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1995 美國普渡大學藥物化學博士
1988 國立清華大學輻射生物研究所碩士
1975 台北醫學大學(前台北醫學院)藥學系學士

經歷

2009 迄今 長庚大學副教授
2003-2009 長庚大學助理教授
1997-2003 行政院原子能委員會核能研究所副研究員
1988-1997 行政院原子能委員會核能研究所助理研究員
1979-1985 國防部中山科學研究院研究助理
1977-1979 國防部中山科學研究院附設石園醫院藥師

研究領域

1. PET 放射藥物：
 - (1) 迴旋加速器/靶、合成模組、品質檢驗的技術發展。
 - (2) 神經及腫瘤造影用新碳-11、氟-18及鎵-68標誌放射藥物研製。
2. SPECT放射藥物：用於細胞凋、血管增生以及神經受體/轉運體造影的鎳-99m及碘-123標誌放射藥物研製。
3. PET 放射藥物調製CGMP技術及法規研究。

發表文獻

1. Hsiao IT, Weng YH, Hsieh CJ, Lin WY, Wey SP, Kung MP, Yen TC, Lu CS, Lin KJ. Correlation of Parkinson Disease Severity and 18F-DTBZ Positron Emission Tomography. *JAMA Neurol* 2014 Jun 1;71(6):758-766.
2. Chen KJ, Chaung EY, Wey SP, Lin KJ, Cheng F, Lin CC, Liu HL, Tseng HW, Liu CP, Wei MC, Liu CM, Sung HW. Hyperthermia-mediated local drug delivery by a bubble-generating liposomal system for tumor-specific chemotherapy. *ACS Nano* 2014 May 27;8(5):5105-5115.
3. Wang PH, Yu CP, Lee TH, Lin CW, Ismail W, Wey SP, Kuo AT, Chiang YR. Anoxic androgen degradation by the denitrifying Sterolibacterium denitrificans via the 2,3-seco-pathway. *Appl Environ Microbiol* 2014 Jun;80(11):3442-3452.
4. Hsiao IT, Weng YH, Lin WY, Hsieh CJ, Wey SP, Yen TC, Kung MP, Lu CS, Lin KJ. Comparison of ^{99m}Tc-TRODAT-1 SPECT and ¹⁸F-AV-133 PET imaging in healthy controls and Parkinson's disease patients. *Nucl Med Biol* 2014 Apr;41(4):322-329.
5. Su FY, Chuang EY, Lin PY, Chou YC, Chen CT, Mi FL, Wey SP, Yen TC, Lin KJ, Sung HW. Treatment of chemotherapy-induced neutropenia in a rat model by using multiple daily doses of oral administration of G-CSF-containing nanoparticles. *Biomaterials* 2014 Apr;35(11):3641-3649.
6. Lin SC, Lin KJ, Hsiao IT, Hsieh CJ, Lin WY, Lu CS, Wey SP, Yen TC, Kung MP, Weng YH. In vivo detection of monoaminergic degeneration in early Parkinson disease by ¹⁸F-9-fluoropropyl-(+)-dihydrotetrabenzazine PET. *J Nucl Med* 2014 Jan;55(1):73-79.
7. Lin KJ, Weng YH, Hsieh CJ, Lin WY, Wey SP, Kung MP, Yen TC, Lu CS, Hsiao IT. Brain imaging of vesicular monoamine transporter type 2 in healthy aging subjects by ¹⁸F-FP-(+)-DTBZ PET. *PLoS One* 2013 Sep 30;8(9):e75952.
8. Lo CL, Chou MH, Lu PL, Lo IW, Chiang YT, Hung SY, Yang CY, Lin SY, Wey SP, Lo JM, Hsiue GH. The effect of PEG-5K grafting level and particle size on tumor accumulation and cellular uptake. *Int J Pharm* 2013 Nov 18;456(2):424-431.
9. Yang HW, Lu YJ, Lin KJ, Hsu SC, Huang CY, She SH, Liu HL, Lin CW, Xiao MC, Wey SP, Chen PY, Yen TC, Wei KC, Ma CC. EGRF conjugated PEGylated nanographene oxide for targeted chemotherapy and photothermal therapy. *Biomaterials* 2013; Sep;34(29):7204-7214.
10. Yang HW, Hua MY, Hwang TL, Lin KJ, Huang CY, Tsai RY, Ma CC, Hsu PH, Wey SP, Hsu PW, Chen PY, Huang YC, Lu YJ, Yen TC, Feng LY, Lin CW, Liu HL, Wei KC. Non-invasive synergistic treatment of brain tumors by targeted chemotherapeutic delivery and amplified focused ultrasound-hyperthermia using magnetic nanographene oxide. *Adv Mater* 2013 Jul 12;25(26):3605-3611.
11. Chuang EY, Lin KJ, Su FY, Mi FL, Maiti B, Chen CT, Wey SP, Yen TC, Juang JH, Sung HW. Noninvasive imaging oral absorption of insulin delivered by nanoparticles and its stimulated glucose utilization in controlling postprandial hyperglycemia during OGTT in diabetic rats. *J Control Release* 2013 Dec 10;172(2):513-522.
12. Chu PC, Chai WY, Hsieh HY, Wang JJ, Wey SP, Huang CY, Wei KC, Liu HL. Pharmacodynamic analysis of magnetic resonance imaging-monitored focused ultrasound-induced blood-brain barrier opening for drug delivery to brain tumors. *Biomed Res Int* 2013;2013:627496.
13. Huang KL, Lin KJ, Hsiao IT, Kuo HC, Hsu WC, Chuang WL, Kung MP, Wey SP, Hsieh CJ, Wai YY, Yen TC, Huang CC. Regional amyloid deposition in amnesic mild cognitive impairment and Alzheimer's disease evaluated by [¹⁸F]AV-45 positron emission tomography in chinese population. *PLoS One* 2013;8(3):e58974.

