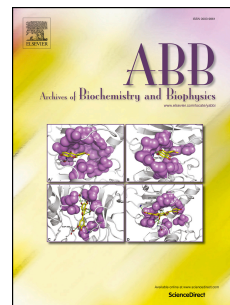


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Ernst H. Oliw



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Product specificity of fungal 8R- and 9S-dioxygenases of the peroxidase-cyclooxygenase superfamily with amino acid derivatized polyenoic fatty acids

by

Ernst H. Oliw*

Division of Biochemical Pharmacology, Department of Pharmaceutical Biosciences, Uppsala University, Box 591, SE-751 24 Uppsala, Sweden.

Running title: Substrate orientation in dioxygenase domains

*To whom correspondence should be addressed: Division of Biochemical Pharmacology, Department of Pharmaceutical Biosciences, Uppsala University, Box 591, SE-751 24 Uppsala, Sweden. Telephone: +46 184714455; E-mail: Ernst.oliw@farmbio.uu.se

¹Abbreviations: AOS, allene oxide synthase(s); COX, cyclooxygenase(s); CYP, cytochrome(s) P450; DiHODE, dihydroxyoctadecadienoic acid; DiHOTrE, dihydroxyoctadecatrienoic acid; DOX, dioxygenase(s); LDS, linoleate diol synthase(s); LOX, lipoxygenase(s); SRS, substrate recognition site; TIC, total ion current; RP, reversed phase; TPP, triphenylphosphine. 8-H(P)ODE, 8-hydro(pero)xy-9Z,12Z-octadecadienoic acid; 16:3n-3-Gly, N-[7Z,10Z,113Z-hexadecatrienoyl]-S-glycine; 18:2n-6-Gly, N-[9Z,12Z-octadecadienoyl]-S-glycine, 18:2n-6-Ile, N-[9Z,12Z-octadecadienoyl]-S-isoleucine; 18:2n-6-Trp, N-[9Z,12Z-octadecadienoyl]-S-tryptophan; 18:3n-3-Gly, N-[9Z,12Z,15Z-octadecatrienoyl]-S-glycine; 18:3n-3-Ile, N-[9Z,12Z,15Z-octadecatrienoyl]-S-isoleucine; 18:3n-3-Trp, N-[9Z,12Z,15Z-octadecatrienoyl]-S-tryptophan 8-H(P)OTrE, 8-hydro(pero)xy-9Z,12Z,15Z-octadecatrienoic acid; 9-H(P)ODE, 9-hydro(pero)xy-10E,12Z-octadecadienoic acid; 9-H(P)OTrE, 9-hydro(pero)xy-10E,12Z,15Z-octadecadienoic acid; 12-H(P)OTrE, 12-hydro(pero)xy-9Z,11E,15Z-octadecatrienoic acid; 13-H(P)ODE, 13-hydro(pero)xy-9Z,11E-octadecatrienoic acid; 13-H(P)OTrE, hydro(pero)xy-9Z,11E,15Z-octadecatrienoic acid.

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