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SYNTHESIS AND CHARACTERIZATION OF FLUBENDAZOLE COCRYSTALS

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Background/problem statement: Flubendazole (FBZ) has a great potential for the treatment of lymphatic filariasis in humans, but is poorly absorbed in the current formulations available due its low solubility in water. Objective: The present work describes the synthesis and characterization of FBZ cocrystals in combination with carboxilics acids.

Methods: Mechanochemical liquid-assisted grinding method was used to obtain mixtures corresponding to 1:1 stoichiometric ratios of flublendazole and the cocrystal former. The mixtures were evaluated by X-ray powder diffraction (Bruker D8 Advance). Results: The XRPD patterns (Fig.1) show a potential cocrystal formation with maleic acid and no evidence of cocrystal with aspirin as former.

Conclusions: The combination of flubendazole with maleic acid with application of mechanosynthesis has great potential to obtain cocrystals and can represent a new way for the development of a new oral solid dosage form containing flubendazole.