Yufeng Jane Tseng

Professor

Address: Dept. Computer Science, National Taiwan University,
No. 1, Sec. 4, Roosevelt Rd., Taipei 10617, Taiwan
Tel: 886-2-3366-4888 #529 | Fax: 886-2-23628167 | Email: yjtseng@csie.ntu.edu.tw

CURRENT POSITIONS:

| 2015 – | Director, Drug Research Center, National Taiwan University | |
|---------------------------|--|--|
| 2014 – | Professor, Graduate Institute of Biomedical Electronics, and | |
| | Bioinformatics, Department of Computer Science and Information | |
| | Engineering, School of Pharmacy, National Taiwan University, Taiwan | |
| 2009 – | Principle Investigator, Metabolomics Core Laboratory, Genomic Center, | |
| | National Taiwan University | |
| PROFESSIONAL EXPERIENCES: | | |
| 2010 - 20 | 15 Group Leader, Molecular modeling unit, Drug Research Center, | |

| 2010 - 2015 | Group Leader, Molecular modeling unit, Drug Research Center, |
|-------------|--|
| | National Taiwan University |
| 2008 - 2014 | Associate Professor, Graduate Institute of Biomedical |
| | Electronics, and Bioinformatics, Department of Computer Science |
| | and Information Engineering, School of Pharmacy, National |
| | Taiwan University, Taiwan |
| 2006 - 2008 | Assistant Professor, Institute of Biomedical Electronics, and |
| | Bioinformatics, Department of Computer Science and |
| | Information Engineering (joint position), School of Pharmacy |
| | (joint position since 2007), National Taiwan University, Taipei, |
| | Taiwan |
| 2004 - 2006 | Research Fellow, National Center of Biotechnology Information, |
| | National Institute of Health, Bethesda, MD, USA |
| 1998 - 2006 | Principal Molecular Modeling Software Developer, The |
| | Chem21 Group, Inc., Lake Forest, USA |

HONORS AND AWARDS

| 2015 | Drug Repurposing Innovation Award, TWi Pharmaceutical Foundation, |
|------|---|
| | Taiwan |
| 2015 | IBM Faculty Award, USA |
| 2013 | NTU EECS Outstanding Research Contribution Award, Taiwan |
| 2013 | American Chemical Society Chemluminary award, USA |

- 2012 American Chemical Society Innovation Award, USA
- 2005- 2006 Intramural Training Award, National Center of Biotechnology Information, National Institute of Health, Bethesda, MD, USA
- 2001 Charles Bell Award for Computational Chemistry, University of Illinois at Chicago, Chicago, IL, USA

SELECTED PROFESSIONAL SERVICES

- **Guest-Editor-in-Chief**, Special Issue, The Journal of Combinatorial Chemistry and High Throughput Screening, 2013
- Editorial Advisor, The Journal of Molecular Graphics and Modelling (~2013)
- **Editorial Advisor**, The Journal of Combinatorial Chemistry and High Throughput Screening (~ 2013)
- **Grant Viewer**, National Science of Council (Integrated interdisciplinary program) 2007, 2008, 2009, 2010, (Biomedical Informatics), 2009, 2010, 2011,2012,2013 Taiwan
- **Ad hoc Grant Reviewer**, Agency for Science, Technology and Research (A*STAR), Singapore, 2010
- **Programming Board**, Division of Computers in Chemistry, American Chemical Society National Meetings, since 2010
- Reviewer, Scientific Reports, PLOS One, Journal of Toxicological Sciences, Journal of Molecular Modeling, Journal of Chemical Information and Modeling, Journal of Chemical Information and Computer Science, Journal of the Biomedical Sciences, Journal of the Formosan Medical Association, Journal of the Taiwan Institute of Chemical Engineers, Journal of Biomedical Engineering: Applications, Basis and Communications

Registered Pharmacist, Taiwan, since 1997

EDUCATION:

2002 - Ph.D., Medicinal Chemistry and Pharmacognosy, University of Illinois at Chicago, Chicago, IL

1997 – B.S., Pharmacy, National Taiwan University, Taiwan

<u>SELECTED PEER-REVIEWED PUBLICATIONS</u> (IN CHRONOLOGICAL ORDER SINCE 2003)

Journal paper:

Chiu, H. H., Tsai, S. J., <u>Tseng, Y. J.</u>, Wu, M. S., Liao, W. C., Huang, C. S., & Kuo, C. H. (2015). An efficient and robust fatty acid profiling method for plasma metabolomic studies by gas chromatography–mass spectrometry. *Clinica*

