

Brief Biography



吳漢忠博士/ Dr. Han-Chung Wu

Director

**Biomedical Translation Research Center (BioTReC), Academia Sinica,
Taiwan**

Dr. Han-Chung Wu is currently a Distinguished Research Fellow of the Institute of Cellular and Organismic Biology, Academia Sinica, Taiwan. He is also a Professor at the College of Medicine of the National Taiwan University. His research primarily focuses on two fields, cancer research and infectious diseases, and includes components of both basic research and applied science. Dr. Wu's research interest focuses on the identification of novel tumor antigens, development of targeting drug delivery systems for cancer therapy and molecular imaging. He has developed phage display technologies for the generation of fully human monoclonal antibodies and the identification of peptides for a variety of target molecules. As of today, Dr. Wu has published over 110 original articles in world-renowned journals, and 92 Patents (including 64 granted patents and 28 filed patents). He has successfully licensed out 16 technologies from 48 patents to biotech companies. Three of the technology transfers have completed clinical trials and the products are on the market, two of the technology transfers are currently in clinical trials, and seven of the licensed technologies are currently in preclinical studies for the development of therapeutics.

Aside from conducting research, Dr. Wu has also been responsible for coordinating academic activities and overseeing administration at the Institute of Cellular and Organismic Biology as the Vice Director and Acting Director. He has also served as Director of the Department of Intellectual Property and Technology Transfer, Academia Sinica to promote the protection of intellectual property and the technology transfer, and use the industrialization of intellectual property rights to enhance social welfare. May 2019, Dr. Wu joined National Research Biotechnology Park (NBRP) as Acting Chief Executive Officer of BioHub Taiwan, then Acting Director of Biomedical Translation Research Center (BioTReC), Academia Sinica. On Sept 1, 2020, Dr. Wu served as the Director of BioTReC, with the mission of promoting the biotechnology industry development in Taiwan.

Professional Experience

- Director, Biomedical Translation Research Center, Academia Sinica, Taiwan
- Distinguished Research Fellow, Institute of Cellular and Organismic Biology, Academia Sinica
- Acting Director, Biomedical Translation Research Center, Academia Sinica, Taiwan
- Acting Chief Executive Officer, National Biotechnology Research Park/BioHub Taiwan
- Director, Department of Intellectual Property and Technology Transfer, Academia Sinica
- Acting Director, Institute of Cellular and Organismic Biology, Academia Sinica
- Vice Director, Institute of Cellular and Organismic Biology, Academia Sinica
- Research Fellow, Institute of Cellular and Organismic Biology, Academia Sinica
- Joint Appointment Research Fellow, Genomics Research Center, Academia Sinica
- Joint Appointment Professor, Institute of Pathology; and Graduate Institute of Oral Biology, College of Medicine, National Taiwan University

Honors & Awards

- 2008 Academia Sinica Young Investigator Award
- 2010 Yung-Shing Young Investigator Award
- 2011-2014, NSC Outstanding Research Award, National Science Council, Taiwan
- 2015 Chair, Taiwan Bio-development Foundation (TBF) Award
- 2015 Ho Jen-Dui Distinguished Honor Award
- 2015-2018, MOST Outstanding Research Award, Ministry of Science and Technology, Taiwan
- 2018-2020, Special Research Fellow Award, Ministry of Science and Technology, Taiwan
- 2018 International Inventor Prize and Lifetime Achievement Academic Award
- 2018 The Executive Yuan Award for Outstanding Science and Technology Contribution
- 2019 Award for Excellent Contributions in Technology Transfer, Ministry of Science and Technology, Taiwan
- 2019 Taiwan Reputed University Startups to Taiwan Unicorns, (TRUS-U Program, 50 million NTD/year), Ministry of Science and Technology, Taiwan
- 2020-2023, Special Research Fellow Award, Ministry of Science and Technology, Taiwan

CURRICULUM VITAE

Name: Han-Chung Wu (吳漢忠)

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Education

Ph.D. Institute of Pathology, College of Medicine, National Taiwan University

Professional Experience

Director in National Biotechnology Research Park/Biomedical Translation Research Center, BioTReC, Academia Sinica

Distinguished Research Fellow in Institute of Cellular and Organismic Biology, Academia Sinica

Director in Department of Intellectual Property and Technology Transfer, Academia Sinica

