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Biocatalytic asymmetric hydroamination by native and engineered carbon-nitrogen lyases

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JIELIN ZHANG

List of Publications

1. **Zhang, J.**, Grandi E., Fu H., Saravanan T., Bothof L., Tepper P.G., Thunnissen A.-M. W.H., & Poelarends, G.J., “Enantioselective synthesis of chiral synthons for artificial dipeptide sweeteners catalyzed by an engineered C-N lyase”, *Submitted*.
2. **Zhang, J.**, Fu, H., Tepper, P.G. & Poelarends, G.J., “Biocatalytic enantioselective hydroaminations for production of *N*-cycloalkyl-substituted L-aspartic acids using two C-N lyases”, *Adv. Synth. Catal.*, **361**, 2433-2437 (2019).
3. Fu, H.*, **Zhang, J.***, Saifuddin, M.*, Cruiming, G., Tepper, P.G. & Poelarends, G.J., “Chemoenzymatic asymmetric synthesis of the *metallo*- β -lactamase inhibitor aspergillomarasmine A and related aminocarboxylic acids”, *Nat. Cat.*, **1**, 186-191 (2018).
4. Poddar, H., De Villiers, J., **Zhang, J.**, Puthan Veetil, V., Raj, H., Thunnissen, A.W. & Poelarends, G.J., “Structural basis for the catalytic mechanism of ethylenediamine-*N,N'*-disuccinic acid lyase, a carbon-nitrogen bond-forming enzyme with broad substrate scope”, *Biochemistry*, **57**, 3752-3763 (2018).
5. Fu, H., **Zhang, J.**, Tepper, P.G., Bunch, L., Jensen, A. & Poelarends, G.J., “Chemoenzymatic synthesis and pharmacological characterization of functionalized aspartate analogues as novel excitatory amino acid transporter inhibitors”, *J. Med. Chem.*, **61**, 7741-7753 (2018).
6. Abidin, M.Z., Saravanan, T., **Zhang, J.**, Tepper, P.G., Strauss, E. & Poelarends, G.J., “Modular Enzymatic Cascade Synthesis of Vitamin B5 and Its Derivatives”, *Chem. Eur. J.*, **24**, 17434-17438 (2018).
7. Fu, H., Younes, S. H. H., Saifuddin, M., Tepper, P. G., **Zhang, J.**, Keller, E., Heeres, A., Szymanski, W. & Poelarends, G.J., “Rapid chemoenzymatic route to glutamate transporter inhibitor L-TFB-TBOA and related amino acids”, *Org. Biomol. Chem.*, **15**, 2341-2344 (2017).
8. **Zhang, J.**, Tao, S., Zhang, B., Wu, X., Chen, Y., “A Microparticle-Based Strategy for Controlled Release of Substrate for the Biocatalytic Preparation of L-Homophenylalanine”, *ACS Catal.*, **4** 1584-1587 (2014).
9. **Zhang, J.**, Zhu, T., Wu, X., Chen, Y., “Enhancement of Biocatalytic Efficiency by Increasing Substrate Loading: Enzymatic Preparation of L-Homophenylalanine”, *Appl. Microbiol. Biotechnol.*, **97**, 8487-8494 (2013).