Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2020

New J. Chem.

Supplementary Information

The first zwitterionic cocrystal of indomethacin with amino acid showing optimized physicochemical properties as well as accelerated absorption and slowed elimination *in vivo*

Ling-Yang Wang^a, Yue-Ming Yu^a, Fu-Bin Jiang^c, Yan-Tuan Li^{a,b,*}, Zhi-Yong Wu^a, Cui-Wei Yan^{*}

^a School of Medicine and Pharmacy and College of Marine Life Science, Ocean University of China, Qingdao, Shandong 266003, PR China.

^b Laboratory for Marine Drugs and Bioproducts, Qingdao National Laboratory for Marine Science.

^c Department of Chemistry, Beijing Normal University, Beijing 100875, PR China.

* Correspondence to: Yan-Tuan Li and Cui-Wei Yan (Telephone: +86-53282031695). E-mail addresses: yantuanli@ouc.edu.cn (Yan-Tuan Li), cuiweiyan@ouc.edu.cn (Cui-Wei Yan).

Contents

Fig. S1. FT-IR spectra of INC-PL-H₂O compared with its starting materials.

Fig. S2. DSC and TGA profiles of cocrystal INC-PL-H₂O.

Fig. S3. XRPD comparison of simulated pattern for INC-PL-H₂O and the residual solids after the powder dissolution measurements.

Fig. S4. IDR profiles of INC, PL and INC-PL-H₂O.





Fig. S2. DSC (blue line) and TGA (red line) profiles of INC-PL-H₂O.



Fig. S3. XRPD comparison of simulated pattern for INC-PL-H₂O and the residual solids after the powder dissolution measurements



Fig. S4. IDR profiles of INC and INC-PL at pH 1.2, 4.0, and 6.8.