Chief Executive Officer (CEO) in National Biotechnology Research Park/BioHub Taiwan, Academia Sinica

Acting Director in Institute of Cellular and Organismic Biology, Academia Sinica

Vice Director in Institute of Cellular and Organismic Biology, Academia Sinica
Joint Appointment Professor in Institute of Pathology; and Graduate Institute of Oral Biology, College of Medicine, National Taiwan University

Honors & Awards

1. Editorial Board of the International Journal of Oncology
2. Editorial Board of PLoS ONE
3. Editorial Advisory Board of The Open Breast Cancer Journal
4. Editorial Board of the Clinical Cancer Drugs
5. 2008 Academia Sinica Young Investigator Award (2008年中央研究院年輕學者研究著作獎)
6. 2010 Yung-Shing Young Investigator Award (2010年第五屆永信李天德醫藥科技獎)
7. 2007, 2009, 2010, 2011, 2013, and 2015, Significant Research Achievements, Academia Sinica (2007年, 2009年, 2010年, 2011年, 2013年, 2015年, 中央研究院重要研究成果)
8. 2011 8th National Innovation Award (2011 第八屆國家新創獎)
9. 2011-2014, NSC Outstanding Research Award, National Science Council, Taiwan (2011 國科會傑出研究獎)
10. 2012 9th National Innovation Award (2012 第九屆國家新創獎)
11. 2013 10th National Innovation Award (2013 第十屆國家新創獎)
12. 2013 Taiwan Healthcare and Agricultural Biotech Industries Innovation and Excellence Awards (2013 生醫暨生農產業選秀大賽生醫組潛力新秀獎)
13. 2014 Executive director, Taiwan Antibody Association (台灣抗體協會常務理事)

14. 2015 Executive director, The Taiwan Society for Biochemistry and Molecular Biology (台灣生化學會常務理事)
15. 2015 Chair, Taiwan Bio-development Foundation Award (2015 台灣生技醫藥發展基金會TBF生技講座)
16. 2015 Ho Jen-Dui Distinguished Honor Award (2015 侯金堆傑出榮譽獎)
17. 2015-2018, MOST Outstanding Research Award, Ministry of Science and Technology, Taiwan (2015 科技部傑出研究獎)
18. 2018-2020, Special Research Fellow Award, Ministry of Science and Technology, Taiwan (2018 科技部特約研究員獎)
19. 2018 International Inventor Prize and Lifetime Achievement Academic Award (2018 國際傑出發明家終身成就獎)
20. 2018 The Executive Yuan Award for Outstanding Science and Technology Contribution (2018 行政院傑出科技貢獻獎)
21. 2019 Award for Excellent Contribution in Technology Transfer, Ministry of Science and Technology, Taiwan (2019 科技部傑出技術移轉貢獻獎)
22. 2019 Taiwan Reputed University Startups to Taiwan Unicorns, (TRUS-U Program, 50 million NTD/year), Ministry of Science and Technology, Taiwan (科技部價創計畫，5千萬元/年)
23. 2020-2023, Special Research Fellow Award, Ministry of Science and Technology, Taiwan (2020 科技部特約研究員獎)

Teaching:

1. Molecular Tumor Biology (2001-present) at National Taiwan University, College of Medicine, Graduate Institute of Oral Biology for M.S. and Ph.D. students.
2. Methods in Experimental Pathology (2001-present) at National Taiwan University, College of Medicine, Institute of Pathology for M.S. and Ph.D. students.
3. Advance Tumor Biology (2005-present) at National Taiwan University, College of Medicine, Graduate Institute of Oral Biology for M.S. and Ph.D. students.
4. Advanced Animal Biology (2006-present) at Academia Sinica for TIGP Ph.D. students.
5. Stem Cell Biology (2006-present) at Academia Sinica for M.S., Ph.D. and TIGP Ph.D. students.
6. Seminar in Translational Medicine (2008-present) at Academia Sinica for TIGP Ph.D. students.
7. Molecular & Cellular Biotechnology (2011-present) at Academia Sinica for TIGP Ph.D. students.
8. Translational Medicine (2014-present) at Academia Sinica for TIGP Ph.D. students.

