Metallophthalocyanines as Possible Lignin Peroxidase Models

BioMed. Chem. **1995**, *3*, 471

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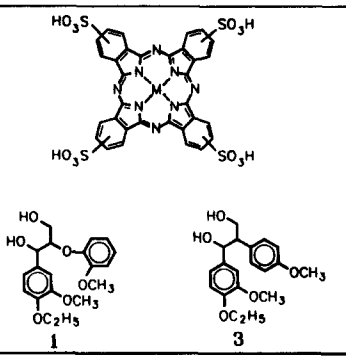
The metallophthalocyanines where M=Cu(II), Ni(II) and Co(II) showed little catalytic activity towards the oxidation of veratryl alcohol and the two lignin model compounds 4-ethoxy-3-methoxyphenyl-glycerol-β-guaiacyl ether (a β-O-4-dimer) **1** and 1-(4-ethoxy-3-methoxy)-2-(4-methoxyphenyl)-1, 3-propanediol (a β-1 dimer) **3**. The iron(III) and Mn(III) phthalocyanines, however, catalyzed the oxidations of these three substrates but as catalysts they were much less stable than the halogenated *meso*-tetraphenylporphyrins.



SUBTILISIN AND α-CHYMOTRYPSIN CATALYZED SYNTHESIS OF PEPTIDES CONTAINING ARGININE OR LYSINE p-NITROANILIDES AS C-TERMINAL MOIETIES.

BioMed. Chem. **1995**, *3*, 479

Valentin M.Stepanov, Elena Yu.Terent'eva, Tatiana L.Voyushina*, Mikhail Yu.Gololobov,
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Abstract: Enzymatic acylation of arginine or lysine *p*-nitroanilides by peptide methyl esters give chromogenic substrates for proteinases with trypsin-like specificity.

Z-Ala-Ala-Xaa-OCH_3 + H-Arg-NH-$C_6H_4NO_2$ ——> Z-Ala-Ala-Xaa-Arg-NH-$C_6H_4NO_2$

Xaa = Ala, Leu, Phe, Ile, Tyr, Trp, Met, His

Conversion Of Aldonic Acids To Their Corresponding 2-Keto-3-Deoxy-Analogs By The Non-Carbohydrate Enzyme Dihydroxy Acid Dehydratase (DHAD)

BioMed. Chem. **1995**, *3*, 487

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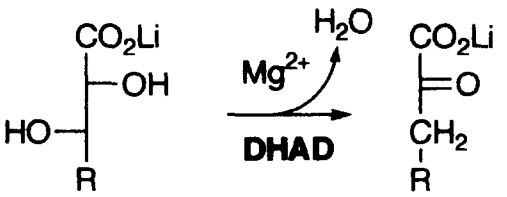
Institut für Organische Chemie, Universität Hamburg,
Martin-Luther-King-Platz 6, D-20146 Hamburg, Germany

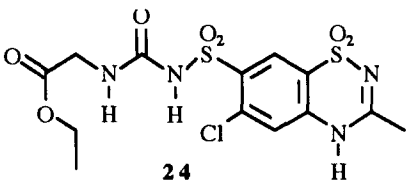


SYNTHESIS AND VASODILATOR EFFECTS OF 3- AND 7- SULFO NYLUREA-1,2,4-BENZOTHIADIAZIN-1,1-DIOXIDES ON RAT AORTA

BioMed. Chem. **1995**, *3*, 495

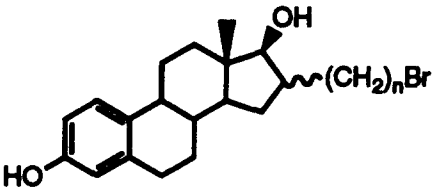
S. Khelili[1], G. Leclerc[1*], G. Faury[2] and J. Verdetti[2] - Université Joseph Fourier, France
[1]Pharmacochimie Moléculaire, 38243 Meylan Cedex, [2]Physiologie Moléculaire, 38041 Grenoble Cedex,.

Abstract : Compound **24** at low doses (0.1μM) induces a vasorelaxation greater than that observed with the K^+/ATP channel openers, cromakalim and diazoxide.



