**Supporting information**

# Correlations between molecular structure and biological activity in "logical series" of dietary chromone derivatives

Short title: Structure and biological activity of chromone derivatives

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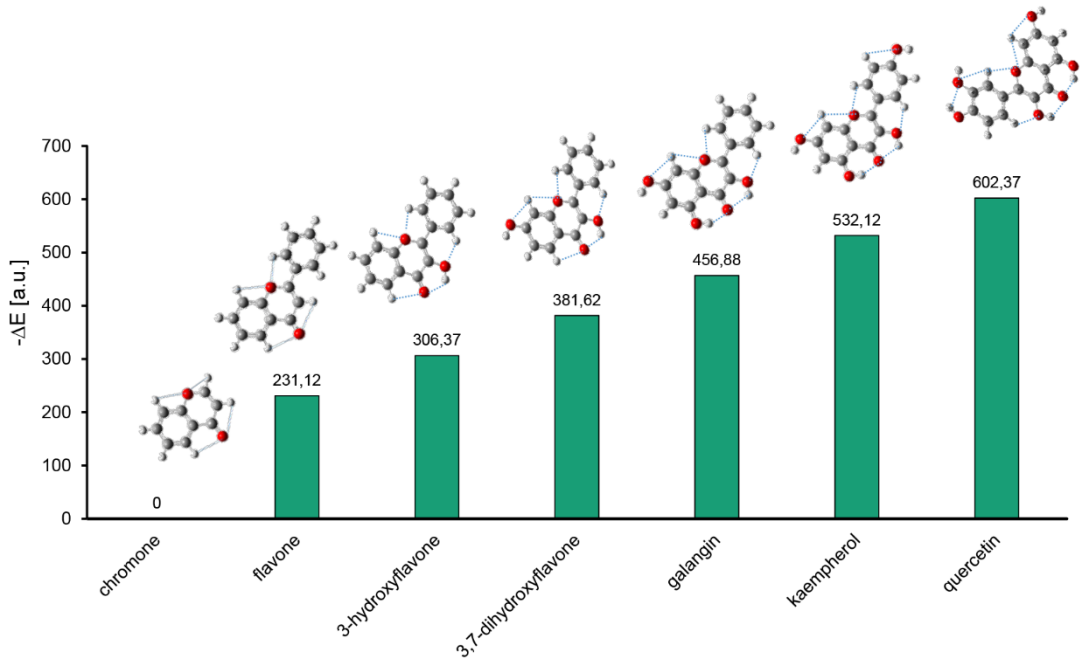


Fig S1. The energy of the most stable conformers of the studied compounds in relation to the energy of chromone.