- Chimica Acta, In press. (IF = 2.824, Ranking=7/31, 22% Category: Medical Laboratory Technology)
- 2. Tzeng, T. H., Kuo, C. Y., Wang, S. Y., Huang, P. K., Kuo, P. H., Huang, Y. M., <u>Tseng, Y. J.</u>*, Tian, W. C., Lee, S. C., & Lu, S. S., (2015). A portable micro gas chromatography system for volatile compounds detection with 15ppb of sensitivity, *IEEE Journal of Solid-State Circuits*, *accepted*. (IF=3.009, Ranking = 23/249, 9%, Category: Engineering, Electrical & Electronic)
- 3. Chen, G. Y., Liao, H. W., Tsai, I.L., <u>Tseng, Y. J.</u>, & Kuo, C. H., (2015). Using the matrix-induced ion suppression method for concentration normalization in cellular metabolomics studies. *Analytical chemistry*, 87(19), 9731-9739. (IF=5.636, Ranking = 4/74, 5%, Category: Chemistry, Analytical)
- Lin, M. I., Su, B. H., Lee, C. H., Wang, S. T., Wu, W. C., Dangate, P., Wang, S. Y., Huang, W. I., Cheng, T. J., Lin, O. A., Cheng, Y. S., <u>Tseng, Y. J.</u>*, & Sun, C. M. (2015). Synthesis and inhibitory effects of novel pyrimido-pyrrolo-quinoxalinedione analogues targeting nucleoproteins of influenza A virus H1N1. *European journal of medicinal chemistry*, 102, 477-486 (IF =3.447, Ranking = 11/59, 18%, Category: Chemistry, Medicinal)
- 5. Lai, Y. S., Chen, W. C., Kuo, T. C., Ho, C. T., Kuo, C. H., Tseng, Y. J., ... & Sheen, L. Y. (2015). Mass spectrometry-based serum metabolomics of a C57BL/6J mouse model of high-fat diet induced nonalcoholic fatty liver disease development. *Journal of Agricultural and Food Chemistry*, 63(35), 7873-7884. (IF = 2.912, Ranking=2/56, 3%, Category: Agriculture, Multidisciplinary)
- Esposito, E. X., Hopfinger, A. J., Shao, C. Y., Su, B. H., Chen, S. Z., & <u>Tseng, Y. J.</u> (2015). Exploring possible mechanisms of action for the nanotoxicity and protein binding of decorated nanotubes: Interpretation of physicochemical properties from optimal QSAR models. *Toxicology and applied pharmacology*, 288(1), 52-62. (IF =3.705, Ranking = 13/88, 14%, Category: Toxicology)
- 7. Su, B. H., Tu, Y. S., Lin, C, Shao, C. Y., Lin, O. A., & <u>Tseng, Y. J.</u>* (2015). Rule-based Prediction Models of Cytochrome P450 Inhibition. *Journal of chemical information and modeling*, 55(7), 1426-1434. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 8. Chen H. H., <u>Tseng, Y. J.</u>, Wang, S. Y., Tsai, Y. S., Chang, C. S., Kuo, T. C., Yao, W. J., Shieh, C. C., Wu, C. H., & Kuo, P. H. (2015). The metabolome profiling and pathway analysis in metabolic healthy and abnormal. *International Journal of Obesity*, 39(8), 1241-1248. (IF =5.004, Ranking = 8/77, 10%, Category: Nutrition & Dietetics)

- 9. Su, B. H., Tu, Y. S., Lin, O. A., Harn, Y. C., Shen, M. Y., & <u>Tseng, Y. J.</u>* (2015). Rule-based Classification Models of Molecular Autofluorescence. *Journal of chemical information and modeling*, 55(2), 434-445. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 10. Wang, S. Y., Kuo, C. H., & <u>Tseng, Y. J.</u>* (2015). An Ion Trace Detection Algorithm to Extract Pure Ion Chromatograms to Improve Untargeted Peak Detection Quality for Liquid Chromatography/Time-of-Flight Mass Spectrometry-based Metabolomics Data. *Analytical chemistry*, 87(5), 3048-3055 (IF=5.636, Ranking = 4/74, 5%, Category: Chemistry, Analytical)
- 11. Chen, G. Y., Liao, H. W., <u>Tseng, Y. J.</u>, Tsai, I. L., & Kuo, C. H. (2015). A matrix-induced ion suppression method to normalize concentration in urinary metabolomics studies using flow injection analysis electrospray ionization mass spectrometry. *Analytica Chimica Acta*, 864, 21-29 (IF= 4.513, Ranking = 5/74, 6%, Category: Chemistry, Analytical)
- 12. Shao, C. Y., Su, B. H., Tu, Y. S., Lin, C., Lin, O. A., & <u>Tseng, Y. J.</u>* (2015). CypRules: A rule-based P450 inhibition prediction server. *Bioinformatics*, *31*(11), 1869-1871. (IF = 4.981, Ranking = 3/57, 5%, Category: Mathematical & Computational Biology)
- 13. Hung, C. S., Li, H. Y., Kuo, C. H., Lin, M. S., Kuo, T. C., Tsai, S. J., Liu, P. H., Lin, C. H., Yang, C.Y., Chuang, L.M., Chen, M.F., <u>Tseng, Y.J.</u>*, & Kao, H. L. (2015). Fasting But Not Changes of Plasma Metabolome During Oral Glucose Tolerance Tests Improve the Diagnosis of Severe Coronary Arterial Stenosis. *Clinical endocrinology*. (IF = 3.457, Ranking=48/128, 37% Category: Endocrinology & Metabolism)
- 14. Chen, G. Y., Chiu, H. H., Lin, S. W., <u>Tseng, Y. J.</u>, Tsai, S. J., & Kuo, C. H. (2015). Development and application of a comparative fatty acid analysis method to investigate voriconazole-induced hepatotoxicity. *Clinica Chimica Acta*, *438*, 126-134. (IF = 2.764, Ranking=7/31, 22% Category: Medical Laboratory Technology)
- 15. Lin, S. W., Kang, W. Y., Lin, D. T., Lee, J. C., Wu, F. L. L., Chen, C. L., & <u>Tseng, Y. J.</u>* (2014). Comparison of warfarin therapy clinical outcomes following implementation of an automated mobile phone-based critical laboratory value text alert system. *BMC medical genomics*, 7(Suppl 1), S13. (IF = 2.873, Ranking=69/167, 41% Category: Genetics & Heredity)
- 16. Su, B. H., Huang, Y. S., Chang, C. Y., Tu, Y. S., & <u>Tseng, Y. J.</u>* (2013). Template-Based de Novo Design for Type II Kinase Inhibitors and Its Extended