BioMed. Chem. **1995**, *3*, 505

SYNTHESIS OF 16-(BROMOALKYL)-ESTRADIOLS HAVING INHIBITORY EFFECT ON HUMAN PLACENTAL ESTRADIOL 17β-HYDROXYSTEROID DEHYDROGENASE TYPE 1



Martin R. Tremblay, Serge Auger and Donald Poirier*
Medicinal Chemistry Division, CHUL Research Center and Laval University

BioMed. Chem. **1995**, *3*, 525

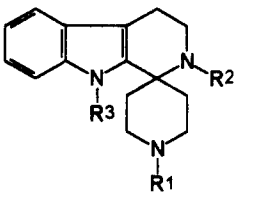
MAPPING THE STRUCTURAL DOMAINS OF *E. COLI* CARBAMOYL PHOSPHATE SYNTHETASE USING LIMITED PROTEOLYSIS

Shadreck M. Mareya and Frank M. Raushel*
Department of Chemistry
Texas A&M University
College Station, TX 77843

Cleavage of short peptides from the C-terminal end of carbamoyl phosphate synthetase from *E. coli* produces a protein that is catalytically active but unresponsive toward allosteric regulation.

BioMed. Chem. **1995**, *3*, 533

Structure-Activity Relationship Studies of CNS Agents. Part 17. Spiro[piperidine-4',1-(1,2,3,4-tetrahydro-β-carboline)] as a Probe Defining the Extended Topographic Model of 5-HT_{1A} Receptors



M.J. Mokrosz, B. Duszyńska, A.J. Bojarski, J.L. Mokrosz*

Department of Medicinal Chemistry, Institute of Pharmacology, Polish Academy of Sciences, 12 Smętna St. 31-343 Kraków, Poland

BioMed. Chem. **1995**, *3*, 539

A NOVEL SERIES OF ORALLY ACTIVE ANTIPLATELET AGENTS.

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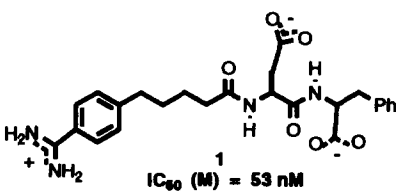
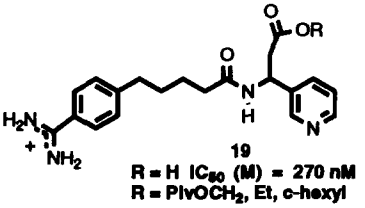


1
IC_{50} (M) = 53 nM

The potent IV fibrinogen receptor antagonist **1** was structurally modified to an orally active pro-drug form **19**.



19
R = H IC_{50} (M) = 270 nM
R = $PivOCH_2$, Et, c-hexyl

BioMed. Chem. **1995**, *3*, 553

Excitatory Amino Acid Receptor Ligands: Asymmetric Synthesis, Absolute Stereochemistry, and Pharmacology of (*R*)- and (*S*)-Homoibotenic Acid

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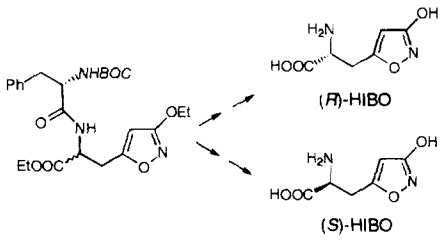
The Royal Danish School of Pharmacy, Department of Medicinal Chemistry, 2 Universitetsparken, DK-2100 Copenhagen, Denmark

The enantiomers of homoibotenic acid (HIBO) were synthesized through diastereomeric intermediates. The absolute stereochemistry was determined chemically, the enantiomeric excess by chiral HPLC and pharmacology studied by receptor binding and electrophysiological experiments.

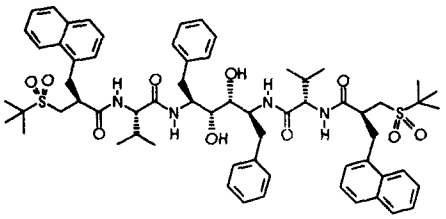


BioMed. Chem. **1995**, *3*, 559

HIV PROTEASE INHIBITOR HOE/BAY 793, STRUCTURE ACTIVITY RELATIONSHIPS IN A SERIES OF C_2-SYMMETRIC DIOLS

K.-H. Budt*§, A. Peyman§, J. Hansen&, J. Knolle§, C. Meichsner§, A. Paessens&, D. Ruppert§ and B. Stowasser§
§Hoechst AG, Pharma Research, 65926 Frankfurt, Germany;&Bayer AG, Institute of Virology, 42096 Wuppertal, Germany

A detailed SAR of C_2-symmetric diol inhibitors of HIV-1 protease leads to the outstanding inhibitor HOE/BAY793 (IC_{50} 0.3 nM; EC_{50} 3 nM).

