

## Dr. Lei Chen, Professor, Ph.D.

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### Contact Information

College of Food Science  
Fujian Agriculture and Forestry University  
Fuzhou, Fujian 350002, China



### Personal Information

Date of Birth: 14th Nov. 1984  
Nationality: China  
Marital Status: Married

**Ph.D.** Hypoglycemic Effects of *Agrimonia pilosa* Ledeb. and Its Active Compounds  
(Supervisor: Young-Hwa Kang, Korea)

### Education

- 2011.3-2015.2 Kyungpook National Univ. (Korea) Division of Applied Biosciences (Ph. D.)
- 2009.3-2011.3 Kyungpook National Univ. (Korea) Division of Applied Biosciences (M.S.E.)
- 2004.9-2008.6 Jishou Univ. (China) Dept. Chemistry Chem. Eng. (B.S.)

### Fields of Research Interest

- Inflammation and Cancer Biology
- Diabetes and diabetic wound healing
- Nanomedicine for cancer therapy (Drug delivery system)
- Natural Products Research for inflammation, diabetes and cancer

### Scholarships

- 2011.3–2015.3 Kyungpook National Univ. (Korea) Division of Applied Biosciences (Ph. D.)
- 2009.3-2011.3 Kyungpook National Univ. (Korea) Division of Applied Biosciences (M.S.E.)

### Research Students Supervision

As a Main Supervisor

6 Master students

### **Professional and Scientific Activities**

Frontiers in Pharmacology | Ethnopharmacology (SCI: IF, 3.483), editorial board; Combinatorial Chemistry & High Throughput Screening (SCI: IF, 0.952), editorial board; Canadian Journal of Gastroenterology and Hepatology (SCI: IF, 2.147), guest editor; Journal of Food Microbiology, editorial board ; Australian Journal of Science & Technology, editorial board; Journal of Clinical Nutrition and Food Science, editorial board ; SM Cell Science & Therapy, editorial board

### **Reviewer for The Following Journals**

Food Research International (18); Journal of Separation Science (13); Natural Product Research (14), International Journal of Food Properties (9); Medicinal Chemistry Research (5); Journal of the Science of Food and Agriculture (2); Phytomedicine (3); Journal of Ethnopharmacology (15); Phytochemistry Review (2)

### **Invited Talks**

International Symposium on Phytochemicals in Medicine and Food, Fuzhou China (ISPMF 2017 )

European Symposium on Phytochemicals in Medicine, Lile, France

Recently, Dr. Chen have published paper in *Critical Reviews in Food Science and Nutrition (IF 6.707, 4)*, *Trends in Food Science and Technology (IF 8.539, 4)*, *Frontiers in Pharmacology (IF 4.418)*, *Food Chemistry (IF 5.359, 2)*, *Food and Chemical Toxicology (IF 3.977)*, *Journal of Agricultural and Food Chemistry (IF 3.412)*, *Journal of Functional Foods (IF 3.470, 5)*, *Food and Function (IF 3.289, 4)* for more than 50 papers (as first or corresponding author). Cited for 429 times, h-index is 25.

**Publications (\* corresponding author(red), first author (blue))**

**2019**

1. **Chen, L.**, Teng, H., & Cao, H. (2019). Chlorogenic acid and caffeic acid from *Sonchus oleraceus* Linn synergistically attenuate insulin resistance and modulate glucose uptake in HepG2 cells. *Food and Chemical Toxicology*.127, 182-187. (2019.05)
2. Li, T., Teng, H., An, F., Huang, Q., **Chen, L\***, & Song, H. (2019). Beneficial effects of purple yam (*Dioscorea alata* L.) resistant starch on hyperlipidemia in high-fat-fed hamsters. *Food & Function*, 10.1039/C8FO02502A.
3. Teng, H., **Chen, Y.**, Lin, X., Lv, Q., Chai, T. T., Wong, F. C., **Chen, L\***, & Xiao, J. (2019). Inhibitory effect of the extract from *Sonchus oleraceus* on the formation of carcinogenic heterocyclic aromatic amines during the pork cooking. *Food and Chemical Toxicology*. 129,138-143. (2019.7)
4. **Chen, L.**, **Lin, X.**, Xu, X., Chen, Y., Li, K., Fan, X., Pang, J., & Teng, H. (2019). Self-nano-emulsifying formulation of *Sonchus oleraceus* Linn for improved stability: Implications for phenolics degradation under in vitro gastro-intestinal digestion: Food grade drug delivery system for crude extract but not single compound. *Journal of Functional Foods*, 53, 28-35. (2019.02)
5. Teng, H., & **Chen, L\***. (2019). Polyphenols and bioavailability: an update. *Critical Reviews in Food Science and Nutrition*, (10.1080/10408398.2018.1437023). (publish online 2019-1-7, Impact factor: 6.202)
6. **Chen, L.**, Lu, X., El-Seedi, H., & Teng, H. (2019). Recent advances in the development of sesquiterpenoids in the treatment of type 2 diabetes. *Trends in Food Science & Technology*, 2019, 88, 46-56. ()
7. **Chen, L.**, Lin, X., Xiao, J., Tian, Y., Zheng, B., & Teng, H. (2019). *Sonchus oleraceus* Linn protects against LPS-induced sepsis and inhibits inflammatory responses in RAW264.7 cells. *Journal of Ethnopharmacology*, 2019, 236, 63-69. (2019-05-23).
8. Huang, Q., Xu, M., Zhang, H., He, D., Kong, Y., **Chen, L\***, & Song, H. (2019). Transcriptome and proteome analyses of the molecular mechanisms associated with coix seed nutritional quality in the process of breeding. *Food chemistry*, 272, 30, 549-558. (2019-1-30, Impact factor:4.946)
9. **Chen, L.**, Gnanaraj, C., Arulselvan, P., El-Seedi, H., & Teng, H. (2019). A review on advanced microencapsulation technology to enhance bioavailability of phenolic compounds: Based on its activity in the treatment of Type 2 Diabetes. *Trends in Food Science & Technology*, 2019, 85, 149-162. (2019-03, Impact factor:6.609)
10. **Chen, L.**, Teng, H., & Xiao, J. (2019). A value-added cooking process to improve the quality of soybean: protecting its isoflavones and antioxidant activity. *Food Science and Human Wellness*. 10.1016/j.fshw.2019.05.001. (in press).
11. Hesham R. El-Seedi, Shaden A. M. Khalifa , Nermeen Yosri , Alfi Khatib, **Lei Chen**, Aamer Saeed, Thomas Efferth, Rob Verpoorte Plants mentioned in the