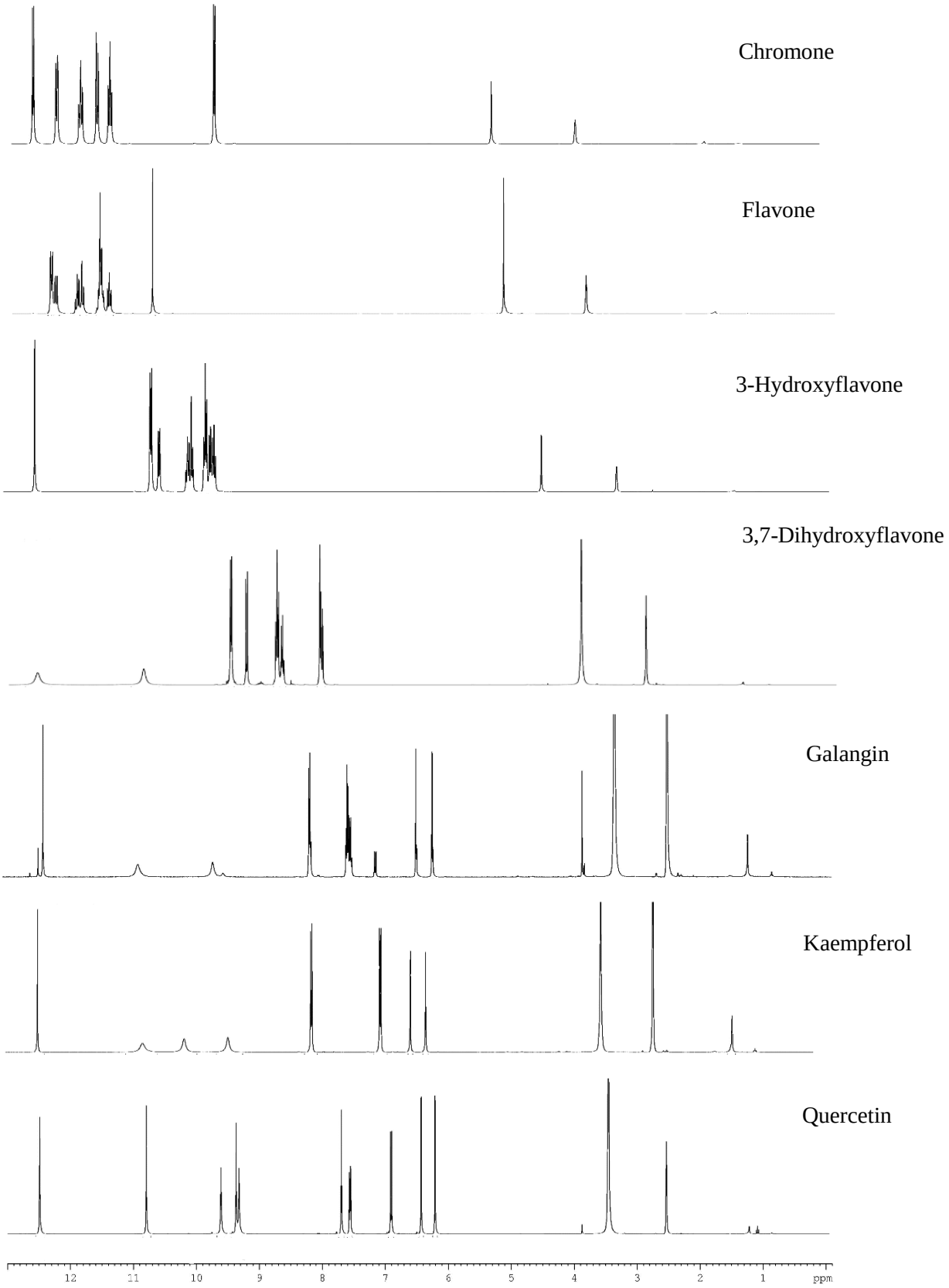


Fig S2. The $^{1}$H NMR spectra of chromone derivatives.

