Accepted Manuscript

Title: Exploring the feasibility of the use of biopolymers as a carrier in the formulation of amorphous solid dispersions – Part I: Gelatin

Authors: Timothy Pas, Bjorn Vergauwen, Guy Van den Mooter

PII: S0378-5173(17)31030-X
DOI: https://doi.org/10.1016/j.ijpharm.2017.10.050
Reference: IJP 17106

To appear in: *International Journal of Pharmaceutics*

Received date: 18-7-2017
Revised date: 25-10-2017
Accepted date: 27-10-2017

Please cite this article as: Pas, Timothy, Vergauwen, Bjorn, Van den Mooter, Guy, Exploring the feasibility of the use of biopolymers as a carrier in the formulation of amorphous solid dispersions – Part I: Gelatin.International Journal of Pharmaceutics https://doi.org/10.1016/j.ijpharm.2017.10.050

EXPLORING THE FEASIBILITY OF THE USE OF BIOPOLYMERS AS A CARRIER IN THE FORMULATION OF AMORPHOUS SOLID DISPERSIONS – PART I: GELATIN.

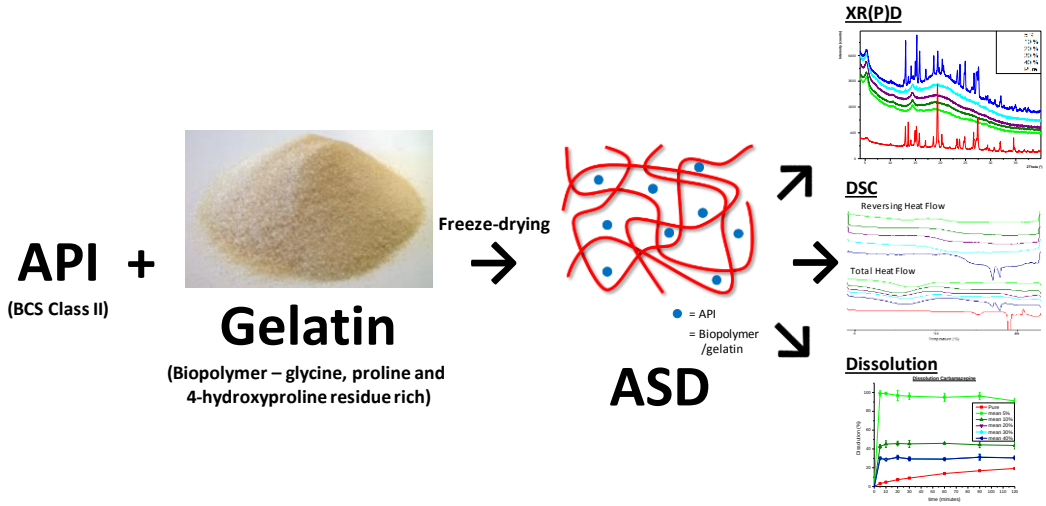
Timothy Pas[a], Bjorn Vergauwen[b], and Guy Van den Mooter[a*]

[a] *Drug Delivery and Disposition, KU Leuven, Department of Pharmaceutical and Pharmacological Sciences, Campus Gasthuisberg ON2, Herestraat 49 b921, 3000 Leuven, Belgium*
[b] *Rousselot bvba, Expertise center, Meulestedekaai 81, 9000 Gent, Belgium*

Corresponding author:

Guy Van den Mooter; Drug Delivery and Disposition, KU Leuven, Department of Pharmaceutical and Pharmacological Sciences, Campus Gasthuisberg ON2, Herestraat 49 b921, 3000 Leuven, Belgium
Guy.vandenmooter@kuleuven.be; Tel.: +32 16 330304

Graphical Abstract:



Abstract

Biopolymers have rarely been used so far as carriers in the formulation of amorphous solid dispersions (ASD) to overcome poor solubility of active pharmaceutical ingredients (APIs). In an attempt to enlarge our knowledge on this topic, gelatin, type 50PS was selected. A screening study was initiated in which twelve structurally different poorly soluble biopharmaceutical classification system (BCS) Class II drugs (carbamazepine, cinnarizine, diazepam, itraconazole, nifedipine, indomethacin, darunavir