- Application to Acetylcholinesterase Inhibitors. *Molecules*, *18*(11), 13487-13509. (IF = 2.416, Ranking=22/58, 37%, Category: Chemistry, Organic)
- 17. Tsai, I. L., Weng, T. I., <u>Tseng, Y. J.</u>, Tan, H. K. L., Sun, H. J., & Kuo, C. H. (2013). Screening and Confirmation of 62 Drugs of Abuse and Metabolites in Urine by Ultra-High-Performance Liquid Chromatography–Quadrupole Time-of-Flight Mass Spectrometry. *Journal of analytical toxicology*, *37*(9), 642-651. (IF = 2.858, Ranking=18/74, 24% Category: Chemistry, Analytical)
- 18. Liu, C. T., Raghu, R., Lin, S. H., Wang, S. Y., Kuo, C. H., <u>Tseng, Y. J.</u>, & Sheen, L. Y. (2013). Metabolomics of ginger essential oil against alcoholic fatty liver in mice. *Journal of agricultural and food chemistry*, *61*(46), 11231-11240. (IF = 2.912, Ranking=2/56, 3%, Category: Agriculture, Multidisciplinary)
- 19. Kuo, T. C., Tian, T. F., & <u>Tseng, Y. J.</u>* (2013). 3Omics: a web-based systems biology tool for analysis, integration and visualization of human transcriptomic, proteomic and metabolomic data. *BMC systems biology*, 7(1), 64. (IF = 2.435, Ranking= 13/57, 22%, Category: Mathematical & Computational Biology)
- 20. Tsai, I. L., Kuo, T. C., Ho, T. J., Harn, Y. C., Wang, S. Y., Fu, W. M., ... & <u>Tseng</u>, <u>Y. J.</u>* (2013). Metabolomic dynamic analysis of hypoxia in MDA-MB-231 and the comparison with inferred metabolites from transcriptomics data. *Cancers*, 5(2), 491-510.
- 21. Huang, C. C., McDermott, M. M., Liu, K., Kuo, C. H., Wang, S. Y., Tao, H., & <u>Tseng, Y. J.</u>* (2013). Plasma metabolomic profiles predict near-term death among individuals with lower extremity peripheral arterial disease. *Journal of vascular surgery*, *58*(4), 989-996. (IF = 3.021, Ranking= 33/198, 16%, Category: Surgery)
- 22. <u>Tseng, Y. J.</u>*, Martin, E., Bologa, C. G., & Shelat, A. A. (2013). Cheminformatics aspects of high throughput screening: from robots to models: symposium summary. *Journal of computer-aided molecular design*, 27(5), 443-453. (IF =2.99, Ranking = 12/102, 11%, Category: Computer Science, Interdisciplinary Applications)
- 23. Tseng, Y. J., Kuo, C. T., Wang, S. Y., Liao, H. W., Chen, G. Y., Ku, Y. L., Shao, W.C., & Kuo, C. H. (2013). Metabolomic characterization of rhubarb species by capillary electrophoresis and ultra high pressure liquid chromatography. *Electrophoresis*, 34(19), 2918-2927. (IF = 3.028, Ranking= 14/74, 18%, Category: Chemistry, Analytical)
- 24. Chang, C. Y., Hsu, M. T., Esposito, E. X., & <u>Tseng, Y. J.</u>* (2013). Oversampling to overcome overfitting: exploring the relationship between data set composition,