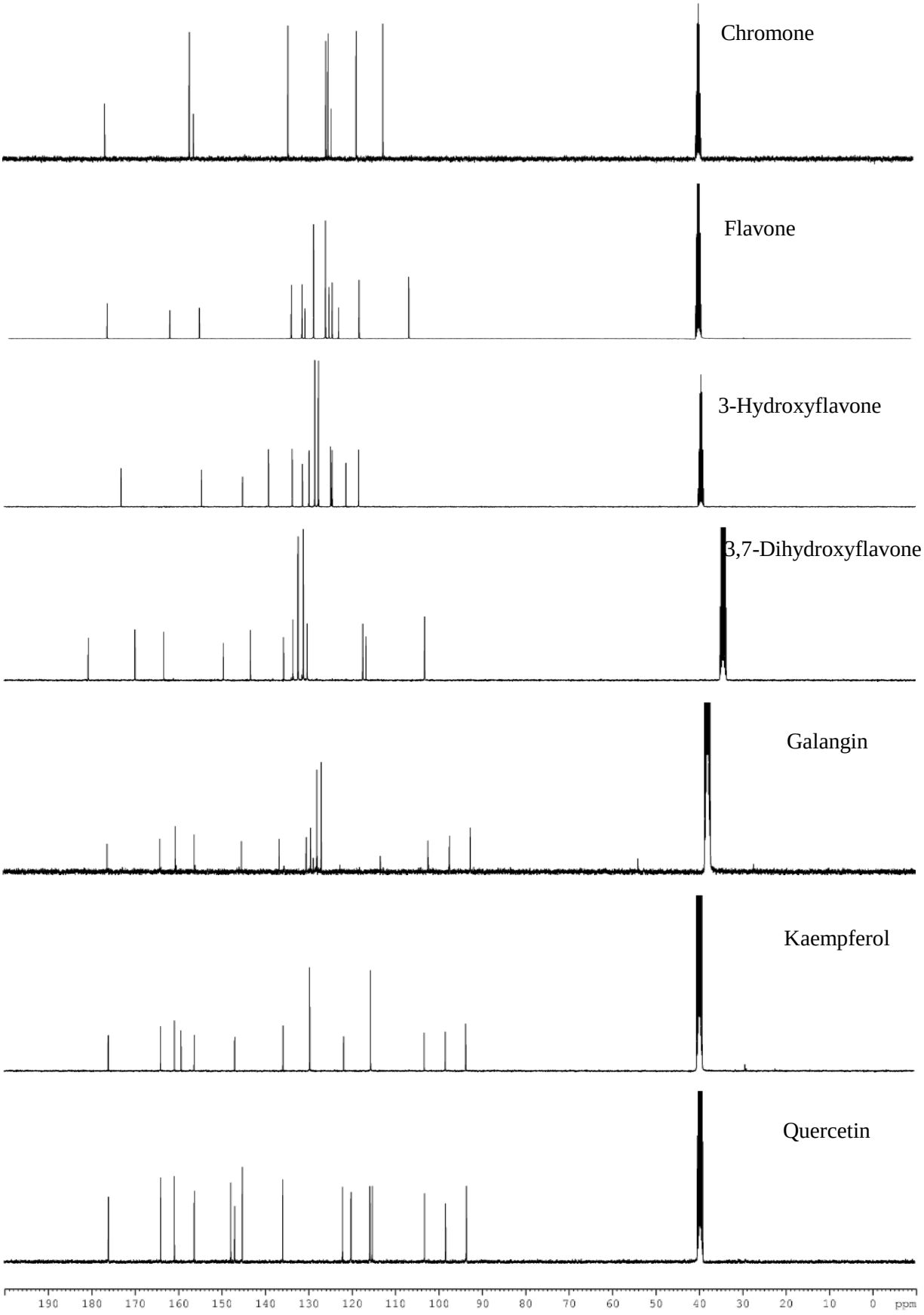


Fig S3. The $^{13}C$ NMR spectra of chromone derivatives.