Research Interests

1. Molecular mechanisms of tumorigenesis.
2. Development of targeting drug delivery systems for cancer imaging and therapy.
3. Development of therapeutic antibodies for cancer therapy.
4. Pathogenesis of dengue hemorrhagic fever.
5. Development of therapeutic antibodies, diagnostic reagents and vaccine for dengue.

Academic Services:

Aside from conducting research, I have also been responsible for coordinating the academic activities as well as overseeing the administrative tasks at the Institute of Cellular and Organismic Institute as the Vice Director since January 2010. With regard to the commitment to education, I have actively participated in teaching various courses and curriculums offered by the Academia Sinica. In addition to being the Joint Appointment professor at the National Taiwan University College of Medicine for 15 years, I have also been the chair-person for the student recruitment program at Academia Sinica. In terms of the dedications and services to the professional community, I have served as the academic committee member for Ministry of Science and Technology (科技部計畫複審委員、傑出研究獎評審委員), as well as the chair-person and committee member for evaluating projects and grant applications to Ministry of Economic Affairs (經濟部學界、業界、法人科專等主審委員及審查委員). At the same time, I have also served as a committee member for 行政院生醫科技與產品研發中心 and Industrial Technology Research Institute (ITRI) 中長期產業技術前瞻, as well as the chair-person for the MOEA SBIR programs committee (經濟部的研發中心計畫主審委員). Lastly, I have serve as a SAB committee member (聘審委員) at various Universities and Research Institutes.

Regular Reviewer: serves as the reviewer for more than 39 the international journals and reviews ~10-15 manuscripts per year including journals:

Advances in Bioscience and Biotechnology
ACS Nano
Applied and Environmental Microbiology
Biomaterials
BMC Cancer
Cancer Biotherapy & Radiopharmaceuticals
Cancer Letter
Cancer Research
Chemistry Today
Clinical Cancer Drugs
Clinical Cancer Research
Current Medicinal Chemistry
Drug Delivery
Epigenomics
European Journal of Pharmaceutical Sciences
FEBS Journal
International Journal of Oncology
International Journal of Pharmaceutics
Journal of Cancer Research and Clinical Oncology
Journal of Drug Delivery and Therapeutics
Journal of Gastroenterology and Hepatology
Journal of Infectious Diseases
Journal of Oncology
Journal of Translational Medicine
Nanomedicine: NBM

Nanoscale
Nature Communications
Oncology
Oncotarget
Pharmacogenomics
PLoS one
Pigment Cell and Melanoma Research
Stem Cell
The Journal of Biomedical Science
The Journal of Virological Methods
The Open Breast Cancer Journal
Tumor Biology
Therapeutic Delivery
Virus Research

Major Committee

1. Academic committee member for various grant applications to Ministry of Science and Technology (MOST); Review more than 30 research proposal/year
2. Chairperson and committee member for evaluating projects grant applications to Ministry of Economic Affairs (MEA); Review more than 15 research proposals/year
3. Chairperson for the MOEA SBIR programs committee
4. The Committee Member of Appointment Review
5. Member of Academic Advisory Committee
6. Expert committee member for the biologic agent of Chinese pharmacopoeia at TFDA (衛生福利部食品藥物管理署-中華藥典生物製劑專家委員)
7. Committee member for 行政院生醫科技與產品研發中心
8. Industrial Technology Research Institute (ITRI) 中長期產業技術前瞻
9. Executive director, The Taiwan Society for Biochemistry and Molecular Biology (台灣生化及分子生物學會常務理事)
10. Executive director, Taiwan Antibody Association (台灣抗體協會常務理事)
11. Committee member for National Taiwan Science Education Center (國立台灣科學教育館評審委員)
12. Committee member for National Primary and High School Science Fair (全國中小學科展評審委員)
13. Steering Committee Member for Taiwan International Science Fair (TISF) (台灣國際科展指導委員)

Committee / Academia Sinica

1. The Management Board of Research and and development achievements (研究發展成果管理委員會)
2. The Management Board of Conflict of Interest (利益衝突管理委員會)
3. The Working Committee of Equipment of National Biotechnology Research Park (國家生技園區儀器設備工作小組委員會)
4. Construction Committee of National Biotechnology Research Park (國家生技園區興建小組委員會)
5. The Supervised Committee of Environmental Protection