- molecular descriptors, and predictive modeling methods. *Journal of chemical information and modeling*, 53(4), 958-971. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 25. Ho, T. J., Kuo, C. H., Wang, S. Y., Chen, G. Y., & <u>Tseng, Y. J.</u>* (2013). True ion pick (TIPick): a denoising and peak picking algorithm to extract ion signals from liquid chromatography/mass spectrometry data. *Journal of Mass Spectrometry*, 48(2), 234-242. (IF= 2.379, Ranking = 14/44, 31%, Category: Spectroscopy)
- 26. Tsai, D. M., Kang, J. J., Lee, S. S., Wang, S. Y., Tsai, I. L., Chen, G. Y., Liao, H. W., Li, W.C., Kuo, C.H., & <u>Tseng, Y. J.</u>* (2013). Metabolomic analysis of complex Chinese remedies: examples of induced nephrotoxicity in the mouse from a series of remedies containing aristolochic acid. *Evidence-Based Complementary and Alternative Medicine*, 2013. (IF =1.88, Ranking = 7/24, 29%, Category: Integrative & Complementary Medicine)
- 27. Shao, C. Y., Chen, S. Z., Su, B. H., <u>Tseng, Y. J.</u>*, Esposito, E. X., & Hopfinger, A. J. (2013). Dependence of QSAR models on the selection of trial descriptor sets: a demonstration using nanotoxicity endpoints of decorated nanotubes. *Journal of chemical information and modeling*, *53*(1), 142-158. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 28. Wang, K. C., Wang, S. Y., Kuo, C. H., & <u>Tseng, Y. J.</u>* (2012). Distribution-based classification method for baseline correction of metabolomic 1D proton nuclear magnetic resonance spectra. *Analytical chemistry*, 85(2), 1231-1239. (IF=5.636, Ranking = 4/74, 5%, Category: Chemistry, Analytical)
- 29. Wang, S. Y., Kuo, C. H., & <u>Tseng, Y. J.</u>* (2012). Batch Normalizer: a fast total abundance regression calibration method to simultaneously adjust batch and injection order effects in liquid chromatography/time-of-flight mass spectrometry-based metabolomics data and comparison with current calibration methods. *Analytical chemistry*, 85(2), 1037-1046. (IF=5.636, Ranking = 4/74, 5%, Category: Chemistry, Analytical)
- 30. Jansen, J. M., Amaro, R. E., Cornell, W., <u>Tseng, Y. J.</u>, & Walters, W. P. (2012). Computational chemistry and drug discovery: a call to action. *Future medicinal chemistry*, *4*(15), 1893-1896. (IF = 3.744, Ranking = 8/59, 13%, Category: Chemistry, Medicinal)
- 31. Jansen, J. M., Cornell, W., <u>Tseng, Y. J.</u>*, & Amaro, R. E. (2012). Teach–Discover–Treat (TDT): Collaborative computational drug discovery for neglected diseases. *Journal of Molecular Graphics and Modelling*, *38*, 360-362.

- (IF = 1.722, Ranking = 36/102, 35%, Category: Computer Science, Interdisciplinary Applications)
- 32. Su, B. H., Tu, Y. S., Esposito, E. X., & <u>Tseng, Y. J.</u>* (2012). Predictive toxicology modeling: protocols for exploring hERG classification and Tetrahymena pyriformis end point predictions. *Journal of chemical information and modeling*, 52(6), 1660-1673. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 33. Kuo, C. H., Wang, K. C., Tian, T. F., Tsai, M. H., Chiung, Y. M., Hsiech, C. M., Tsai, S. J., Wang, S. Y., Tsai, D. M., Huang, C.C., & <u>Tseng, Y. J.</u>* (2012). Metabolomic characterization of laborers exposed to welding fumes. *Chemical research in toxicology*, 25(3), 676-686. (IF =3.529, Ranking = 10/59, 16%, Category: Chemistry, Medicinal)
- 34. <u>Tseng, Y. J.</u>, Hopfinger, A. J., & Esposito, E. X. (2012). The great descriptor melting pot: mixing descriptors for the common good of QSAR models. *Journal of computer-aided molecular design*, 26(1), 39-43. (IF =2.99, Ranking = 12/102, 11%, Category: Computer Science, Interdisciplinary Applications)
- 35. Lin, F. Y., & <u>Tseng, Y. J.</u>* (2011). Structure-based fragment hopping for lead optimization using predocked fragment database. *Journal of chemical information and modeling*, *51*(7), 1703-1715. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 36. Shen, M. Y., Su, B. H., Esposito, E. X., Hopfinger, A. J., & <u>Tseng, Y. J.*</u> (2011). A comprehensive support vector machine binary hERG classification model based on extensive but biased end point hERG data sets. *Chemical research in toxicology*, 24(6), 934-949. (IF =3.529, Ranking = 10/59, 16%, Category: Chemistry, Medicinal)
- 37. Wang, S. Y., Ho, T. J., Kuo, C. H., & <u>Tseng, Y. J.</u>* (2010). Chromaligner: a web server for chromatogram alignment. *Bioinformatics*, 26(18), 2338-2339. (IF = 4.981, Ranking = 3/57, 5%, Category: Mathematical & Computational Biology)
- 38. Su, B. H., Shen, M. Y., Esposito, E. X., Hopfinger, A. J., & <u>Tseng, Y. J.</u>* (2010). In silico binary classification QSAR models based on 4D-fingerprints and MOE descriptors for prediction of hERG blockage. *Journal of chemical information and modeling*, 50(7), 1304-1318. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 39. Kuo, C. H., Lee, C. W., Lin, S. C., Tsai, I. L., Lee, S. S., <u>Tseng, Y. J.</u>, ... & Wei-Chu, L. (2010). Rapid determination of aristolochic acids I and II in herbal