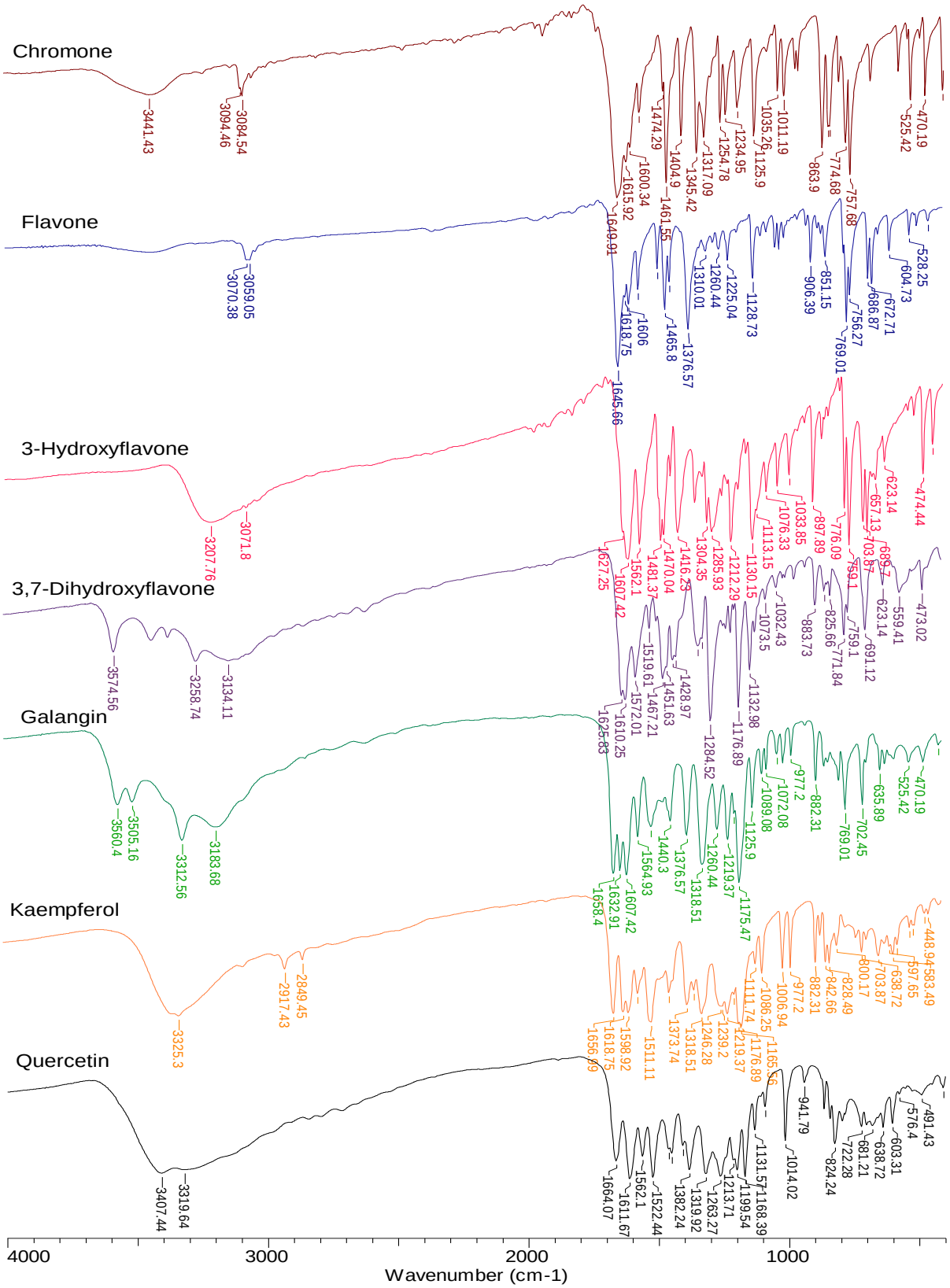


Fig S4. The IR spectra of chromone derivatives registered in the range of 400-4000 $cm^{-1}$.

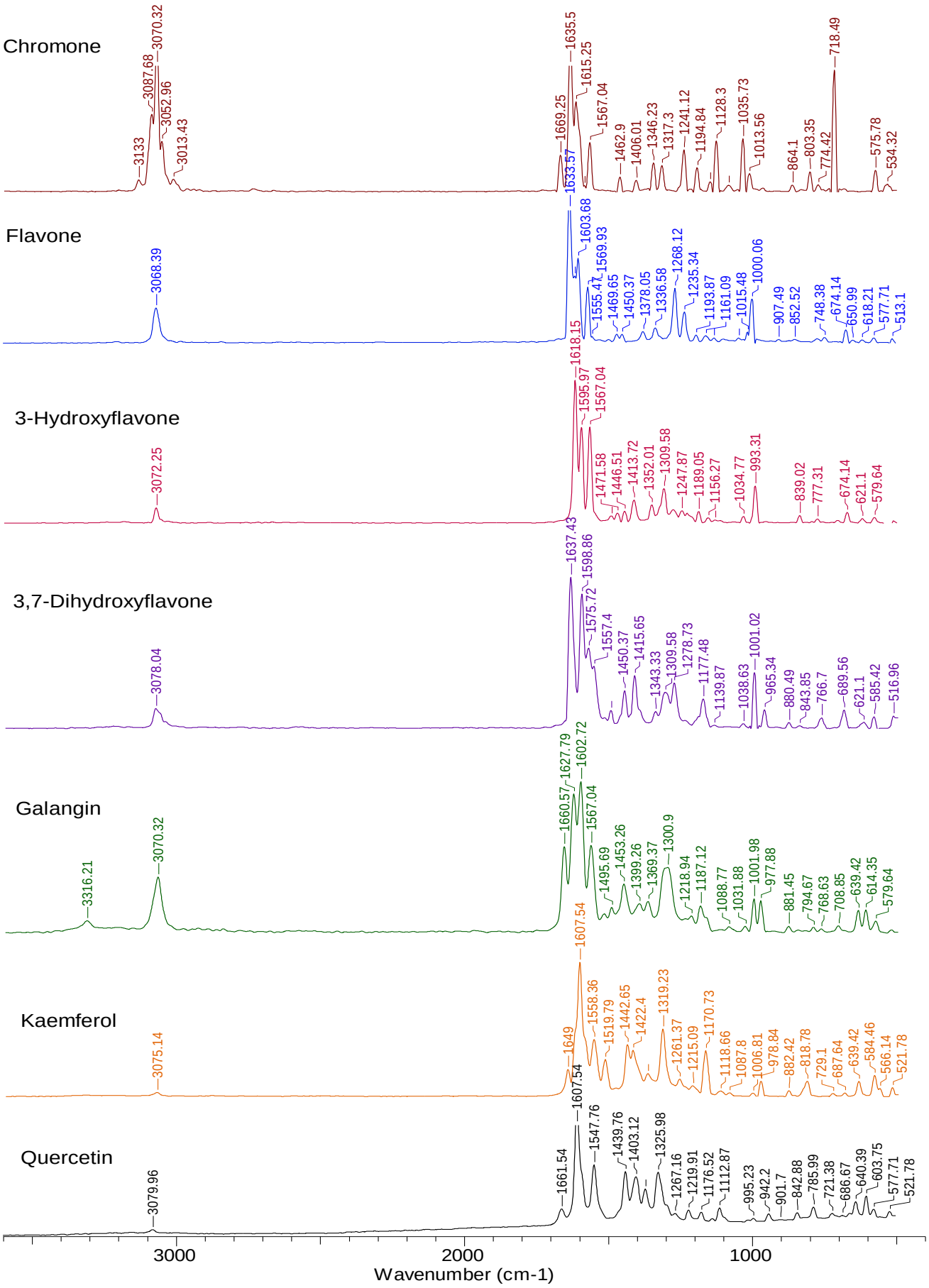


Fig S5. The Raman spectra of chromone derivatives registered in the range of 400-4000 $cm^{-1}$.