Islamic Scriptures (Holy Qur'an and Ahadith): Traditional uses and medicinal importance in contemporary times. *Journal of Ethnopharmacology*, 2019

### **2018**

12. **Chen, L.**, Teng, H., Xie, Z., Cao, H., Cheang, W. S., Skalicka-Woniak, K., & Xiao, J. (2018). Modifications of dietary flavonoids towards improved bioactivity: An update on structure–activity relationship. *Critical reviews in food science and nutrition*, 58(4), 513-527.
13. **Chen, L.**, Cao, H., & Xiao, J. (2018). Polyphenols: Absorption, bioavailability, and metabolomics. In *Polyphenols: Properties, Recovery, and Applications* (pp. 45-67).
14. Xu, M., He, D., Teng, H., **Chen, L\***, Song, H., & Huang, Q. (2018). Physiological and proteomic analyses of coix seed aging during storage. *Food Chemistry*, 260, 82-89. (Impact factor:4.946)
15. Li T, **Chen L**, Xiao J, et al. Prebiotic effects of resistant starch from purple yam (*Dioscorea alata* L.) on the tolerance and proliferation ability of *Bifidobacterium adolescentis* in vitro. *Food & Function*, 2018, 9(4): 2416-2425. (Impact factor:3.289)
16. Cao, H., Ou, J., **Chen, L.**, Zhang, Y., Szkudelski, T., Delmas, D., & Xiao, J. (2018). Dietary polyphenols and type 2 diabetes: Human study and clinical trials. *Critical reviews in food science and nutrition* (Doi: 10.1080/10408398.2018.1492900) (Impact factor: 6.202)
17. **Chen, L.** (2018). Dietary phenolic compound with the presence of C2= C3 double bond take the pre-emptive opportunities to enhance its biological effects. *Journal of Food Microbiology*, 2(1), 4-6.
18. **Chen, L\***, Teng, H., Jia, Z., Yu, Z., Cao, H. & Xiao, J. (2018). Intracellular signaling pathways of inflammation modulated by flavonoids: evidence to date. *Critical Reviews in Food Science and Nutrition*, 58(17), 2908-2924. (Impact factor: 6.202)

### **2017**

19. Teng, H., **Chen, L\***, Fang, T., Yuan, B., & Lin, Q. (2017). Rb2 inhibits  $\alpha$ -glucosidase and regulates glucose metabolism by activating AMPK pathways in HepG2 cells. *Journal of Functional Foods*, 28, 306-313. (2017-01)
20. Teng H., **Chen, L.\*** (2017).  $\alpha$ -Glucosidase and  $\alpha$ -amylase inhibitors from seed oil: a review of liposoluble substance to treat diabetes. *Critical Reviews in Food Science and Nutrition*, 57(16), 3438-3448. (2017-05-25, Impact factor: 6.202)
21. **Teng, H.**, Fang, T., Lin, Q., Song, H., Liu, B., **Chen, L\***. (2017). Red raspberry and its anthocyanins: bioactivity beyond antioxidant capacity. *Trends in Food Science & Technology*, 66, 153-165. (2017-08, Impact factor: 6.609).
22. **Chen, L.**, **Teng, H.**, ZHANG, K.Y., Skalicka-Woźniak, K., Georgiev, M. I., Xiao, J. (2017). Agrimonolide and Desmethyagrimonolide Induced HO-1 Expression in HepG2 Cells through Nrf2-Transduction and p38 Inactivation. *Frontiers in Pharmacology*, 7, 513 (10.3389/fphar.2016.00513). (2017-1-11)

