

## Publication

A multitasking vanadium-dependent chloroperoxidase as an inspiration for the chemical synthesis of the merochlorins.

### JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

**ID** 4636425

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**Year** 2014

**Title** A multitasking vanadium-dependent chloroperoxidase as an inspiration for the chemical synthesis of the merochlorins.

**Journal** Angewandte Chemie (International ed. in English)

**Volume** 53

**Number** 41

**Pages / Article-Number** 11023-6

**Keywords** biomimetic synthesis; chlorine; enzymes; oxidation; vanadium

**Mesh terms** Biocatalysis; Chloride Peroxidase, metabolism; Cyclization; Oxidation-Reduction; Sestert-erpenes, biosynthesis, chemistry; Stereoisomerism

The vanadium-dependent chloroperoxidase Mcl24 was discovered to mediate a complex series of unprecedented transformations in the biosynthesis of the merochlorin meroterpenoid antibiotics. In particular, a site-selective naphthol chlorination is followed by an oxidative dearomatization/terpene cyclization sequence to build up the stereochemically complex carbon framework of the merochlorins in one step. Inspired by the enzyme reactivity, a chemical chlorination protocol paralleling the biocatalytic process was developed. These chemical studies led to the identification of previously overlooked merochlorin natural products.

**ISSN/ISBN** 1521-3773

**Full Text on edoc** ;

**Digital Object Identifier DOI** 10.1002/anie.201405696

**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/25147132>