CV –Ancheng Huang

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Research areas

- Plant specialised metabolism
- Plant natural product biosynthesis – Pathway/ enzyme discovery and elucidation
- Synthetic biology and metabolic engineering
- Mechanisms concerning enzyme-mediated catalysis and protein engineering
- Metabolomics (targeted and untargeted)

Education

09/2010-12/2014, Ph.D. (Natural Product Chemistry), The University of Adelaide, Australia.
Awarded Dean's Commendation for Doctoral Thesis Excellence

09/2009-07/2010, Graduate, South China University of Technology.
Recipient of 1st class scholarship; Exempted from the national graduate entrance examination

09/2005-07/2009, Bachelor of Engineering, South China Agricultural University.
Top 1st out of 500 in terms of overall credit

Work experience

10/2018 – present, Post-doctoral Scientist, John Innes Centre, UK.

10/2016 – 09/2018, Post-doctoral Scientist (Marie Skłodowska-Curie Individual Fellow), Department of Metabolic Biology, John Innes Centre, UK. (Project: Biosynthesis of novel plant terpene natural products)

12/2015 – 09/2016, Post-doctoral Scientist, Department of Metabolic Biology, John Innes Centre, UK. (NIH funded GNPN Project: Discovery of biosynthetic enzymes for the synthesis of plant novel natural products)

4/2015 – 11/2015, Post-doctoral fellow, State Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology, Macau, China.

Prize and awards

- Marie Skłodowska-Curie Individual Fellowship, 10/2016-09/2018
- Dean's Commendation for Doctoral Thesis Excellence, 12/2014
- *HongManTang* graduate Certificate for Outstanding Undergraduates in Research, South China Agricultural University, top 10 out of 500, 6/2009.

Publications

1. Xue Z.; Tan Z.; **Huang A.**; Zhou Y.; Sun J.; Wang X.; Thimmappa R. B.; Stephenson M. J.; Osbourn A.; Qi X. Identification of key amino acid residues determining product specificity of 2,3-oxidosqualene cyclase in *Oryza* species. ***New Phytol.*** 2018, 218(3):1076-1088.
2. **Huang, A. C.**; Hong, Y. J.; Bond, A. D.; Tantillo, D. J.; Osbourn, A. Diverged terpene synthases reroute the carbocation cyclization path towards the formation of unprecedented 6/11/5 and 6/6/7/5 sesterterpene scaffolds. ***Angew. Chem. Int. Ed.***, 2018, 57(5), 1291-1295.
3. **Huang, A. C.**; Kautsar S. A..; Hong, Y. J.; Bond, A. D.; Madema M. H.; Tantillo, D. J.; Osbourn, A. Unearthing a sesterterpene biosynthetic repertoire in the Brassicaceae through genome mining reveal convergent evolution. ***Proc. Natl. Acad. Sci. U.S.A.*** 2017, 114(29), E6005-6014.
4. Owen C.; Patron N. J.; **Huang A.**; Osbourn A. Harnessing plant metabolic diversity. ***Curr. Opin. Chem. Biol***. 2017, 40, 24-30.
5. Nützmann H.-W.; **Huang A.**; Osbourn A. Plant metabolic clusters-from genetics to genomics. ***New Phytol.*** 2016, 211(3), 711-789.
6. Davies, C; Böttcher, C; Nicholson, E. L.; Burbidge, C. A.; Bastian, S; Harvey, K. E.; **Huang, A.-C.**; Taylor, D. K.; Boss, P. K. Shiraz wines made from grape berries (Vitis vinifera) delayed in ripening by plant growth regulator treatment have elevated rotundone levels and 'pepper' flavor and aroma. ***J. Agric. Food Chem.*** 2015, 63(8), 2137-2144.
7. **Huang, A.-C.**; Sefton, M. A.; Taylor, D. K. Comparison of the formation of peppery and woody sesquiterpenes derived from α-guaiene and α-bulnesene under aerial oxidative conditions. ***J. Agric. Food Chem.*** 2015, 63(8), 2137-2144
8. **Huang, A.-C.**; Sefton, M. A.; Sumby, C. J.; Tiekink, E. R.T.; Taylor, D. K. Mechanistic studies on the autoxidation of α-guaiene: The structural diversity of the sesquiterpenoid downstream products. ***J. Nat. Prod.*** 2015, 78, 131-145.
9. **Huang, A.-C.**; Burrett, S.; Sefton, M. A.; Taylor, D. K. Production of the pepper aroma compound, (-)-rotundone by aerial oxidation of α-guaiene. ***J. Agric. Food Chem.***