### **2012-2016**

23. **Chen, L., Teng, H., Fang, T. & Xiao, J.** (2016). Agrimonolide from *Agrimonia pilosa* suppresses inflammatory responses through down-regulation of COX-2/iNOS and inactivation of NF- $\kappa$ B in lipopolysaccharide- stimulated macrophages. *Phytomedicine*, 23(8), 846-855. (2016-07-15)
24. **Teng, H., Chen, L\*, & Song, H.** (2016). The potential beneficial effects of phenolic compounds isolated from *A. pilosa* Ledeb on insulin-resistant hepatic HepG2 cells. *Food & Function*, 7(10), 4400-4409. (2016-10-12)
25. **Teng, H., Huang, Q., & Chen, L\*.** (2016). Inhibition of cell proliferation and triggering of apoptosis by agrimonolide through MAP kinase (ERK and p38) pathways in human gastric cancer AGS cells. *Food & Function*, 7(11), 4605-4613. (2016-11-09)
26. **Teng, H., Chen, L\*, Huang, Q., Wang, J., Lin, Q., Liu, M., Lee, W.Y. & Song, H.** (2016). Ultrasonic-Assisted Extraction of Raspberry Seed Oil and Evaluation of Its Physicochemical Properties, Fatty Acid Compositions and Antioxidant Activities. *PloS one*, 11(4).e0153457 (2016-04-27).
27. **Huang, Q., Chen, L\*, Teng, H., Song, H., Wu, X., & Xu, M.** (2015). Phenolic compounds ameliorate the glucose uptake in HepG2 cells' insulin resistance via activating AMPK: Anti-diabetic effect of phenolic compounds in HepG2 cells. *Journal of Functional Foods*, 19, 487-494. (**2015-12**).
28. **Chen, L., Kang Y.H.** (2014). Antioxidant and Enzyme Inhibitory Activities of Plebeian Herba (*Salvia plebeia* R. Br.) under Different Cultivation Conditions. *Journal of Agricultural and Food Chemistry*, 62: 2190-2197 (Impact Factor:2.857).
29. **Chen, L., Kang Y.H., Suh J.K.** (2014). Roasting processed oriental melon (*Cucumis melo* L. var. *makuwa* Makino) seed influenced the triglyceride profile and the inhibitory potential against key enzymes relevant for hyperglycemia. *Food Research International*, 56: 236-242. (Impact Factor: 3.182).
30. **Chen, L., Hwang J.E., Choi B. et al.** Antioxidant capacities and cytostatic effect of Korean red pepper (*Capsicum annum* L): a screening and in vitro study. *Journal of the Korean Society for Applied Biological Chemistry*. 2014, 57: 43-52. (Impact Factor: 0.665).
31. **Chen, L., Kang Y.H.** Hypoglycaemic activity of oriental melon (*cucumis melo* l. var. *makuwa makino*) seeds and its active compounds. *The Plant Resources Society of Korea*. 2014, 27, 622-628. (KSCI)
32. **Chen, L., Kang Y.H.** Antioxidant Activities of *Agrimonia pilosa* Ledeb: In Vitro Comparative Activities of Its Different Fractions. *Korean J. Plant Res*, 2014, 27(6): 642-649. (KSCI)
33. **Chen, L., Kang Y.H.** (2013) In vitro inhibitory effect of oriental melon (*Cucumis melo* L. var. *makuwa* Makino) seed on key enzyme linked to type 2 diabetes: Assessment of anti-diabetic potential of functional food. *Journal of Functional Foods*. (Impact Factor: 3.973).
34. **Chen, L., Kang Y.H.** (2013). Anti-inflammatory and antioxidant activities of red pepper (*Capsicum annum* L.) stalk extracts: Comparison of pericarp and placenta extracts, 2013, 5: 1724-1731. *Journal of Functional Foods* (Impact Factor:3.973).

- 35. Chen, L., Kang Y. H. (2013).** In vitro inhibitory potential against key enzymes relevant for hyperglycemia and hypertension of red pepper (*Capsicum annuum* L.) including pericarp, placenta, and stalk. *Journal of Food Biochemistry*, 38: 300-306.(Impact Factor: 1.155)
- 36. Chen, L., Hwang J.E., Gu K.M. et al.** Comparative study of antioxidant effects of five Korean varieties red pepper (*Capsicum Annuum. L*) extracts from various parts including placenta, stalk, and pericarp. *Food Science and Biotechnology* 2012, 21: 715-721. (Impact Factor: 1.449).