- products and biological samples by ultra-high-pressure liquid chromatography—tandem mass spectrometry. *Talanta*, 80(5), 1672-1680. (IF =3.545, Ranking = 11/74, 14%, Category: Chemistry, Analytical)
- 40. Zheng, T., Hopfinger, A. J., Esposito, E. X., Liu, J., & <u>Tseng, Y. J.</u>* (2008). Membrane-Interaction Quantitative Structure– Activity Relationship (MI-QSAR) Analyses of Skin Penetration Enhancers. *Journal of chemical information and modeling*, 48(6), 1238-1256. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 41. Liu, J., Kern, P. S., Gerberick, G. F., Santos-Filho, O. A., Esposito, E. X., Hopfinger, A. J., & <u>Tseng, Y. J.</u>* (2008). Categorical QSAR models for skin sensitization based on local lymph node assay measures and both ground and excited state 4D-fingerprint descriptors. *Journal of computer-aided molecular design*, 22(6-7), 345-366. (IF =2.99, Ranking = 12/102, 11%, Category: Computer Science, Interdisciplinary Applications)
- 42. Iyer, M., Zheng, T., Hopfinger, A. J., & <u>Tseng, Y. J.</u>* (2007). QSAR analyses of skin penetration enhancers. *Journal of chemical information and modeling*, 47(3), 1130-1149. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 43. Li, Y., Pan, D., Liu, J., Kern, P. S., Gerberick, G. F., Hopfinger, A. J., & <u>Tseng, Y. J.</u>* (2007). Categorical QSAR models for skin sensitization based upon local lymph node assay classification measures Part 2: 4D-Fingerprint three-state and two-2-state logistic regression models. *Toxicological sciences*, 99(2), 532-544. (IF =3.854, Ranking = 11/88, 12%, Category: Toxicology)
- 44. Iyer, M., Zheng, T., Hopfinger, A. J., & <u>Tseng, Y. J</u>*. (2007). QSAR analyses of skin penetration enhancers. *Journal of chemical information and modeling*, 47(3), 1130-1149. (IF =3.738, Ranking = 7/139, 5%, Category: Computer science, Information systems)
- 45. Iyer, M., <u>Tseng, Y. J.</u>, Senese, C. L., Liu, J., & Hopfinger, A. J. (2007). Prediction and mechanistic interpretation of human oral drug absorption using MI-QSAR analysis. *Molecular pharmaceutics*, 4(2), 218-231. (IF =4.384, Ranking = 29/255, 11%, Category: Pharmacology & Pharmacy)
- 46. Li, Y., <u>Tseng, Y. J.</u>, Pan, D., Liu, J., Kern, P. S., Gerberick, G. F., & Hopfinger, A. J. (2007). 4D-fingerprint categorical QSAR models for skin sensitization based on the classification of local lymph node assay measures. *Chemical research in toxicology*, 20(1), 114-128. (IF =3.529, Ranking = 10/59, 16%, Category: Chemistry, Medicinal)

- 47. Senese, C. L., Duca, J., Pan, D., Hopfinger, A. J., & <u>Tseng, Y. J.</u>* (2004). 4D-fingerprints, universal QSAR and QSPR descriptors. *Journal of chemical information and computer sciences*, 44(5), 1526-1539. (IF =4.34, Ranking = 3/100, 3%, Category: Computer Science, Interdisciplinary Applications)
- 48. Pan, D., Liu, J., Senese, C., Hopfinger, A. J., & <u>Tseng, Y. J.</u>* (2004). Characterization of a ligand-receptor binding event using receptor-dependent four-dimensional quantitative structure-activity relationship analysis. *Journal of medicinal chemistry*, 47(12), 3075-3088. (IF =5.48, Ranking = 3/58, 5%, Category: Chemistry, Medicinal)
- 49. Liu, J., Pan, D., <u>Tseng, Y. J.</u>, & Hopfinger, A. J. (2003). 4D-QSAR analysis of a series of antifungal p450 inhibitors and 3D-pharmacophore comparisons as a function of alignment. *Journal of chemical information and computer sciences*, 43(6), 2170-2179. (IF =4.34, Ranking = 3/100, 3%, Category: Computer Science, Interdisciplinary Applications)
- 50. Senese, C. L., Duca, J., Pan, D., Hopfinger, A. J., & <u>Tseng, Y. J</u>*. (2004). 4D-fingerprints, universal QSAR and QSPR descriptors. *Journal of chemical information and computer sciences*, 44(5), 1526-1539. (IF =4.34, Ranking = 3/100, 3%, Category: Computer Science, Interdisciplinary Applications)
- 51. Pan, D., <u>Tseng, Y. J.</u>, & Hopfinger, A. J. (2003). Quantitative structure-based design: formalism and application of receptor-dependent RD-4D-QSAR analysis to a set of glucose analogue inhibitors of glycogen phosphorylase. *Journal of chemical information and computer sciences*, 43(5), 1591-1607. (IF =4.34, Ranking = 3/100, 3%, Category: Computer Science, Interdisciplinary Applications)
- 52. Duca, J. S., Tseng, Y. F., & Hopfinger, A. J. (2001). 4D-QSPR analysis and virtual screening in materials science. *Advanced Materials*, *13*(22), 1713 (IF =17.49, Ranking = 2/139, 1%, Category: Chemistry, Physical)
- 53. Hopfinger, A. J., Vankatarangan, P., Tseng, Y.F., Wang, S., Duca, J. S. (2000) Evaluation of alignment dependence in 3D-QSAR model construction using 4D-QSAR analysis. *Internet Journal of Chemistry* 3(9-11)

Conference papers

1. Tzeng, T. H., Kuo, C. Y., Wang, S. Y., Huang, P. K., Kuo, P. H., Huang, Y. M., <u>Tseng, Y. J.</u>*, Tian, W. C., Lee, S. C., & Lu, S. S.. 21.5 A portable micro gas chromatography system for volatile compounds detection with 15ppb of sensitivity, IEEE International Solid-State Circuits Conference, San Francisco, California, Feb. 22-26. 2015