2014, *62* (44), 10809–10815.

10. **Huang, A.-C.**; Sumby, C. J.; Tiekink, E. R.T.; Taylor, D. K. Synthesis of guaia-4(5)-en-11-ol, guaia-5(6)-en-11-ol, aciphyllene, 1-*ep*i-melicodenone C and E and other guaiane-type sesquiterpenoids via the diastereoselective epoxidation of guaiol. ***J. Nat. Prod.*** 2014, *77*(11), 2522-2536.
11. **Huang, A.-C.**; Wilde, A.; Ebmeyer, J.; Skouroumounis, G. K.; Taylor, D. K. Examination of the phenolic profile and antioxidant activity of the leaves of the Australian native plant *Smilax glyciphylla*. ***J. Nat. Prod.*** 2013, *76* (10), 1930-1936.
12. Q. Zhong.; **A. Huang.**; B. Wang.; X. Dong., Development of direct competitive ELISA kit for the detection of tetrodotoxin using HRP labeled antigen. ***Adv. Mater. Res.*** *(Durnten-Zurich, Switz.)* 2011, 236, 2820-2824.

黄安诚

(出生年月：1987 年 5 月)

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研究领域

- 植物功能基因组学和代谢组学
- 植物天然产物的生物合成途径发现与解析
- 合成生物学和代谢工程
- 酶学催化反应机理和酶工程改造

教育背景

2010-2014，有机化学博士，澳大利亚阿德莱德大学
2009-2010，硕士研究生，华南理工大学 (获得保送资格和一等奖学金)
2005-2009，本科，华南农业大学，总绩点 3.86，排名年级第一 (1/500)

工作经历

2015，澳门科技大学中药质量控制国家重点实验室，博士后
2015-至今，英国约翰英纳斯中心，博士后

所获荣誉

2016，欧盟玛丽居里学者（Marie Skłodowska-Curie Individual Fellowship）
2014，阿德莱德大学院长卓越博士论文奖
2009，华南农业大学‘红满堂’优秀本科生 (10/500)

发表文章

1. Xue Z.; Tan Z.; **Huang A.**; Zhou Y.; Sun J.; Wang X.; Thimmappa R. B.; Stephenson M. J.; Osbourn A.; Qi X. Identification of key amino acid residues determining product specificity of 2,3-oxidosqualene cyclase in *Oryza* species. ***New Phytol.*** 2018, 218(3):1076-1088.
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3. **Huang, A. C.**; Kautsar S. A..; Hong, Y. J.; Bond, A. D.; Madema M. H.; Tantillo, D. J.; Osbourn, A. Unearthing a sesterterpene biosynthetic repertoire in the Brassicaceae through genome mining reveal convergent evolution. ***Proc. Natl. Acad. Sci. U.S.A.*** 2017, 114(29), E6005-6014.
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9. **Huang, A.-C.**; Burrett, S.; Sefton, M. A.; Taylor, D. K. Production of the pepper aroma compound, (-)-rotundone by aerial oxidation of α-guaiene. ***J. Agric. Food Chem*.** 2014, *62* (44), 10809–10815.
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11. **Huang, A.-C.**; Wilde, A.; Ebmeyer, J.; Skouroumounis, G. K.; Taylor, D. K. Examination of the phenolic profile and antioxidant activity of the leaves of the Australian native plant *Smilax glyciphylla*. ***J. Nat. Prod.*** 2013, *76* (10), 1930-1936.
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