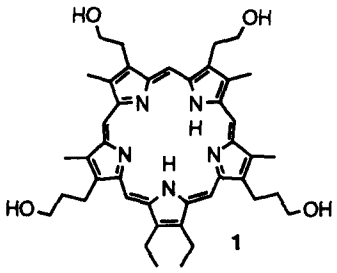


BioMed. Chem. **1995**, *3*, 573

A NON-IONIC WATER-SOLUBLE PENTAPHYRIN DERIVATIVE. SYNTHESIS AND CYTOTOXICITY

Vladimír Král, Eric A. Brucker, Gregory Hemmi, and Jonathan L. Sessler,*
Department of Chemistry and Biochemistry
Jarmila Králová, and Henry Bose, Jr.
Department of Microbiology and the Cell Research Institute
The University of Texas at Austin, Austin, TX 78712

The synthesis of the water soluble tetrahydroxypentaphyrin derivative, **1**, is described. This species, which forms complexes with both small neutral molecules and uranyl cation, has been studied as a possible cytotoxic agent. Cytotoxic studies performed with the human T lymphoma cell line (JURKAT) revealed that pentaphyrin **1** exhibits toxicity at μM concentrations comparable with other water soluble porphyrin-like systems.

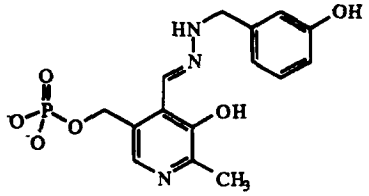


1

BioMed. Chem. **1995**, *3*, 579

Mechanism for the Time-Dependent Inhibition of γ-Aminobutyric Acid Aminotransferase by 3-Hydroxybenzylhydrazine

Eric S. Lightcap, Mark Hans Hopkins, Gregory T. Olson, and Richard B. Silverman*
Department of Chemistry and Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, IL 60208-3113



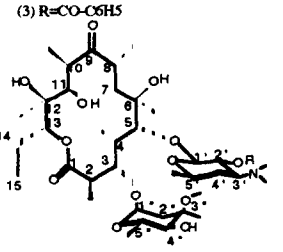
UV-visible and ^1H NMR studies, both with GABA aminotransferase and with PLP as a chemical model for the enzyme-catalyzed reaction, indicate that 3-hydroxybenzylhydrazine reacts both enzymatically and nonenzymatically to form the 3-hydroxybenzylhydrazone of PLP without tautomerization.

BioMed. Chem. **1995**, *3*, 587

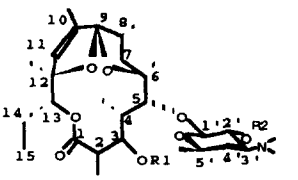
Conformational Change due to Esterification of hydroxy groups in Erythromycin A and its major metabolite:Analysis of theseDerivatives with different Biological Properties using NMR and molecular dynamics (MD) data.

P.Ladam, J.Gharbi-Benarous, M.Delaforge, M.-R.Van Calsteren, C. K.Jankowski and J.-P. Girault*

(1) Erythromycin R=H
(2) R=CO-C3H7
(3) R=CO-C6H5



(4) Erythralosamine R1=H R2=H
(5) R1=CO-C6H5 R2=H
(6) R1=H R2=CO-C6H5
(7) R1=R2=CO-C6H5



BioMed. Chem. **1995**, *3*, 605

Inhibition of *Helicobacter pylori* Urease by Phenyl Phosphorodiamidates: Mechanism of Action, W. Stephen Faraci*, Bingwei V. Yang, Dawn O'Rourke, and Robin W. Spencer, *Medicinal Chemistry Department, Pfizer Central Research, Groton, CT 06340*

Abstract: *Helicobacter pylori* urease is a nickel-containing enzyme that hydrolyzes urea to bicarbonate and ammonia. We show that 4-substituted phenyl phosphorodiamidates (4-R-$PhOP(=O)(NH_2)_2$) are slow-binding inhibitors of *H. pylori* urease with no evidence of kinetic saturation. The Bronsted β for inhibition is 0.4, similar to that of model system $S_N2(P)$ reactions. Based on these observations, we suggest that urease inhibition is covalent but reversible, involving a common phosphoacyl enzyme intermediate.