

Health Cluster Portugal is a non-profit association of 127 academic, hospital, local authority and business institutions with the mission of improving healthcare in Portugal.

Subject: Proposal by Health Cluster Portugal for a revised text that includes Access to Effective and Affordable Medicines as a priority in the Proposal to the Council for the Specific Programme for the Implementation of Horizon 2020. The rationale for this change is to design smarter drugs that are at the same time more affordable.

Proposed new section 1.2 Effective and Affordable Medicines, in Part III.

1.2 Effective and Affordable Medicines

As European society ages, access to effective and affordable medicines is a social and economic imperative. Projects should be supported which re-purpose marketed existing drugs for improved effectiveness through new indications being researched or therapeutical effectiveness being increased or new delivery mechanisms being developed. Re-purposed drugs are known molecules that are currently being used as medicines but where there is potential to increase their scope of use and their efficacy, through morphology and physical changes by using nanotechnology and advanced manufacturing, and the resulting product is no longer therapeutically equivalent to the marketed original. Scientific and technological advances are emerging which are opening innovative therapeutical opportunities for existing drugs, and they need to be encouraged.

From an economic perspective, re-purposed existing drugs would require less investment in the investigation of their safety profiles, because they have been on the market, sometimes for decades, and their safety is thus well known. Consequently, time to market should be shorter and the prices of the re-purposed drugs be more affordable. At the same time, it is also expected that re-purposing existing drugs would require extensive pharmaceutical and clinical research and development and would generate opportunities for intellectual property creation and patenting.

For further questions, please contact Joaquim Cunha, Executive Director, Health Cluster Portugal, Rua Eng.º Frederico Ulrich 2650, 4470-605 Maia, Portugal or jcunha@healthportugal.com

Examples of drugs with potentially new indications from the scientific literature:

Strittmatter WJ, "Old Drug, New Hope for Alzheimer's Disease", Science 23 March 2012: 1447-1448. DOI:10.1126/science.1220725

Tan CM et al, "Restoring Methicillin-Resistant *Staphylococcus aureus* Susceptibility to β -Lactam Antibiotics", Sci Transl Med 21 March 2012: Vol. 4, Issue 126, p. 126ra35. Sci. Transl. Med. DOI: 10.1126/scitranslmed.3003592

Brown DL, "Low-Dose Doxycycline Can Reduce Coronary Heart Disease Risk" Arteriosclerosis, Thrombosis and Vascular Biology, April 2004.

Petrinec D, Liao S, Holmes DR et al. "Doxycycline inhibition of aneurysmal degeneration in an elastase induced rat model of abdominal aortic aneurysm". J Vasc Surg. 1996 Feb;23(2):336-46.