem.* 2011; 59:9219-9225. {SCI} (IF=2.816; Ranking/AGRICULTURE, MULTIDISCIPLINARY: 2/55=3.65%)
11. Hunyadi A, Chuang DW, Danko B, Chiang MY, Lee CL, **Wang HC**, Wu CC, Chang FR\*, Wu YC\*. Direct semi-synthesis of the anticancer lead-drug Protoapigenone from Apigenin, and synthesis of further new cytotoxic protoflavone derivatives. *PLoS One* 2011; 6:e23922. {SCI} (IF=4.411; Ranking/BIOLOGY: 12/86=13.95%)
  12. Liao WT, Huang TS, Chiu CC, Pan JL, Liang SS, Chen BH, Chen SH, Liu PL, **Wang HC**, Wen ZH, Wang HM\*, Hsiao SW\*. Biological properties of acidic cosmetic water from seawater. *Int J Mol Sci.* **2012**;13:5952-5971. {SCI} (IF=2.598 Ranking/CHEMISTRY, MULTIDISCIPLINARY: 45/154=29.22%)
  13. **Wang HC**, Tsai YL, Wu YC, Chang FR, Liu MH, Chen WY, Wu CC\*. Withanolides-induced breast cancer cell death is correlated with their ability to inhibit heat protein 90. *PLoS One.* **2012**;7:e37764 {SCI} (IF=3.730; Ranking/BIOLOGY: 7/56=12.5%)
  14. **Wang HC\***, Lee AY, Chou WC, Wu CC, Tseng CN, Liu KY, Lin WL, Chang FR, Chuang DW, Hunyadi A, Wu YC\*. Inhibition of ATR-dependent signaling by protoapigenone and its derivative sensitizes cancer cells to interstrand cross-link-generating agents *in vitro* and *in vivo*. *Mol Cancer Ther.* **2012**;11:1443-1453 {SCI} (IF=5.599 Ranking/ONCOLOGY: 29/197=14.80%)
  15. Danko B, Martins A, Chuang DW, **Wang HC**, Amaral L, Molnár J, Chang FR, Wu YC\*, and Hunyadi A\*. *In vitro* cytotoxic activity of novel protoflavone analogs – selectivity towards a multidrug resistant cancer cell line. *Anticancer Res.* **2012**; 32:2863-2869. {SCI} (IF=1.725 Ranking/ONCOLOGY: 136/196=69.39%)
  16. Chen WC, Wang SY, Chiu CC, Tseng CK, **Wang HC\***, and Lee JC\*. Lucidone suppresses hepatitis C virus replication by Nrf2-mediated heme oxygenase-1 induction. *Antimicrobial Agents and Chemotherapy* **2013**; 57:1180-91. (IF=4.841 Rank/PHARMACOLOGY & PHARMACY: 31/260=11.9%)
  17. Tseng CN\*, Chang HW, Stocker J, **Wang HC**, Lu CC, Wu CH, Yang JG, Cho CL, Huang HW\*. A Method to Identify RNA A-to-I Editing Targets Using I-Specific Cleavage and Exon Array Analysis. *Mol Cell Probes.* **2013**;27:38-45. {SCI} (IF=1.873 Rank/ BIOTECHNOLOGY & APPLIED MICROBIOLOGY 89/160=48.7%)
  18. **Wang HC\***, Wu CC, Cheng TS, Kuo CY, Tsai YC, Chiang SY, Wong TS, Wu YC, Chang FR\*. Active constituents from *Liriope platyphylla* root against cancer growth *in vitro*. *Evid-Based Compl Alt.* **2013**; 2013: 857929. {SCI} (IF=1.722 Rank/INTEGRATIVE & COMPLEMENTARY MEDICINE: 8/21=38.09%)
  19. **Wang HC**, Chu FH, Chien SC, Liao JW, Hsieh HW, Li WH, Lin CC, Shaw JF, Kuo YH\*, Wang SY\*. Establishment of metabolite profile for an *Antrodia cinnamomea* health food product and investigation of its chemoprevention activity. *J Agric Food Chem.* **2013**; 61: 8556–8564 {SCI} (IF=2.906 Rank/AGRICULTURE, MULTIDISCIPLINARY: 1/57=1.8%)

20. **Wang HC**, Tseng YH, Wu HR, Chu FH, Yueh-Hsiung Kuo YH\* and Wang SY\*. Anti-proliferation Effect on Human Breast Cancer Cells *via* Inhibition of pRb Phosphorylation by Taiwanin E Isolated from *Eleutherococcus trifolius*. *Nat Prod Commun.* **2014**; 9: 1303-1306 {SCI} (IF=0.924 Rank/ FOOD SCIENCE & TECHNOLOGY= 76/123 =61.8%)
21. Kuo CY, **Wang HC**, Kung PH, Lu CY, Liao CY, Wu MT, Wu CC\*. Identification of CalDAG-GEFI as an intracellular target for the vicinal dithiol binding agent phenylarsine oxide in human platelets. *Thromb Haemost.* **2014**; 111:892-901 {SCI} (IF=5.760 Rank/ PERIPHERAL VASCULAR DISEASE= 7/65 =10.8%)