- (國家生技研究園區環境保護監督委員會)
6. Advisory Committee of Incubation Center at Academia Sinica
(中研院附設育成中心諮詢委員會)
 7. The Committee of Environment, Health and Safety Management
(環安衛管理委員會)
 8. The Review Team of Specialist (院本部特殊性約聘技術人員審核小組)
 9. The Review Team of Research Technician Assistant
(院本部特殊技能助理甄審小組)
 10. Coordinating Committee of Project and Budget
(107 年度計畫與預算協調委員會)
 11. Promotion Committee of computerized administration
(行政作業電腦化推動委員會)

Review for international academic institutes or government agencies

National Medical Research Council, UK

Interregional Project Networks (IPN), The Austrian Science Fund

Raine Medical Research Foundation, Australia

Ariel University, Israel, Evaluation of promotion to the full Professor

Publication Summary:

110 Peer-reviewed published papers; 92 Patents (including 64 granted patents and 28 filed patents); Licensed out 16 technology transfers from 48 patents; 12 Invited review articles or books; 198 plenary, Invited or Conference contributions.

Selected Publications (2011 ~ 2020)

Corresponding author: Impact Factor, Order/Field

1. Chen, H. N., Liang, K. H., Lai, J. K., Lan, C. H., Liao, M. Y. Hung, S. H., Chuang, Y. T. and **Wu, H. C.*** (2020). EpCAM signaling promotes tumor progression and protein stability of PD-L1 through EGFR pathway. **Cancer Research** (Accepted) 9.727; 19/244 (7.79%)
2. Ke, F. Y., Chen, W. Y., Lin, M. C., Hwang, Y. C., Kuo, K. T. and **Wu, H. C.*** (2020). Novel monoclonal antibody against integrin $\alpha 3$ shows therapeutic potential for ovarian cancer. **Cancer Science** (Accepted) 4.966; 45/244 (18.4 %)
3. Lu, R. M., Hwang, Y. C., Liu, I. J., Lee, C. C., Tsai, H. Z., Li, H. Z. and **Wu, H. C.*** (2020). Development of therapeutic antibodies for the treatment of diseases. Development of therapeutic antibodies for the treatment of diseases. **Journal of Biomedical Science** 17:1. 5.762; 17/138 (12.3 %)
4. Wang, Y. P., Liu, I. J., Chung, M. J. and **Wu, H. C.*** (2020). Novel anti-EGFR scFv human antibody-conjugated immunoliposomes enhance chemotherapeutic efficacy in squamous cell carcinoma of head and neck. **Oral Oncology** 106, 104689. 3.979; 5/91 (5.5 %)

