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Grzech, D., Hong, B., Caputi, L., Sonawane, P.D., O'Connor, S.E.*

Engineering the biosynthesis of late-stage vinblastine precursors precondylocarpine acetate, catharanthine and tabersonine in *Nicotiana benthamiana*.

Submitted

Palmer L., Chuang L., Siegmund, M., Kunert, M., Yamamoto, K., Sonawane, P.D., O'Connor, S.E.*

In vivo characterization of key iridoid biosynthesis pathway genes in catnip (*Nepeta cataria*)

In revision, Planta

Koellner, T.G.*, David, A., Luck, K., Kunert, G., Beran, F., Zhou, J.-J., Caputi, L., O'Connor, S.E.*

Biosynthesis of iridoid sex pheromones in aphids

In revision, PNAS

Langley, C., Tatsis, E., Hong, B., Nakamura, Y., Paetz, C., Stevenson, C.E.M., Basquin, J., Lawson, D.M., Caputi, L.*, O'Connor, S.E.*

Expansion of the Catalytic Repertoire of Alcohol Dehydrogenases in Plant Metabolism

In revision, Angew. Chem.

Kamileen, M.O., DeMars, M. Hong, BB., Nakamura, Y., Paetz, C., Lichman, B.R., Sonawane, P.D., Caputi, L.*, O'Connor, S.E.*

Recycling upstream redox enzymes expands the regioselectivity of cycloaddition in pseudo-aspidosperma alkaloid biosynthesis.

In revision, J. Am. Chem. Soc.

Li, C., Wood, J.C., Vu, H.A., Hamilton, J.P., Rodríguez-López, C.E., Payne, R.M.E., Serna Guerrero, D.A., Yamamoto, K., Vaillancourt, B., Caputi, L.*, O'Connor, S.E.*, Buell, C.R.*

Single-cell multi-omics enabled discovery of alkaloid biosynthetic pathway genes in the medical plant *Catharanthus roseus*.

Bioarchive, doi: <https://doi.org/10.1101/2022.07.04.498697>

In revision, Nature Chem. Bio.

Dudley, Q.M., Jo, S., Serna Guerrero, D.A., O'Connor, S.E., Caputi, L.*, Patron, N.J.* Reconstitution of monoterpene indole alkaloid biosynthesis in genome engineered *Nicotiana benthamiana*.

Bioarchive, doi: <https://doi.org/10.1101/2021.08.12.456143>

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Zhang, J., Hansen, L.G., Gudich, O., Viehrig, K., Lassen, L.M.M., Schrübbers, L., Adhikari, K.B., Rubaszka, P., Carrasquer-Alvarez, E., Chen, L., D'Ambrosio, V., Lehka, B., Haidar, A.K., Nallapareddy, S., Giannakou, K., Laloux, M., Arsovska, D., Jørgensen, M.A.K., Chan, L.J.G., Kristensen, M., Christensen, H.B., Sudarsan, S., Stander, E.A., Baidoo, E., Petzold, C.J., Wulff, T., O'Connor, S.E., Courdavault, V., Jensen, M.K.*, Keasling, J.D.* (2022) A microbial supply chain for production of the anti-cancer drug vinblastine. *Nature*. doi: 10.1038/s41586-022-05157-3.

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