- 2. Shao, C. Y., Su, B. H., Tu, Y.S., Lin, C., Lin, O. A., <u>Tseng, Y. J.</u>*, CypRules: A rule-based P450 inhibition prediction server, 248th ACS National Meeting & Exposition, San Francisco, California, Aug. 10-14. 2014
- 3. Wang, S. Y., Kuo, C. H., <u>Tseng, Y. J.</u>*, An ion trace detection algorithm to extract pure ion chromatogram to improve untargeted peak detection quality for LC/TOF-MS-based metabolomics data, 10th International conference of the Metabolomics Society, Tsuruoka, Japan, June 26-29, 2014
- 4. Tsai, D. M., Kuo, C. H., <u>Tseng, Y. J.</u>*, Strategy of UPLC/MS-based Targeted Metabolomics, 10th International conference of the Metabolomics Society, Tsuruoka, Japan, June 26-29, 2014
- 5. Tan, C. E., Chung, Y. Y., <u>Tseng, Y. J.</u>*, IDMass: GC/MS Data Management and Analyzes Software for Metabolomics Studies, 10th International conference of the Metabolomics Society, Tsuruoka, Japan, June 26-29, 2014
- 6. Lin, S. W., Kang, W. Y., Lin, D. T., Lee, J., Wu, F. L., Chen, C. L. <u>Tseng, Y. J.</u>*, Comparison of warfarin therapy clinical outcomes following implementation of an automated mobile phone-based critical laboratory value text alert system, Translational Bioinformatics Conference, Seoul, Korea, October 2-4, 2013
- 7. <u>Tseng, Y. J.</u>*, BaselineCorrector: A distribution-based classification method for baseline correction of metabolomic 1D proton nuclear magnetic resonance spectra, 246th ACS National Meeting & Exposition, Indianapolis, Indiana, September 8-12, 2013
- 8. <u>Tseng, Y. J.</u>*, GAME: Gpu accelerated mixture elucidator 246th ACS National Meeting & Exposition, Indianapolis, Indiana, September 8-12, 2013
- 9. <u>Tseng, Y. J.</u>*, "Drug discovery through Teach-Discover-Treat initiative, 246th ACS National Meeting & Exposition, Indianapolis, Indiana, September 8-12, 2013
- 10. Wang, S. Y., Wu, M. S., Kuo, C. H., Liao, W. C., <u>Tseng, Y. J.</u>*, Metabolomics study of metabolite changes in the serum of morbidly obese patients after the gastric bypass surgery, 4th AOMSC & 10th TSMS Annual Conference, TICC, Taipei, Taiwan, July 10-12, 2013
- 11. Tsai, D. M., Chen, G. Y., Kuo, C. H., <u>Tseng, Y. J.</u>*, Development of a hydrophilic interaction chromatography coupled with mass spectrometry method for metabolomic analysis, 4th AOMSC & 10th TSMS Annual Conference, TICC, Taipei, Taiwan, July 10-12, 2013

- 12. Kuo, P. H., Chang, N. W., Kuo, C. H., <u>Tseng, Y. J.</u>*, Metabolomic analysis of exhaled breath condensates (EBC) in healthy volunteers and patients with chronic obstructive pulmonary disease (COPD) and bronchiectasis, 4th AOMSC & 10th TSMS Annual Conference, TICC, Taipei, Taiwan, July 10-12, 2013
- 13. Wang, S. Y., <u>Tseng, Y. J.</u>*, BN server: a web-based service for LC/TOFMS-based metabolomics data normalization and statistical analysis, 9th International conference of the Metabolomics Society, Glasgow, SECC, Glasgow, Scotland, July 1-4, 2013
- 14. Chung, Y. Y, Kuo, C. H., <u>Tseng, Y. J.</u>*, Noise reduction of GC/TOF-MS using spectrum domain baseline removal and chromatogram segment filtering, 9th Annual Conference of the Metabolomics Society, SECC, Glasgow, Scotland, July 1-4, 2013
- 15. Kuo, T. C., Tsai, D. M., Kuo, H. C., Kuo, C. H., <u>Tseng, Y. J.</u>, Establish Targeted Lipidomics Workflow Using TIPick, 9th International Conference of the Metabolomics Society, SECC, Glasgow, Scotland, July 1-4, 2013
- 16. Chang, N. W., Kuo, C. H., <u>Tseng, Y. J.</u>, Metabolomics characterisation of Angelica species by comprehensive two-dimensional gas chromatography coupled with time-of-flight mass spectrometry (GCxGC-TOFMS), 9th International conference of the Metabolomics Society, SECC, Glasgow, Scotland, July 1-4, 2013
- 17. Liu, J. W., Kuo, C. H., <u>Tseng, Y. J.</u>*, The Retention Time Alignment for non-targeted LC/MS analysis Using Kernel Density Estimation with a Novel Bandwidth Estimator, 9th International conference of the Metabolomics Society, SECC, Glasgow, Scotland, July 1-4, 2013
- 18. Hsu, K. H., <u>Tseng, Y. J.</u>*, A new approach of traditional Chinese medicine taxonomy: using marker ingredients as bases, 245th ACS National Meeting & Exposition, New Orleans, Louisiana, April 7-11, 2013
- 19. Shao, C. Y., <u>Tseng, Y. J.</u>*, Exploration of mechanism between nanotoxicity and protein targets: QSAR models using nanotoxicity endpoints of decorated nanotubes, 245th ACS National Meeting & Exposition, New Orleans, Louisiana, April 7-11, 2013
- 20. Tu, Y. S., Harn, Y. C., Shen, M. Y., <u>Tseng, Y. J.</u>*, Classification tree and random forest based prediction models on molecular autofluorescence, 245th ACS National Meeting & Exposition, New Orleans, Louisiana, April 7-11, 2013