Table S1. Selected bond lengths [Å] and angles [°] of 3-dihydroxyflavone conformers (atom numbering in Fig. 4)

| | **Conformers of 3-dihydroxyflavone** | |
|---|---|---|
| **Bond lenghts [Å]** | **1** | **2** |
| C2-C1’ | 1,476 | 1,472 |
| C2-C3 | 1,363 | 1,363 |
| C3-O3 | 1,360 | 1,355 |
| O3-H3 | 0,965 | 0,975 |
| C3-C4 | 1,472 | 1,458 |
| C4=O4 | 1,222 | 1,232 |
| C4-C10 | 1,475 | 1,463 |
| C9-C10 | 1,398 | 1,400 |
| C8-C9 | 1,399 | 1,399 |
| C7-C8 | 1,384 | 1,384 |
| C6-C7 | 1,405 | 1,406 |
| C5-C6 | 1,382 | 1,382 |
| C1’-C2’ | 1,404 | 1,403 |
| C2’-C3’ | 1,490 | 1,391 |
| C3’-C4’ | 1,395 | 1,394 |
| C4’-C5’ | 1,393 | 1,394 |
| C5’-C6’ | 1,404 | 1,391 |
| C6’-C1’ | 1,404 | 1,402 |
| C6-O1 | 1,363 | 1,393 |
| O1-C5 | 1,370 | 1,369 |
| **Hydrogen bonds [Å]** | | |
| O1…H2’ | 2,591 | 2,469 |
| O1…H8 | 2,557 | 2,556 |
| O4…H5 | 2,565 | 2,633 |
| O3…H3 | - | 2,057 |
| O2-H6’ | 2,691 | 2,397 |

Table S2. The NBO atomic charges [e] calculated for 3-dihydroxyflavone conformers (atom numbering in Fig. 4)

| | | Conformers of 3-dihydroxyflavone | |
|---|---|---|---|
| **Ring** | **Atom** | **1** | **2** |
| **A** | C8 | -0,235 | -0,233 |
| | C9 | 0,341 | 0,346 |
| | C10 | -0,182 | -0,183 |
| | C5 | -0,144 | -0,144 |
| | C6 | -0,214 | -0,213 |
| | C7 | -0,171 | -0,169 |
| **Total charge** | | -0,605 | -0,596 |
| **C** | O1 | -0,489 | -0,481 |
| | C2 | 0,270 | 0,303 |
| | C3 | 0,203 | 0,200 |
| | C4 | 0,466 | 0,455 |
| | C10 | -0,182 | -0,183 |
| | C9 | 0,341 | 0,346 |
| **Total charge** | | 0,609 | 0,640 |
| **B** | 3’C | -0,199 | -0,209 |
| | 4’C | -0,189 | -0,188 |
| | 5’C | -0,201 | -0,207 |
| | 6’C | -0,198 | -0,151 |
| | C1’ | -0,099 | -0,097 |
| | C2’ | -0,157 | -0,159 |
| **Total charge** | | -1,043 | -1,011 |
| | O1 | -0,489 | -0,481 |
| | O3 | -0,652 | -0,674 |
| | O4 | -0,564 | -0,619 |

e = $1{,}602*10^{-19}$ C

Table S3. Selected bond lengths [Å] and angles [°] of 3,7-dihydroxyflavone conformers (atom numbering in Fig. 4)

