

Novel Use of Leflunomide and Malononitrilamides

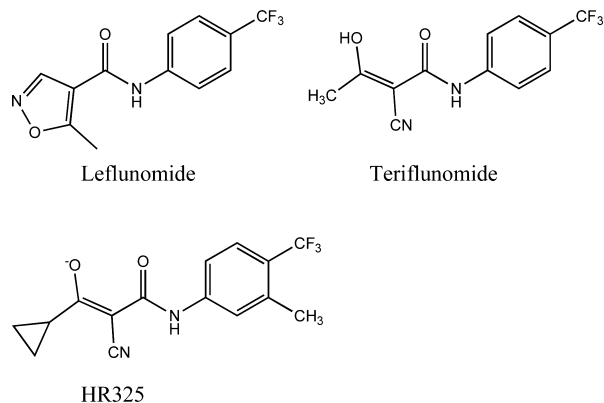
Patent Highlight

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Title:	Novel Use of Leflunomide and Malononitrilamides		
Patent/Patent Application Number:	WO 2012/025217 A1	Publication Date:	March 1, 2012
Priority Application:	EP 10008802.0	Priority Date:	August 24, 2010
	US 61/376,453		
Inventors:	Koopman, G.; Hasse B.; Mullner, S.		
Assignee Company:	Algiax Pharmaceuticals GmbH, 40699 Erkrath, Germany		
Disease Area:	Spinal Cord Injury	Biological Target:	Mitochondrial Enzyme Dihydroorotate Dehydrogenase
Summary:	Leflunomide is sold under the brand name Arava by Sanofi. In the United States, Arava is indicated in adults for the treatment of rheumatoid arthritis and psoriatic arthritis. Leflunomide inhibits mitochondrial enzyme dihydroorotate dehydrogenase, an enzyme involved in de novo pyrimidine synthesis. Leflunomide prevents the expansion of activated and autoimmune lymphocytes by interfering with their cell cycle progression, while nonlymphoid cells are able to use another pathway to make their ribonucleotides. In this patent application, Algiax Pharmaceuticals has found a new use in CNS trauma. Leflunomide improved locomotor and voiding functions in rats with several spinal cord contusion injury when administered at 20 mg/kg/day for 7 days. The same was found for malononitrilamide analogues such as HR325 (lafunimus) and teriflunomide, the active primary metabolite of leflunomide.		

Key Structures:



Recent Review Articles:	Vyas, V. K.; Ghatge, M. Recent developments in the medicinal chemistry and therapeutic potential of dihydroorotate dehydrogenase (DHODH) inhibitors. <i>J. Med. Chem.</i> 2011 , <i>11</i> (12), 1039–1055. Teschner, S.; Burst, V. Leflunomide: A drug with a potential beyond rheumatology. <i>Immunotherapy</i> 2010 , <i>2</i> (5), 637–650.
Biological Data:	The patent application reports in vivo evaluation of leflunomide, teriflunomide, and HR325.
Claims:	Claims 1–6: Use of leflunomide and malononitrilamides in treatment of CNS trauma related disorder
Additional Information:	New patent application for known drug

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Notes

The authors declare no competing financial interest.

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