5. Lu, R. M., Wu, C. H., Patil, A. V., and **Wu, H. C.*** (2020). Peptide Targeting Methods. Book title “Handbook of *in vivo* chemistry in mice”, in Chapter 16, published by WILEY.
6. Lu, R. M., Chiu, C. Y., Liu, I. J., Chang, Y. L., Liu, Y. J. and **Wu, H. C.*** (2019). Novel human antibody against VEGFR2 shows therapeutic potential for leukemia and prostate cancer. **Cancer Science** *110*, 3773-3787. 4.966; 45/244 (18.4 %)
7. Kuan, I. I., Chen, C. H., Lu, J. and **Wu, H. C.*** (2019). The extracellular domain of epithelial cell adhesion molecule (EpCAM) enhances multipotency of mesenchymal stem cells through EGFR-LIN28-LET7 signaling. **Journal of Biological Chemistry** *294*, 7769-7786. 4.238; 87/297 (29.3 %)
8. Huang, J. R., Lee, M. H., Li, W. S. and **Wu, H. C.*** (2019). Development of liposomal irinotecan for treatment of colorectal cancer in a preclinical model. **Cancers** *11*, 281. 6.126; 37/244 (15.2 %)
9. Liang, K. H., Tso, H. C., Hung, S. H., Kuan, I. I., Lai, J. K., Ke, F. Y., Chuang, Y. T., Liu, I. J., Wang, Y. P., Chen, R. H. and **Wu, H. C.*** (2018). Extracellular domain of EpCAM enhances tumor progression through EGFR signaling in colon cancer cells. **Cancer Letters** *433*, 165-175. 7.36; 30/244 (12.3 %)
10. Huang, S. T., Wang, Y. P., Chen, Y. H., Lin, C. T., Li, W. S. and **Wu, H. C.*** (2018). Liposomal paclitaxel induces fewer hematopoietic and cardiovascular complications than bioequivalent doses of Taxol. **International Journal of Oncology** *53*, 1105-1117. 3.899; 34/244 (13.9%)
11. Wu, C. H., Lan, C. H., Wu, K. L., Wu, Y. M., Jane, W. N., Hsiao, M., and **Wu, H. C.*** (2018). Hepatocellular carcinoma-targeted nanoparticles for cancer therapy. **International Journal of Oncology** *52*, 389-401. 3.899; 34/244 (13.9%)
12. Tang, Y. L., Liu, I. J., Li, P. C., Chiu, C. Y., Lin, C. Y., Huang, C. H., Chen, Y. H., Fu, C. Y., Chao, D. Y., King, C. C., and **Wu, H. C.*** (2017). Generation and characterization of anti-NS1 monoclonal antibodies and development of diagnostics for dengue virus type 2. **The American Journal of Tropical Medicine and Hygiene** *97*, 1049-1061. 2.315; 8/21 (38.1 %)
13. Chi, Y. H., Hsiao, J. K., Lin, M. H., Chang, C, Lan, C. H. and **Wu, H. C.*** (2017). Lung cancer-targeting peptides with multi-subtype indication for combinatorial drug delivery and molecular imaging. **Theranostics** *7*, 1612-1632. **8.579; 10/138 (7.2 %)**
14. Kuan, I. I., Liang, K. H., Wang, Y. P., Kuo, T. W., Meir, Y. J. J., Wu, S. C. Y., Lu, J., and **Wu, H. C.*** (2017). EpEX/EpCAM and Oct4 or KLF4 alone are sufficient to generate induced pluripotent stem cells through STAT3 and HIF2 α . **Scientific Reports** *7*: 41852. 3.998; 17/71 (23.9 %)
15. Abdu-Allah, H. M., Huang, S. T., Chang, T. T., Chen, C. L., **Wu, H. C.*** and Li, W. S.* (2016). Nature-inspired design of tetraindoles: optimization of the core structure and evaluation of structure-activity relationship. **Bioorganic & Medicinal Chemistry Letters** *26*, 4497 - 4503. 2.572; 24/57 (42.1 %)
16. Yeh, C. Y., Hsiao, J. K., Wang, Y. P., Lan, C. H. and **Wu, H. C.*** (2016). Peptide-conjugated nanoparticles for targeted imaging and therapy of prostate cancer. **Biomaterials** *99*, 1-15. **10.317; 1/38 (2.6 %)**

