

Filed On Behalf Of: Novartis AG

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**PAR PHARMACEUTICAL, INC.,
BRECKENRIDGE PHARMACEUTICAL, INC. AND
ROXANE LABORATORIES, INC.**

Petitioners,

v.

NOVARTIS AG,
Patent Owner

Case IPR2016-00084¹
U.S. Patent 5,665,772

**PATENT OWNER'S DEMONSTRATIVE
EXHIBITS FOR ORAL HEARING**

¹ Breckenridge Pharmaceutical, Inc. was joined as a party to this proceeding via a Motion for Joinder in IPR2016-01023; Roxane Laboratories, Inc. was joined as a party via a Motion for Joinder in IPR2016-01102.

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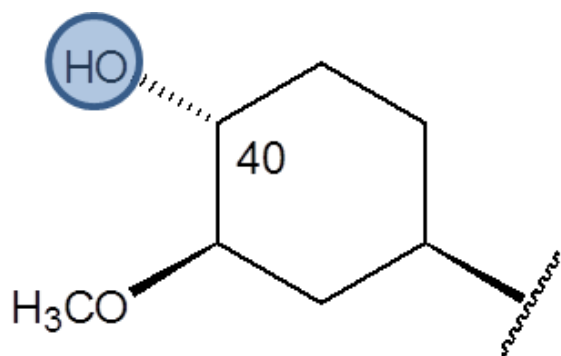
U.S. Patent No. 5,665,772

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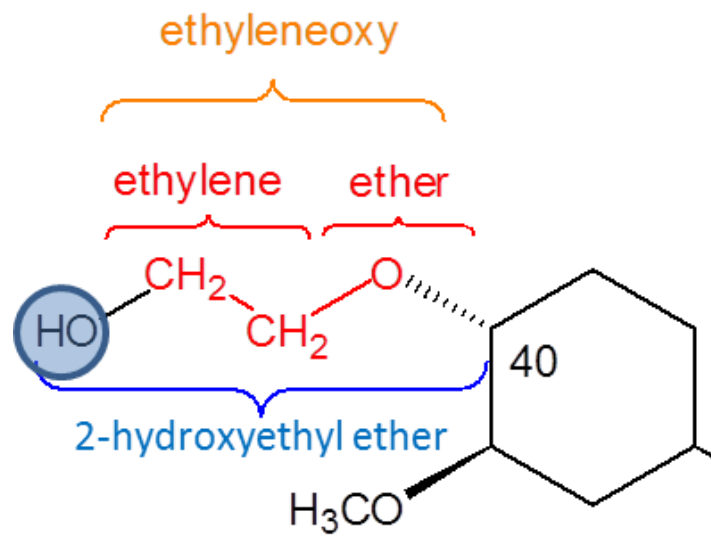
February 2, 2017

Structural Similarities And Differences Between Rapamycin And Everolimus

Paper 27 at 7-8



Rapamycin



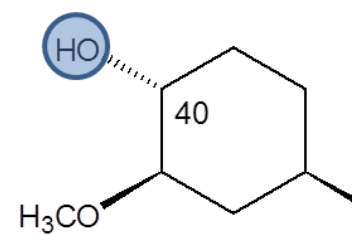
Everolimus

Lemke Does Not Reasonably Suggest That An Ethyle Group Would Increase Rapamycin's Water Solubility

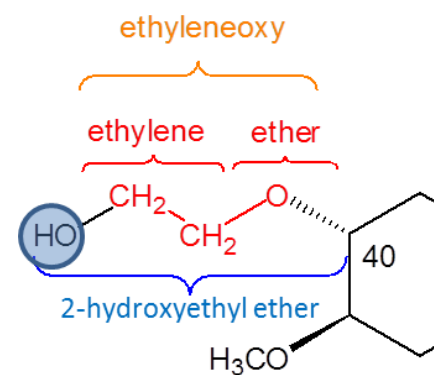
Paper 27 at 7-9

Table 16-1.
Water-Solubilizing Potential of Organic Functional Groups
When Present in a Mono- or Polyfunctional Molecule.
Water Solubility Is Defined As >1% Solubility.

Functional Group	Monofunctional Molecule	Polyfunctional Molecule
Alcohol	5 to 6 carbons	3 to 4 carbons
Phenol	6 to 7 carbons	3 to 4 carbons
Ether	4 to 5 carbons	2 carbons
Aldehyde	4 to 5 carbons	2 carbons
Ketone	5 to 6 carbons	2 carbons
Amine	6 to 7 carbons	3 carbons
Carboxylic Acid	5 to 6 carbons	3 carbons
Ester	6 carbons	3 carbons
Amide	6 carbons	2 to 3 carbons
Urea, Carbonate, Carbamate		2 carbons



Rapamycin



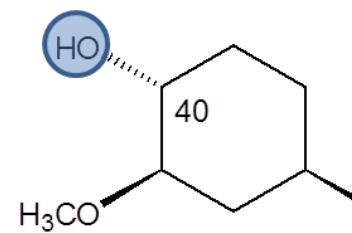
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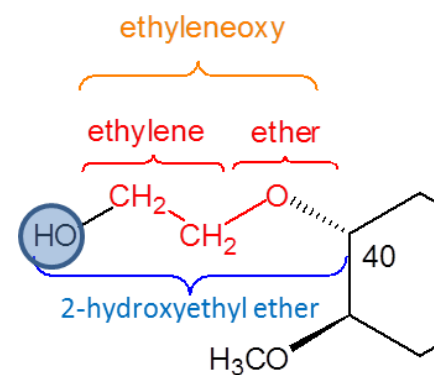
Paper 27 at 9-11

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Rapamycin



Everolimus

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