14. Hsiao IT, Huang CC, Hsieh CJ, Wey SP, Kung MP, Yen TC, Lin KJ. Perfusion-like template and standardized normalization-based brain image analysis using ^{18}F -florbetapir (AV-45/Amyvid) PET. *Eur J Nucl Med Mol Imaging* 2013 Jun;40(6):908-920.
15. Yang HW, Hua MY, Lin KJ, Wey SP, Tsai RY, Wu SY, Lu YC, Liu HL, Wu T, Ma YH. Bioconjugation of recombinant tissue plasminogen activator to magnetic nanocarriers for targeted thrombolysis. *Int J Nanomed* 2012 Sep;7:5159-5173.
16. Kung MP, Weng CC, Lin KJ, Hsiao IT, Yen TC, Wey SP. Amyloid plaque imaging from IMPY/SPECT to AV-45/PET. *Chang Gung Med J* 2012 May-Jun; 35(3):211-218.
17. Chao KT, Tsao HH, Weng YH, Hsiao IT, Hsieh CJ, Wey SP, Yen TC, Kung MP, Lin KJ. Quantitative analysis of binding sites for 9-fluoropropyl-(+)-dihydrotetrabenazine (^{18}F AV-133) in a MPTP-lesioned PD mouse model. *Synapse* 2012 Sep;66(9):823-831.
18. Huang KL, Lin KJ, Ho MY, Chang YJ, Chang CH, Wey SP, Hsieh CJ, Yen TC, Hsiao IT, Lee TH. Amyloid deposition after cerebral hypoperfusion: Evidenced on ^{18}F AV-45 positron emission tomography. *J Neurol Sci* 2012 Aug;319(1-2):124-129.
19. Hsiao IT, Huang CC, Hsieh CJ, Hsu WC, Wey SP, Yen TC, Kung MP, Lin KJ. Correlation of early-phase ^{18}F -florbetapir (AV-45/Amyvid) PET images to FDG images: preliminary studies: reply to Ballinger. *Eur J Nucl Med Mol Imaging* 2012 Apr;39(4):613-620.
20. Su FY, Lin KJ, Sonaje K, Wey SP, Yen TC, Ho YC, Panda N, Chuang EY, Maiti B, Sung HW. Protease inhibition and absorption enhancement by functional nanoparticles for effective oral insulin delivery. *Biomaterials* 2012 Mar;33(9):2801-2811.
21. Tsao HH, Skovronsky DM, Lin KJ, Yen TC, Wey SP, Kung MP. Sigma receptor binding of tetrabenazine series tracers targeting VMAT2 in rat pancreas. *Nucl Med Biol* 2011 Oct;38(7):1029-1034.
22. Sonaje K, Lin KJ, Tseng MT, Wey SP, Su FY, Chuang EY, Hsu CW, Chen CT, Sung HW. Effects of chitosan-nanoparticle-mediated tight junction opening on the oral absorption of endotoxins. *Biomaterials* 2011 Nov;32(33):8712-8721.
23. Lin KJ, Lin WY, Hsieh CJ, Weng YH, Wey SP, Lu CS, Skovronsky D, Yen TC, Chang CJ, Kung MP, Hsiao IT. Optimal scanning time window for ^{18}F -FP-(+)-DTBZ (^{18}F -AV-133) summed uptake measurements. *Nucl Med Biol* 2011 Nov;38(8):1149-1155.
24. Liao MH, Jan TR, Chiang CC, Yen KC, Liao TZ, Chen MW, Chi CW, *Wun TC, Yen TC, *Wey SP. Investigation of a potential scintigraphic tracer for imaging apoptosis: radioiodinated annexin V-Kunitz protease inhibitor fusion protein. *J Biomed Biotechnol* 2011;2011:675701.
25. Wang TC, Hsiao IT, Cheng YK, Wey SP, Yen TC, Lin KJ. Noninvasive monitoring of tumor growth in a rat glioma model: comparison between neurological assessment and animal imaging. *J Neurooncol* 2011 Sep;104(3):669-678.
26. Wang CC, Hung-Li Lin HL, Wey SP, *Jan TR. Areca nut extract modulates antigen-specific immunity and augments inflammation in ovalbumin-sensitized mice. *Immunopharmacol Immunotoxicol* 2011 Jun;33(2):315-322.
27. Nguyen HN, Wey SP, Juang JH, Sonaje K, Ho YC, Chuang EY, Hsu CW, Yen TC, *Lin KJ, *Sung HW. The glucose-lowering potential of exendin-4 orally delivered via a pH-sensitive nanoparticle vehicle and effects on subsequent insulin secretion in vivo. *Biomaterials* 2011 Apr;32(10):2673-2682.
28. Liao MH, Jan TR, Chiang CC, Yen KC, Liao TZ, Chen MW, Chi CW, *Wun TC, Yen TC, *Wey SP. Investigation of a potential scintigraphic tracer for imaging apoptosis:

- radioiodinated annexin V-Kunitz protease inhibitor fusion protein. *J Biomed Biotechnol* 2011;2011:675701. Epub 2011 Apr 27.
29. Lu PL, Chen YC, Ou TW, Chen HH, Tsai HC, Wen CJ, *Lo CL, Wey SP, Lin KJ, *Yen TC, *Hsiue GH. Multifunctional hollow nanoparticles based on graft-diblock copolymers for doxorubicin delivery. *Biomaterials* 2011 Mar;32(8):2213-2221.
 30. Liu DZ, Hu CM, Huang CH, Wey SP, *Jan TR. Cannabidiol attenuates delayed-type hypersensitivity reactions via suppressing T-cell and macrophage reactivity. *Acta Pharmacol Sin* 2010 Dec;31(12):1611-1617.
 31. Liao MH, Wey SP, Jan ML, Chiang CC, Liao TZ, Chi CW, Shen LH, *Jan TR. Monitoring of 2-deoxy-2-[¹⁸F]fluoro-D-glucose uptake in tumor-bearing mice using high-sensitivity projection imaging: compared with PET imaging. *Nucl Med Commun* 2010 Dec;31(12):1040-1044.
 32. Lin KJ, Weng YH, Wey SP, Hsiao IT, Lu CS, Skovronsky D, Chang HP, Kung MP, *Yen TC. Whole-body biodistribution and radiation dosimetry of ¹⁸F-FP-(+)-DTBZ (¹⁸F-AV-133): a novel vesicular monoamine transporter 2 imaging agent. *J Nucl Med* 2010 Sep;51(9):1480-1485.
 33. Yao CH, Lin KJ, Weng CC, Hsiao IT, Ting YS, Yen TC, Jan TR, Skovronsky D, Kung MP, *Wey SP. GMP-compliant automated synthesis of [¹⁸F]AV-45 (Florbetapir F 18) for imaging beta-amyloid plaques in human brain. *Appl Radiat Isot* 2010 Dec;68(12):2293-2297.
 34. Sonaje K, Lin KJ, Wey SP, Lin CK, Yeh TH, Nguyen HN, Hsu CW, Yen TC, Juang JH, Sung HW. Biodistribution, pharmacodynamics and pharmacokinetics of insulin analogues in a rat model: oral delivery using pH-Responsive nanoparticles vs. subcutaneous injection. *Biomaterials* 2010 Sep;31(26):6849-6858.
 35. Yen TC, Wey SP, Liao CH, Yeh CH, Shen DW, Achilefu S, *Wun TC. Measurement of the binding parameters of annexin derivatives-erythrocyte membrane interactions. *Anal Biochem* 2010 November;406(1):70-79.
 36. Lin KJ, Hsu WC, Hsiao IT, Wey SP, Jin LW, Skovronsky D, Wai YY, Chang HP, Lo CW, Yao CH, Yen TC, Kung MP. Whole-body biodistribution and brain PET imaging with [¹⁸F]AV-45, a novel amyloid imaging agent — a pilot study. *Nucl Med Biol* 2010 May;37(4):497-508.
 37. Tsao HH, Lin KJ, Juang JH, Skovronsky DM, Yen TC, *Wey SP, *Kung MP. Binding characteristics of 9-fluoropropyl-(+)-dihydrotetrabenzazine (AV-133) to the vesicular monoamine transporter type 2 in rats. *Nucl Med Biol* 2010 May;37(4):413-419.
 38. Sonaje K, Chen YJ, Chen HL, Wey SP, Juang JH, Nguyen HN, Hsu CW, Lin KJ, Sung HW. Enteric-coated capsules filled with freeze-dried chitosan/poly(gamma-glutamic acid) nanoparticles for oral insulin delivery. *Biomaterials* 2010 Apr;31(12):3384-3394.
 39. Lee ML, Kung MP, Lin KJ, Liao MH, Lin CH, Shen LH, *Wey SP. Can iodo-GTS-21 be a model to develop new tracer for imaging central nicotinic receptors? *Ann Nucl Med Sci* 2010 Mar;23(1):19-28.
 40. Lee PW, Hsu SH, Wang JJ, Tsai JS, Lin KJ, Wey SP, Chen FR, Lai CH, Yen TC, Sung HW. The characteristics, biodistribution, magnetic resonance imaging and biodegradability of superparamagnetic core-shell nanoparticles. *Biomaterials* 2010 Feb;31(6):1316-1324.
 41. Kao PF, Wey SP, Yang AS. Simultaneous ^{99m}Tc and ¹²³I dual-isotope brain striatal phantom single photon emission computed tomography: validation of ^{99m}Tc-TRODAT-1 and ¹²³I-IBZM simultaneous dopamine system brain imaging. *Kaohsiung J Med Sci* 2009 Nov;25(11):601-607.