17. Wu, C. H., Liu, I. J., Lu, R. M. and **Wu, H. C.*** (2016). Advancement and applications of peptide phage display technology in biomedical science. **Journal of Biomedical Science** 23, 8. 5.762; 17/138 (12.3 %)
18. Tang, Y. L., Chiu, C. Y., Lin, C. Y., Huang, C. H., Chen, Y. H., Destura, R. V., Chao, D. Y., **Wu, H. C.*** (2015). Establishment and comparison of two different diagnostic platforms for detection of DENV1 NS1 protein. **International Journal of Molecular Sciences** 16, 27850–27864. 4.556; 74/297 (24.9 %)
19. Wu, C. H., Kuo, Y. H., Hong, R. L., **Wu, H. C.*** (2015). α -Enolase-binding peptide enhances drug delivery efficiency and therapeutic efficacy against colorectal cancer. **Science Translational Medicine** 7, 290ra91, 1-14. **16.304; 2/138 (1.4 %)**
20. **Tang, C.T., Li, P. C., Liu, I. J., Liao, M. Y., Chiu, C. Y., Chao, D. Y., Wu, H. C.*** (2015). An epitope-substituted DNA vaccine improves safety and immunogenicity against dengue virus type 2. **PLoS Neglected Tropical Diseases** 9, e0003903. **3.885, 1/23 (4.3 %)**
21. Liao, M. Y., Lai, J. K., Kuo, M. Y. P., Lu, R., Lin, C. W., Cheng, P. C., Liang, K. H., **Wu, H. C.*** (2015). An anti-EpCAM antibody EpAb2-6 for the treatment of colon cancer. **Oncotarget** 6, 24947-24968. 5.168; 44/217 (20.3 %)
22. Tang, C. T., Liao, M. Y., Chiu, C. Y., Shen, W. F., Chiu, C. Y., Cheng, P. C., Chang, G. J. J., **Wu, H. C.*** (2015). Generation of monoclonal antibodies against dengue virus type 4 and identification of enhancing epitopes on envelope protein. **PLoS ONE** 10, e0136328. 2.740; 27/71 (38.0 %)
23. Hsiao, J. K., Liao, H. W., A. Yu, **Wu, H. C.***, Lin, C.T.* (2015). A multifunctional peptide for targeted imaging and chemotherapy for nasopharyngeal and breast cancers. **Nanomedicine: NBM** 11, 1425-1434. 5.182; 25/138 (18.1 %)
24. Shen, Y. A., Liu, C. S., Chang, Y. H., Chen, P. H., He, C. L., **Wu, H. C.*** and Chuang, C. M.* (2015). Subtype-specific binding peptides enhance therapeutic efficacy of nanomedicine in the treatment of ovarian cancer. **Cancer Letters** 360, 39-47. 7.36; 30/244 (12.3 %)
25. Liao, M. Y., Kuo, M. Y. P., Lu, T. Y., Wang, Y. P., **Wu, H. C.*** (2015). Generation of an anti-EpCAM antibody and epigenetic regulation of EpCAM in colorectal cancer. **International Journal of Oncology** 46, 1788-1800. 3.899; 34/244 (13.9%)
26. Lin, C. W., Sun, M. S., Liao, M. Y., Chung, C. H., Chi, Y. H., Chiou, L. T., Yu, J., Lou, K. L., and **Wu, H. C.*** (2014) Podocalyxin-like 1 promotes invadopodia formation and metastasis through activation of Rac1/Cdc42/Cortactin signaling in breast cancer cells. **Carcinogenesis** 35, 2425-2435. 4.603; 77/244 (31.6 %)
27. Lin, C. W., Sun, M. S. and **Wu, H. C.*** (2014) Podocalyxin-like 1 is associated with tumor aggressiveness and metastatic gene expressions in human oral squamous cell carcinoma. **International Journal of Oncology** 45, 710-718. 3.899; 34/244 (13.9%)
28. Wang, H. K., Tsai, C. H., Chen, K. H., Tang, C. T., Leou, J. S., Li, P. C., Tang, Y. L., Hsieh, H. J., **Wu, H. C.*** and Cheng, C. M.* (2014) Cellulose-based