- 21. <u>Tseng, Y. J.</u>*, LeadOp: Structure-based fragment hopping for lead optimization using pre-docked fragment database, 244th ACS National Meeting & Exposition, Philadelphia, Pennsylvania, August 19-23, 2012. (Invited talk, Drug Discovery Symposium)
- 22. Chen, S. Z., <u>Tseng, Y. J.</u>*, Predictive toxicity protocol for cell-viability high throughput data, 244th ACS National Meeting & Exposition, Philadelphia, Pennsylvania, August 19-23, 2012
- 23. <u>Tseng, Y. J.</u>*, Kuo, C. H., Yang, W. Q., Wang, S. Y., Metabolic Signatures Associated with the Progression of Breast Cancer by Ultra High Pressure Liquid Chromatography Time-of-Flight Mass Spectrometry, 8th International conference of the Metabolomics Society, Washington D.C., June 25-28, 2012
- 24. Yang, W. Q., Ho, C. C., <u>Tseng, Y. J.</u>, Kuo, C. H., Development of a Solid-Phase Microextraction Gas Chromatography Time-of-Flight Mass Spectrometry Method for Profiling Volatile Metabolic Patterns of Exhaled Breath Condensate, the 60th ASMS Conference on Mass Spectrometry and Allied Topics, Vancouver, Canada, May 20–24, 2012
- 25. <u>Tseng, Y. J.</u>*, Kuo, C. H., Tian, T. F., An Alignment Algorithm for Comprehensive Two-dimensional Gas Chromatography-Mass Spectrometry, 60th ASMS Conference on Mass Spectrometry and Allied Topics, Vancouver, Canada, May 20–24, 2012
- 26. Chang, C. Y., <u>Tseng, Y. J.</u>*, Virtual screening the natural products for FKBP12 inhibition, 243rd ACS National Meeting & Exposition, San Diego, California, March 25 29, 2012
- 27. Tu, Y. S., Esposito, E. X., <u>Tseng, Y. J.</u>*, Predictive Toxicology Modeling: Protocols for Exploring Tetrahymena Pyriformis Endpoint Predictions, 243rd ACS National Meeting & Exposition, San Diego, California, March 25 29, 2012
- 28. Su, B. H., Harn, Y. C., <u>Tseng, Y. J.</u>*, An efficient dynamic programming algorithm to predict natural product structures, 243rd ACS National Meeting & Exposition, San Diego, California, March 25 29, 2012
- 29. Jansen, J. M., <u>Tseng, Y. J.</u>*, Rommie E Amaro, Teach Discover Treat: A COMP initiative to provide high quality computational chemistry tutorials that impact education and drug discovery for neglected diseases, 242nd ACS National Meeting & Exposition, Denver, USA, August 28 Sept. 1, 2011. (invited talk, Collaborative Drug Discovery for Neglected Diseases session in COMP)

- 30. Su, B. H., Chen, S. Z., Tu, Y. S., <u>Tseng, Y. J.</u>*, Natural products screening for alpha-glucosidase inhibitors, 242nd ACS National Meeting & Exposition, Denver, USA, August 28 Sept. 1, 2011
- 31. <u>Tseng, Y. J.</u>*, The symposium of "Cheminformatics aspects of high throughput screening: from robots to models", 242nd ACS National Meeting & Exposition, Denver, USA, August 28 Sept. 1, 2011. (Invited Talk for special symposium)
- 32. Ho, T. J., Tseng, Y. J.*, MetaPick, a denoising and peak picking algorithm for extracting single compound from complex mixtures liquid chromatography/mass spectrometry (LC/MS) metabolomics data, 7th International Conference of the Metabolomics Society, Cairns, Australia, June 27 - 30, 2011. (Best presentation award)
- 33. Harn, Y. C., <u>Tseng, Y. J.</u>*, Structure Hunter: Prediction of novel chemical structures in a mixture, 7th International Conference of the Metabolomics Society, Cairns, Australia, June 27 30, 2011. (Invited Talk for Technology Innovation Section)
- 34. Tian, T. F., Kuo, T. C., <u>Tseng, Y. J.</u>*, 3Omics: a web based systems biology visualization tool by integrating transcriptomics, proteomics and metabolomics data in human, 7th International Conference of the Metabolomics Society, Cairns, Australia, June 27 30, 2011. (Invited Talk for Systems Biology Section)
- 35. Kuo, T. C., Tian, T. F., <u>Tseng, Y. J.</u>*, HMO: Human Metabolome Ontology, 7th International Conference of the Metabolomics Society, Cairns, Australia, June 27 30, 2011
- 36. Wang, S. Y., <u>Tseng, Y. J.</u>*, A fast robust total abundance regression calibration to adjust sever batch effect, 7th International Conference of the Metabolomics Society, Cairns, Australia, June 27 30, 2011
- 37. Liao, H. W., Kuo, C. H., <u>Tseng, Y. J.</u>, Determination of posaconazole in patient plasma by field amplified sample stacking in capillary electrophoresis, Joint Congress 2011, Berlin, May 1-5, 2011
- 38. Lin, F. Y., <u>Tseng, Y. J.</u>*, Lead Optimization with Synthetic Accessibility, 241st ACS National Meeting & Exposition, Anaheim, CA, March 27-31, 2011
- 39. Lin, S. W., Kan, W. Y., Wu, F. L., Lin, D. T., <u>Tseng, Y. J.</u>*, A comparison of the clinical outcome toward switching from manual reminders to a cell phone alert system on warfarin therapy (abstract HPS-P-044), World Congress of Pharmacy & Pharmaceutical Sciences 2010, Portugal, August 28-September 2, 2010

