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Supporting information for article:

Zwitterionic *versus* neutral molecules of fluoroquinolones: crystal structure of danofloxacin dihydrate

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Table S1 The results of the database survey.

CSD refcodes of the analysed fluoroquinolones, two C–O bond lengths (Å), the molecular form, the associated solvents and substituents at positions 5 and 8.

d_1 and d_2 are the C–O bond lengths in the carboxylic/carboxylate group, where $d_1 \leq d_2$.

| No. | Refcode | $d_1(\text{C–O})$ | $d_2(\text{C–O})$ | molecular form | solvate/hydrate | substituent* at positions 5 and 8 |
|-----|----------|-------------------|-------------------|----------------|--------------------------|--------------------------------------|
| 1 | ASUSIS | 1.207 | 1.325 | neutral | dichloromethane solvate | 8-Cl |
| 2 | COQWOU | 1.250 | 1.258 | zwitterion | hydrate | 5-NH ₂ , 8-F |
| 2a | COQWOU01 | 1.246 | 1.266 | zwitterion | hydrate | |
| 2b | COQWOU02 | 1.255 | 1.260 | zwitterion | hydrate | |
| 3 | COVPIN | 1.251 | 1.254 | zwitterion | hydrate | |
| 3a | COVPIN01 | 1.258 | 1.26 | zwitterion | hydrate | |
| 3b | COVPIN03 | 1.261 | 1.261 | zwitterion | hydrate | |
| 3c | COVPIN04 | 1.259 | 1.260 | zwitterion | hydrate | |
| 3d | COVPIN05 | 1.256 | 1.259 | zwitterion | hydrate | |
| 4 | EJOBOW | 1.213 | 1.337 | neutral | methanol solvate hydrate | |
| 5 | ENODOB | 1.252 | 1.262 | zwitterion | difluoroethanol solvate | |
| | ENODOB | 1.249 | 1.278 | zwitterion | | |
| 6 | ENODUH | 1.258 | 1.262 | zwitterion | hydrate | |
| | ENODUH | 1.253 | 1.265 | zwitterion | | |
| | ENODUH | 1.249 | 1.270 | zwitterion | | |
| 6a | ENODUH01 | 1.253 | 1.269 | zwitterion | hydrate | |
| | ENODUH01 | 1.253 | 1.260 | zwitterion | | |
| | ENODUH01 | 1.250 | 1.272 | zwitterion | | |
| 7 | EVERUV | 1.211 | 1.326 | neutral | | 8-Cl |
| 8 | GEHLIR | 1.210 | 1.324 | neutral | | |
| 9 | GEHLOX | 1.207 | 1.326 | neutral | acetonitrile solvate | |
| 10 | JEKMOB | 1.208 | 1.324 | neutral | | 5-NH ₂ , 8-F |

| | | | | | | |
|-----|----------|-------|-------|------------|--------------------------|-------------------------|
| 11 | LONTUE01 | 1.199 | 1.325 | neutral | | |
| 12 | MAPKEU | 1.205 | 1.328 | neutral | | |
| 13 | MOCYAF | 1.215 | 1.334 | neutral | | |
| 14 | MUBKIE | 1.210 | 1.330 | neutral | | |
| 15 | NUQWIF | 1.205 | 1.335 | neutral | | |
| 16 | PAZSAN | 1.249 | 1.251 | zwitterion | hydrate | 5-F, 8-F |
| 17 | PIKVIO | 1.251 | 1.253 | zwitterion | hydrate | 8-OMe |
| 18 | PIKVOU | 1.226 | 1.255 | zwitterion | hydrate | 8-OMe |
| 19 | RIFHEV | 1.212 | 1.336 | neutral | | |
| 20 | SESZEW | 1.241 | 1.272 | zwitterion | methanol solvate | |
| 21 | TUNJAP | 1.208 | 1.325 | neutral | | 5-NH ₂ , 8-F |
| 22 | UHITOV01 | 1.195 | 1.341 | neutral | | |
| 23 | UHITOV02 | 1.247 | 1.266 | zwitterion | | |
| 24 | ULOSEW | 1.194 | 1.302 | neutral | acetic acid solvate | |
| 25 | XEBWOS | 1.206 | 1.335 | neutral | | |
| 26 | XICPAC | 1.206 | 1.34 | neutral | | |
| 26a | XICPAC01 | 1.206 | 1.332 | neutral | | |
| 27 | XICPEG | 1.247 | 1.265 | zwitterion | hydrate | |
| 28 | XITMAQ | 1.215 | 1.324 | neutral | acetone solvate | |
| 29 | XITMEU | 1.218 | 1.327 | neutral | methanol solvate hydrate | |
| | XITMEU | 1.220 | 1.329 | neutral | | |
| 30 | XITMIY | 1.216 | 1.320 | neutral | dichloromethane solvate | |
| 31 | YAPMEJ | 1.261 | 1.261 | zwitterion | hydrate | |
| | YAPMEJ | 1.252 | 1.265 | zwitterion | | |
| | YAPMEJ | 1.244 | 1.274 | zwitterion | | |
| 32 | YIHHAY | 1.198 | 1.318 | neutral | | |
| 33 | YIHHEC | 1.211 | 1.318 | neutral | | 8-F |
| 34 | YIHHIG | 1.237 | 1.274 | zwitterion | | |
| 35 | YOPWUV | 1.180 | 1.337 | neutral | | 8-Cl |

* Substituent other than H-atom

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