| | **Conformers of 3,7-dihydroxyflavone** | | | |
|---|---|---|---|---|
| **Bond lenghts [Å]** | **1** | **2** | **3** | **4** |
| C1'-C7 | 1,475 | 1,468 | 1,468 | 1,475 |
| C2-C3 | 1,361 | 1,366 | 1,365 | 1,361 |
| C3-O3 | 1,360 | 1,353 | 1,352 | 1,359 |
| O3-H3 | 0,965 | 0,979 | 0,978 | 0,965 |
| C2-C4 | 1,474 | 1,462 | 1,463 | 1,475 |
| C4=O4 | 1,223 | 1,238 | 1,238 | 1,223 |
| C4-C10 | 1,470 | 1,451 | 1,450 | 1,470 |
| C9-C10 | 1,401 | 1,403 | 1,400 | 1,397 |
| C8-C9 | 1,395 | 1,395 | 1,398 | 1,398 |
| C7-C8 | 1,387 | 1,387 | 1,388 | 1,388 |
| C7-O7 | 1,363 | 1,362 | 1,361 | 1,363 |
| O7-H7 | 0,963 | 0,963 | 0,963 | 0,963 |
| C6-C7 | 1,409 | 1,410 | 1,410 | 1,408 |
| C5-C6 | 1,380 | 1,378 | 1,376 | 1,377 |
| C5-C10 | 1,405 | 1,406 | 1,410 | 1,408 |
| C1'-C2' | 1,404 | 1,408 | 1,408 | 1,404 |
| C2'-C3' | 1,390 | 1,389 | 1,390 | 1,390 |
| C3'-C4' | 1,395 | 1,394 | 1,394 | 1,396 |
| C4'-C5' | 1,393 | 1,393 | 1,393 | 1,393 |
| C5'-C6' | 1,393 | 1,391 | 1,391 | 1,393 |
| C6'-C1' | 1,404 | 1,408 | 1,408 | 1,404 |
| C9-O1 | 1,361 | 1,356 | 1,356 | 1,361 |
| O1-C2 | 1,373 | 1,376 | 1,377 | 1,374 |
| **Hydrogen bonds [Å]** | | | | |
| O4…H3 | - | 1,978 | 1,974 | - |
| O3…H6' | 2,678 | 2,157 | 2,157 | 2,688 |
| O1…H2' | 2,578 | 2,309 | 2,313 | 2,590 |
| H8…O7 | 2,581 | 2,576 | 2,702 | 2,704 |
| O1…H8 | 2,569 | 2,571 | 2,551 | 2,550 |
| O4…H5 | 2,572 | 2,653 | 2,658 | 2,577 |

Table S4. The NBO atomic charges [e] calculated for 3,7-dihydroxyflavone conformers (atom numbering in Fig. 4)

| | | **Conformers of 3,7-dihydroxyflavone** | | | |
|---|---|---|---|---|---|
| **Ring** | **Atom** | **1** | **2** | **3** | **4** |
| **A** | C8 | -0,291 | -0,295 | -0,322 | -0,324 |
| | C9 | 0,363 | 0,376 | 0,377 | 0,364 |
| | C10 | -0,208 | -0,208 | -0,222 | -0,208 |
| | C5 | -0,123 | -0,122 | -0,110 | -0,124 |
| | C6 | -0,285 | -0,284 | -0,261 | -0,255 |
| | C7 | 0,344 | 0,347 | 0,350 | 0,347 |
| **Total charge** | | -0,200 | -0,186 | -0,188 | -0,200 |
| **C** | O1 | -0,489 | -0,485 | -0,488 | -0,492 |
| | C2 | 0,266 | 0,311 | 0,312 | 0,268 |
| | C3 | 0,205 | 0,210 | 0,198 | 0,207 |
| | C4 | 0,467 | 0,448 | 0,461 | 0,465 |
| | C10 | -0,208 | -0,208 | -0,222 | -0,208 |
| | C9 | 0,363 | 0,376 | 0,377 | 0,364 |
| **Total charge** | | 0,604 | 0,652 | 0,638 | 0,599 |
| **B** | C3’ | -0,199 | -0,201 | -0,201 | -0,199 |
| | C4’ | -0,190 | -0,189 | -0,190 | -0,190 |
| | C5’ | -0,201 | -0,206 | -0,205 | -0,201 |
| | C6’ | -0,199 | -0,159 | -0,159 | -0,199 |
| | C1’ | -0,093 | -0,115 | -0,114 | -0,098 |
| | C2’ | -0,157 | -0,174 | -0,176 | -0,158 |
| **Total charge** | | -1,039 | -1,044 | -1,045 | -1,045 |
| | O3 | -0,652 | -0,679 | -0,679 | -0,652 |
| | O4 | -0,570 | -0,634 | -0,631 | -0,569 |
| | 7O | -0,663 | -0,660 | -0,659 | -0,662 |

