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Education : Ph.D.

Specialty : Molecular diagnostics, Industrial Innovation

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Research Direction

1. Surface Acoustic Wave (SAW) biosensors
2. In vitro diagnostic medical device and point-of-care applications
3. Technologies related to aging society and death-ridden society

Publications

1. Cheng, C.-H.; Peng, Y.-C.; Lin, S.-M.; Yatsuda, H.; Liu, **S.-H.**; Liu, S.-J.; Kuo, C.-Y.; Wang, R.Y.L. Measurements of Anti-SARS-CoV-2 Antibody Levels after Vaccination Using a SH-SAW Biosensor. *Biosensors* 2022, 12, 599.
2. Peng, Y. C., Cheng, C. H., Yatsuda, H., **Liu, S. H.**, Liu, S. J., Kogai, T., Kuo, C. Y., & Wang, R. (2021). A Novel Rapid Test to Detect Anti-SARS-CoV-2 N Protein IgG Based on Shear Horizontal Surface Acoustic Wave (SH-SAW). *Diagnostics*, 11(10), 1838.
3. Wang, S.H., Liou, G.G., **Liu, S.H.***, Chang, J.S., Hsiao, J.R., Yen, Y.C., Chen, Y.L., Wu, W.L., Chang, J.Y., Chen, Y.W.* (2019) Laminin γ 2-enriched extracellular vesicles of oral squamous cell carcinoma cells enhance in vitro lymphangiogenesis via integrin α 3-dependent uptake by lymphatic endothelial cells. *Int. J. Cancer* 144(11):2795-2810
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4. Koji Kano, Yi-Qi Huang, Takashi Kogai, Yu-Tung Huang, Hiromi Yatsuda, Pei-Jer Chen; **Szu-Heng Liu***, "Evaluation of SH-SAW Biosensor in Whole Blood," *2018 IEEE International Ultrasonics Symposium (IUS)*, 2018, pp. 1-4, doi:

10.1109/ULTSYM.2018.8580094

5. S-H Wang, J S Chang, J-R Hsiao, Y-C Yen, S S Jiang, **S-H Liu**, Y-L Chen, Y-Y Shen, J-Y Chang and Y-W Chen. "Tumour cell-derived WNT5B modulates in vitro lymphangiogenesis via induction of partial endothelial-mesenchymal transition of lymphatic endothelial cells" , *Oncogene* 2017 **36**, 1503-1515.
6. Tzyy Yue Wong, Ying-Hui Chen, **Szu-Heng Liu**, et al., "Differential Proteomic Analysis of Human Placenta-Derived Mesenchymal Stem Cells Cultured on Normal Tissue Culture Surface and Hyaluronan-Coated Surface," *Stem Cells International*, vol. 2016, Article ID 2809192, 16 pages, 2016. doi:10.1155/2016/2809192.
7. **Szu-Heng Liu***, Shih-Fang Huang, Yuan-Ling Hsu, Szu-Hua Pan, Yen-Ju Chen and Yi-Hung Lin. "Structure of human collapsin response mediator protein 1: A possible role of its C-terminal tail" , *Acta Crystallogr F*. 2015 **71**:938–945.
8. **Szu-Heng Liu***, Yi-Hung Lin, Liang-Jen Huang, Shiang-Wen Luo, Wan-Lin Tsa i , Su-Yu Chiang and Hok-Sum Fung* . "Design and construction of a compact end-station at NSRRC for circular dichroism spectra in the vacuum-ultraviolet region" , *J. Synchrotron Rad. (Impact factor 2.333; ranking: 10/58=17.2%, Instruments & Instrumentation)* 2010 **17**: 761-768.
9. Chia-Wei Chang, Sheng-Chih Peng, Wen-Yao Cheng, **Szu-Heng Liu**, Huei-Hsuan Cheng, San-Yuan Huang and Yen-Chung Chang* "Studying the protein-protein interactions in the postsynaptic density by means of immunoabsorption and chemical crosslinking", *Proteomics Clin. Appl. (SCI)*, 2007 **1**: 1499-1512.
10. Li-Ping Lo, **Szu-Heng Liu** and Yen-Chung Chang* "Assembling microtubules disintegrate the postsynaptic density in vitro" , *Cell Motility and Cytoskeleton (SCI, Impact factor 3.089; ranking:91/162=56.1%, Cell Biology)*, 2007 **64**: 6-18.
11. Huei-Hsuan Cheng, **Szu-Heng Liu**, Hui-Cheng Lee, Ya-Shiuan Lin, Zu-Han Huang, Cheng-I Hsu, Yu-Che-Chen and Yen-Chung Chang* "The heavy chain of cytoplasmic dynein is a major protein component of the postsynaptic density fraction" , *Journal of Neuroscience Research (SCI, Impact factor 3.239; ranking:104/231=45.0%, Neurosciences)*. 2006 **84**:244-254.
12. **Szu-Heng Liu***, Huei-Hsuan Cheng, San-Yuan Huang, Pei-Chun Yiu and Yen-Chung Chang* "Studying the protein organization of the postsynaptic density by a novel solid-phase- and chemical crosslinking based technology" , *Mol Cell Proteomics (Impact factor 9.876; ranking: 2/67=2.9%, Biochemical Research Methods)* 2006 **5**: 1019-1032.

Awards