42. Chen MC, Wong HS, Lin KJ, Chen HL, Wey SP, Sonaje K, Lin YH, Chu CY, Sung HW. The characteristics, biodistribution and bioavailability of a chitosan-based nanoparticulate system for the oral delivery of heparin. *Biomaterials* 2009 Dec;30(34):6629-6637.
43. Lin KJ, Liu HL, Hsu PH, Chung YH, Huang WC, Chen JC, Wey SP, Yen TC, Hsiao IT. Quantitative micro-SPECT/CT for detecting focused ultrasound-induced blood-brain barrier opening in the rat. *Nucl Med Biol* 2009 Oct;36(7):853-861.
44. Wey SP, Weng CC, Lin KJ, Yao CH, Yen TC, Kung HK, Skovronsky D, Kung MP. Validation of an ^{18}F -labeled biphenylalkyne as a PET imaging agent for β -amyloid plaques. *Nucl Med Biol* 2009 May;36(4):411-417.
45. Hsiao YM, Mathias CJ, Wey SP, Fanwick PE, Green MA. Synthesis and biodistribution of lipophilic and monocationic gallium radiopharmaceuticals derived from *N,N'*-bis(3-aminopropyl)-*N,N'*-dimethylethylenediamine: potential agents for PET myocardial imaging with ^{68}Ga . *Nucl Med Biol* 2009 Jan;36(1):39-45.
46. Sonaje K, Lin YH, Juang JH, Wey SP, Chen CT, Sung HW. In vivo evaluation of safety and efficacy of self-assembled nanoparticles for oral insulin delivery. *Biomaterials* 2009 Apr;30(12):2329-2339.