$e = 1{,}602*10^{-19}$ C

Table S5. Selected bond lengths [Å] and angles [°] of galangin conformers (atom numbering in Fig. 4)

| | **Conformers of galangin** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Bond lenghts [Å]** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| C3-OH | 1,359 | 1,360 | 1,360 | 1,364 | 1,359 | 1,350 | 1,354 | 1,354 |
| H3-O3 | 0,965 | 0,965 | 0,965 | 0,966 | 0,965 | 0,982 | 0,977 | 0,977 |
| C4=O4 | 1,242 | 1,242 | 1,241 | 1,233 | 1,219 | 1,235 | 1,255 | 1,256 |
| C5-OH | 1,338 | 1,338 | 1,338 | 1,356 | 1,352 | 1,351 | 1,340 | 1,341 |
| H5-O5 | 0,993 | 0,993 | 0,991 | 0,966 | 0,964 | 0,964 | 0,985 | 0,986 |
| C7-OH | 1,361 | 1,361 | 1,361 | 1,358 | 1,362 | 1,361 | 1,360 | 1,360 |
| C1'-C2 | 1,475 | 1,475 | 1,475 | 1,475 | 1,475 | 1,467 | 1,467 | 1,467 |
| C2-C3 | 1,362 | 1,362 | 1,362 | 1,358 | 1,356 | 1,361 | 1,367 | 1,367 |
| C3-C4 | 1,465 | 1,465 | 1,466 | 1,472 | 1,482 | 1,471 | 1,453 | 1,452 |
| C4-C10 | 1,448 | 1,448 | 1,449 | 1,465 | 1,476 | 1,454 | 1,432 | 1,433 |
| C10-C5 | 1,424 | 1,424 | 1,427 | 1,426 | 1,420 | 1,423 | 1,425 | 1,422 |
| **Hydrogen bonds [Å]** | | | | | | | | |
| C4=O…HO-C5 | 1,702 | 1,702 | 1,710 | - | - | - | 1,778 | 1,771 |
| C3-OH…O=C4 | - | - | - | - | - | 1,920 | 2,006 | 2,011 |

Table S6. The NBO atomic charges [e] calculated for galangin conformers (atom numbering in Fig. 4)

| | | Conformers of galangin | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Ring** | **Atom** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| | C8 | -0,332 | -0,332 | -0,363 | -0,347 | -0,323 | -0,352 | -0,360 | -0,329 |
| | C9 | 0,380 | 0,380 | 0,381 | 0,383 | 0,381 | 0,394 | 0,393 | 0,391 |
| | C10 | -0,265 | -0,265 | -0,264 | -0,257 | -0,255 | -0,254 | -0,269 | -0,270 |
| **A** | C5 | 0,404 | 0,404 | 0,403 | 0,401 | 0,408 | 0,389 | 0,402 | 0,398 |
| | C6 | -0,352 | -0,352 | -0,352 | -0,352 | -0,384 | -0,334 | -0,321 | -0,337 |
| | C7 | 0,369 | 0,369 | 0,369 | 0,368 | 0,360 | 0,360 | 0,372 | 0,366 |
| **Total charge** | | -0,265 | -0,265 | -0,264 | -0,257 | -0,255 | -0,254 | -0,269 | -0,270 |
| **C** | O1 | -0,483 | -0,483 | -0,485 | -0,483 | -0,489 | -0,491 | -0,486 | -0,481 |
| | C2 | 0,280 | 0,280 | 0,277 | 0,289 | 0,261 | 0,290 | 0,313 | 0,327 |
| | C3 | 0,207 | 0,206 | 0,208 | 0,197 | 0,210 | 0,206 | 0,202 | 0,198 |
| | C4 | 0,463 | 0,463 | 0,463 | 0,465 | 0,463 | 0,462 | 0,456 | 0,455 |
| | C10 | -0,265 | -0,265 | -0,264 | -0,257 | -0,255 | -0,254 | -0,269 | -0,270 |
| | C9 | 0,380 | 0,380 | 0,381 | 0,383 | 0,381 | 0,394 | 0,393 | 0,391 |
| **Total charge** | | 0,582 | 0,581 | 0,580 | 0,594 | 0,571 | 0,607 | 0,609 | 0,620 |
| **B** | C3’ | -0,198 | -0,198 | -0,199 | -0,204 | -0,199 | -0,200 | -0,208 | -0,203 |
| | C4’ | -0,188 | -0,188 | -0,188 | -0,190 | -0,192 | -0,192 | -0,186 | -0,186 |
| | C5’ | -0,201 | -0,201 | -0,201 | -0,204 | -0,201 | -0,206 | -0,206 | -0,206 |
| | C6’ | -0,198 | -0,198 | -0,197 | 0,194 | -0,196 | -0,163 | -0,160 | -0,157 |
| | C1’ | -0,101 | -0,101 | -0,101 | -0,109 | -0,112 | -0,099 | -0,104 | -0,118 |
| | C2’ | -0,156 | -0,156 | -0,156 | -0,161 | -0,156 | -0,167 | -0,162 | -0,172 |
| **Total charge** | | -1,042 | -1,042 | -1,042 | -1,062 | -1,056 | -1,027 | -1,026 | -1,042 |
| | O1 | -0,483 | -0,483 | -0,485 | -0,483 | -0,489 | -0,491 | -0,486 | -0,481 |
| | O3 | -0,652 | -0,652 | -0,651 | -0,681 | -0,652 | -0,680 | -0,676 | -0,676 |
| | O4 | -0,621 | -0,621 | -0,619 | -0,635 | -0,541 | -0,607 | -0,685 | -0,687 |
| | O5 | -0,670 | -0,670 | -0,667 | -0,657 | -0,625 | -0,628 | -0,665 | -0,668 |
| | O7 | -0,660 | -0,660 | -0,658 | -0,674 | -0,660 | -0,660 | -0,655 | -0,657 |