- diagnostic devices for diagnosing serotype-2 dengue fever in human serum. **Advanced Healthcare Materials** 3, 187-196. 7.367; 7/87 (8.0 %)
29. Chang, D. K., Li, P.C., Jane, W. N. and **Wu, H. C.*** (2013) Peptide-mediated Liposomal Doxorubicin Enhances Drug Delivery Efficiency and Therapeutic Efficacy in Animal Models. **PLoS ONE** 8, e83239. 2.74; 27/71 (38.0 %)
 30. Wang, Y. P., Liu, I. J., Chiang, C. P. and **Wu, H. C.*** (2013) Astrocyte elevated gene-1 is associated with metastasis in head and neck squamous cell carcinoma through p65 phosphorylation and upregulation of MMP1. **Molecular Cancer** 12, 109. **15.302; 5/297 (1.7 %)**
 31. Lu, R. M., Chen, M. S., Chang, D. K., Chiu C. Y., Lin, W. C., Yan, S. L., Wang, Y. P., Kuo, Y. S., Lo, A. and **Wu, H. C.*** (2013) Targeted drug delivery systems mediated by a novel peptide in breast cancer therapy and imaging. **PLoS ONE** 8, e66128. 2.74; 27/71 (38.0 %)
 32. Wu, J. C., Tseng, P. Y., Tsai, W. S., Liao, M. Y., Lu, S. H., Frank, C. W., Chen, J. S., **Wu, H. C.*** and Chang, Y. C.* (2013) Antibody conjugated supported lipid bilayer for capturing and purification of viable tumor cells in blood for subsequent cell culture. **Biomaterials** 34, 5191-5199. **10.317; 1/38 (2.6 %)**
 33. Tung, K. H., Lin, C.W., Kuo, C.C., Li, L.T., Kuo, Y.H., Lin, C.W., and **Wu, H. C.*** (2013) CHC promotes tumor growth and angiogenesis through regulation of HIF-1 α and VEGF signaling. **Cancer Letters** 331, 58-67. 5.992. 7.36; 30/244 (12.3 %)
 34. Lin, C. W., Liao, M. Y., Lin, W. W., Wang, Y. P., Lu, T.Y. and **Wu, H. C.*** (2012) Epithelial cell adhesion molecule regulates tumor initiation and tumorigenesis via activating reprogramming factors and epithelial-mesenchymal transition genes expression in colon cancer. **Journal of Biological Chemistry** 287, 39449-39459. 4.238; 87/297 (29.3 %)
 35. Li, P. C., Liao, M. Y., Cheng, P. C., Liang, J. J., Liu, I. J., Chiu, C. Y., Lin, Y. L., Chang, G. J. J. and **Wu, H. C.*** (2012) Development of a humanized antibody with high therapeutic potential against dengue virus type 2. **PLoS Neglected Tropical Diseases** 6, e1636. **3.885, 1/23 (4.3 %)**
 36. Wu, C. D., Chou, H. W., Kuo, Y. S., Lu, R. M., Hwang, Y. C., **Wu, H. C.*** and Lin, C. T.* (2012) Nucleolin antisense oligodeoxynucleotides induce apoptosis and may be used as a potential drug for nasopharyngeal carcinoma therapy. **Oncology Reports** 27, 94-100. 3417; 116/244 (47.5 %)
 37. Wu, C. D., Kuo, Y. S., **Wu, H. C.*** and Lin, C.T.* (2011). MicroRNA-1 induces apoptosis by targeting prothymosin alpha in nasopharyngeal carcinoma cells. **Journal of Biomedical Science** 18, 80. 5.762; 17/138 (12.3 %)
 38. Liu, I. J., Chiu, C. Y., Chen, Y.C. and **Wu, H. C.*** (2011) Molecular Mimicry of Human Endothelial Cell Antigen by Autoantibodies to Nonstructural Protein 1 of Dengue Virus. **Journal of Biological Chemistry** 286, 9726-9736. 4.238; 87/297 (29.3 %)
 39. Lu, R. M., Chang, Y. L., Chen, M. S. and **Wu, H. C.*** (2011) Single chain anti-c-Met antibody conjugated nanoparticles for in vivo tumor targeted imaging and drug delivery. **Biomaterials** 32, 3265-3274. **10.317; 1/38 (2.6 %)**

40. **Wu, H. C.*** Chi, Y. H. and Wu C. H (2011). Targeting Liposomes for Drug Delivery in Cancer Therapy. Book title “Lipid nanocarriers in cancer diagnosis and therapy”, in Chapter 5, published by iSmithers, UK.

Co-author

41. Cheng, C. L., Yang, S. C., Lai, C. Y., Wang, C. K., Chang, C. F., Lin, C. Y., Chen, W. J., Lin, P. Y., Wu, H. C., Lu F. L. and Lu J. (2020). CXCL14 maintains hESC self-renewal through binding to IGF-1R and activation of the IGF-1R pathway. **Cells** 9, 1706. 4.366; 70/195 (35.9 %)
42. Lo, W. L., Liang, C. H., Chen, L. C., Lee, S. Y., Lo, S. N., Chen, M. W., Lu, R. M., Liu, I. J., **Wu, H. C.** and Chang, C. H. (2020). Imaging and biodistribution of radiolabeled SP90 peptide in BT-483 tumor bearing mice. **Applied Radiation and Isotopes** 161, 109162. 1.27; 16/34 (47.1 %)
43. Li, M. Y., Peng, W. H., Wu, C. H., Chang, Y. M., Lin, Y. L., Chang, G. D. and **Wu, H. C.** and Chen, G. C. (2019). PTPN3 suppresses lung cancer cell invasiveness by counteracting Src-mediated DAAM1 activation and actin polymerization. **Oncogene** 38, 7002-7016. 7.971; 29/297 (9.8 %)
44. Lin, H. H., Yang, S. P., Tsai, M. J., Lin, G. C., **Wu, H. C.** and Wu, S. C. (2019). Dengue and Zika virus domain III-flagellin fusion and glycan- masking E antigen for prime-boost immunization. **Theranostics** 9, 4811-4826. 8.579; 10/138 (7.2 %)
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