- 40. <u>Tseng, Y. J.</u>, Computational hERG Toxicity Classification Model Based on QSAR and Support Vector Machines (Invited talk, Skolnik Award Symposium)", 240th ACS National Meeting & Exposition, Boston, USA, August 22-26, 2010
- 41. Huang, Y. S., Su, B. H., <u>Tseng, Y. J.</u>*, A fragment-based de-novo design for VEGFR2/3 inhibitors, 240th ACS National Meeting & Exposition, Boston, USA, August 22-26, 2010
- 42. Lin, F. Y., <u>Tseng, Y. J</u>*, Structure-based fragment hopping for lead optimization using pre-docked fragment database, 240th ACS National Meeting & Exposition, Boston, USA, August 22-26, 2010
- 43. Tu, Y. S., Su, B. H., <u>Tseng, Y. J.</u>*, Clustering Based Scaffold Hopping with 4D-Fingerprints, 240th ACS National Meeting & Exposition, Boston, USA, August 22-26, 2010
- 44. Wang, K. C., Wang, S. Y., <u>Tseng, Y. J.</u>*, NMR Deconvolutor: A Robust Deconvolution Algorithm for Quantitative Metabolomics, 6th International Conference of the Metabolomics Society, Amsterdam, June 27 July 1, 2010
- 45. Kuo, T. C., Tian, T. F., <u>Tseng, Y. J.</u>*, MetPath: Metabolomics pathway visualization, 5th International Conference of the Metabolomics Society, Alberta, Canada, August 30 September 2, 2009
- 46. Kuo, C. H., Wang, S. Y., Ho, T. J., <u>Tseng, Y. J.</u>*, Chromaligner: a web server for chromatogram alignment, 5th International Conference of the Metabolomics Society, Alberta, Canada, August 30 September 2, 2009
- 47. Kuo, C. H., Tsai, D. M., <u>Tseng, Y. J.</u>*, Metabolomics analysis on complex Chinese remedies Examples from a series of Aristolochic Acid containing remedy induced Nephrotoxicity in Rodents, 5th International Conference of the Metabolomics Society, Alberta, Canada, August 30 September 2, 2009
- 48. Wang, K. C., Kuo, C. H., <u>Tseng, Y. J.</u>*, Distribution-based Reconstruction Model for Baseline Correction in Metabolomic NMR Spectrum, 5th International Conference of the Metabolomics Society, Alberta, Canada, August 30 -September 2, 2009
- 49. Su, B. H., Shen, M. Y., Esposito, E. X., <u>Tseng, Y. J.</u>*, In silico binary QSAR model based on 4D-fingerprints and MOE descriptors for hERG blockage evaluation, 238th ACS National Meeting & Exposition, Washington D.C., August 16-20, 2009

- 50. Tsai, C. C., Chung, C. H., Chang, C. H., Huang, T. F., <u>Tseng, Y. J.</u>*, Structural basis of agonists and antagonists derived from snake venom C-type lectins: Interaction with platelet Glycoprotein VI, 238th ACS National Meeting & Exposition, Washington D.C., August 16-20, 2009
- 51. Shen, M. Y., Su, B. H., Esposito, E. X., <u>Tseng, Y. J.</u>*, Support vector machine classification model of PubChem hERG Bioassay data with 4D-fingerprint and MOE descriptors, 238th ACS National Meeting & Exposition, Washington D.C., August 16-20, 2009
- 52. Kuo, C. H., Tsai, I. L., Wang, S. Y., <u>Tseng, Y. J.</u>*, Hypoxia and normoxia metabolomics profiling on MDA 231 Breast Cancer Cells, 4th International Conference of the Metabolomics Society, Boston, USA, September 2-6, 2008
- 53. Tseng, Y. J.*, Wang, S. Y., Tsai, L. L., Kuo, C. H., Metabolic profiling on breast cancer cell lines in hypoxia, 4th International Conference of the Metabolomics Society, Boston, USA, September 2-6, 2008

BOOK CHAPTER:

Tseng YJ., Essential Algorithms in Cheminformatics. In: Molecular Conceptor. Israel. 2008: 13.1-13.10