22. Ting YC, Ko HH, **Wang HC**, Peng CF, Chang HS, Hsieh PC, Chen IS. Biological evaluation of secondary metabolites from the roots of *Myrica adenophora*. *Phytochemistry.* **2014**; 103:89-98. {SCI} (IF=3.350 Rank/PLANT SCIENCES: 28/199=14.1%)
23. Chang HW, **Wang HC**, Chen CY, Hung TW, Hou MF, Yuan SS, Huang CJ, Tseng CN. 5-azacytidine induces anoikis, inhibits mammosphere formation and reduces metalloproteinase 9 activity in MCF-7 human breast cancer cells. (**co-first author**) *Molecules.* **2014**;19:3149-59. {SCI} (IF=2.095 Rank/ CHEMISTRY, ORGANIC= 30/58=51.7%)
24. Cheng YB, Chien YT, Lee JC, Tseng CK, **Wang HC**, Lo IW, Wu YH, Wang SY, Wu YC\*, Chang FR\*. Limonoids from the seeds of *Swietenia macrophylla* with inhibitory activity against dengue virus 2. *J Nat Prod.* **2014**;77:2367-74. {SCI} (IF=3.947 Rank/PLANT SCIENCES: 21/199 =10.6%)
25. Hou YL, Chang HS, **Wang HC**, Wang SY, Chen TY, Lin CH, Chen IS\*. Sassafrandainol: A new neolignan and anti-inflammatory constituents from the stem of *Sassafras randaiense*. *Nat Prod Res.* **2015**;29:827-32. {SCI} (IF=0.919 Rank/CHEMISTRY, APPLIED: 46/72 =63.9%)
26. Liao CY, Lee CL, **Wang HC**, Liang SS, Kung PH, Wu YC, Chang FR, Wu CC\*. CLL2-1, a chemical derivative of orchid 1,4-phenanthrenequinones, inhibits human platelet aggregation through thiol modification of calcium-diacylglycerol guanine nucleotide exchange factor-I (CalDAG-GEFI). *Free Radic Biol Med.* **2015**; 78:101-10. {SCI} (IF=5.736 Rank/ENDOCRINOLOGY & METABOLISM: 16/128 =12.5%)
27. **Wang HC\***, Chang FR, Huang TJ, Kuo CY, Tsai YC, Wu CC\*. (-)-Liriopein B Suppresses Breast Cancer Progression via Inhibition of Multiple Kinases. *Chem Res Toxicol.* **2015**;28:897-906. {SCI} (IF=3.529 Rank/CHEMISTRY, MEDICINAL: 10/59 =16.9%)
28. Kuo CY, Chou WC, Wu CC, Wong TS, Kakadiya R, Lee TC, Su TS\*, **Wang HC\***. Repairing of N-mustard derivative BO-1055 induced DNA damage requires multiple DNA repair mechanisms. *Oncotarget* **2015**;6:25770-83 {SCI} (IF=6.359 Rank/ONCOLOGY: 21/211 =10.0%)
29. Bózsity N, Minorics R, Szabó J, Mernyák E, Schneider G, Wölfling J, **Wang HC**, Wu CC, Ocsovszki I, Zupkó I\*. Mechanism of antiproliferative action of a new D-secoestrone-triazole derivative in cervical cancer cells and its effect on cancer cell motility. *J Steroid Biochem Mol Biol.* **2016**;pii: S0960-0760(16)30196-0 {SCI} (IF=3.985 Rank/ENDOCRINOLOGY & METABOLISM: 32/131=24.4%)

30. Chang HS, Lin CH, Chen YS, **Wang HC**, Chan HY, Hsieh SY, Wu HC, Cheng MJ\*, Yuan GF, Lin SY, Lin JY, and Chen IS\*. Secondary metabolites of the endophytic fungus *Lachnum abnorme* from *Ardisia cornudentata*. Int. J. Mol. Sci. **2016**;17. pii: E1512 {SCI} (IF=3.325 Rank/CHEMISTRY, MULTIDISCIPLINARY: 51/163=31.3%)
31. Kuo CY, Zupkó I, Chang FR, Hunyadi A, Wu CC, Weng TS, **Wang HC**\*. Dietary flavonoid derivatives enhance chemotherapeutic effect by inhibiting the DNA damage response pathway. Toxicol Appl Pharmacol. **2016**; pii: S0041-008X(16)30285-X {SCI} (IF=3.847 Rank/TOXICOLOGY: 12/85=14.1%)
32. Chao CH, Wu CY, Huang CY, **Wang HC**, Dai CF, Wu YC, Sheu JH\*. Cubitanoids and Cembranoids from the Soft Coral *Sinularia nanolobata*. Mar Drugs. **2016**; 14. pii: E150 {SCI} (IF=3.345 Rank/ CHEMISTRY, MEDICINAL: 13/59=22.0%)
33. Huang CY, Chang CW, Tseng YJ, Lee J, Sung PJ, Su JH, Hwang TL, Dai CF, **Wang HC**, Sheu JH\*. Bioactive Steroids from the Formosan Soft Coral *Umbellulifera petasites*. Mar Drugs. **2016**;14. pii: E180 {SCI} (IF=3.345 Rank/ CHEMISTRY, MEDICINAL: 13/59=22.0%)