e = $1{,}602*10^{-19}$ C

Table S7. Selected bond lengths [Å] and angles [°] of kaempherol conformers (atom numbering in Fig. 4)

| | **Conformers of kaempherol** | | | | |
|---|---|---|---|---|---|
| **Bond lenghts [Å]** | **1** | **2** | **3** | **4** | **5** |
| C4'-OH | 1,363 | 1,364 | 1,364 | 1,364 | 1,364 |
| C3-OH | 1,361 | 1,357 | 1,356 | 1,356 | 1,356 |
| C4=O | 1,243 | 1,257 | 1,256 | 1,256 | 1,256 |
| C5-OH | 1,338 | 1,341 | 1,341 | 1,340 | 1,340 |
| C7-OH | 1,361 | 1,360 | 1,360 | 1,361 | 1,361 |
| C1'-C2 | 1,472 | 1,463 | 1,463 | 1,463 | 1,463 |
| **Hydrogen bonds [Å]** | | | | | |
| C4=O…HO-C5 | 1,700 | 1,768 | 1,771 | 1,767 | 1,774 |
| C3-OH…O=C4 | - | 2,017 | 2,012 | 2,018 | 2,014 |

Table S8. The NBO atomic charges [e] calculated for kaempherol conformers (atom numbering in Fig. 4)

| | | Conformers of kaempherol | | | | |
|---|---|---|---|---|---|---|
| **Ring** | **Atom** | **1** | **2** | **3** | **4** | **5** |
| **A** | C8 | -0.223 | -0.334 | -0.349 | -0.330 | -0.361 |
| | C9 | 0.380 | 0.390 | 0.386 | 0.390 | 0.392 |
| | C10 | -0.265 | -0.262 | -0.261 | -0.269 | -0.268 |
| | C5 | 0.404 | 0.396 | 0.401 | 0.403 | 0.402 |
| | C6 | -0.353 | -0.337 | -0.321 | -0.351 | -0.321 |
| | C7 | 0.368 | 0.365 | 0.367 | 0.370 | 0.371 |
| **Total charge** | | 0.311 | 0.218 | 0.223 | 0.213 | 0.215 |
| **C** | O1 | -0.484 | -0.484 | -0.488 | -0.484 | -0.489 |
| | C2 | 0.286 | 0.330 | 0.326 | 0.333 | 0.318 |
| | C3 | 0.200 | 0.204 | 0.205 | 0.190 | 0.194 |
| | C4 | 0.464 | 0.438 | 0.439 | 0.453 | 0.454 |
| | C9 | 0.380 | 0.390 | 0.386 | 0.390 | 0.392 |
| | C10 | -0.265 | -0.262 | -0.261 | -0.269 | -0.268 |
| **Total charge** | | 0.581 | 0.616 | 0.607 | 0.613 | 0.601 |
| **B** | C1’ | -0.133 | -0.147 | -0.147 | -0.146 | -0.133 |
| | C2’ | -0.133 | -0.149 | -0.150 | -0.159 | -0.138 |
| | C3’ | -0.246 | -0.247 | -0.247 | -0.262 | -0.287 |
| | C4’ | 0.329 | 0.332 | 0.332 | 0.327 | 0.331 |
| | C5’ | -0.283 | -0.285 | -0.285 | -0.253 | -0.254 |
| | C6’ | -0.171 | -0.134 | -0.134 | -0.135 | -0.137 |
| **Total charge** | | -0.637 | -0.630 | -0.631 | -0.628 | -0.618 |
| | O1 | -0.484 | -0.484 | -0.488 | -0.484 | -0.489 |
| | O3 | -0.656 | -0.682 | -0.680 | -0.680 | -0.679 |
| | O4 | -0.626 | -0.692 | -0.690 | -0.690 | -0.688 |
| | O5 | -0.670 | -0.669 | -0.665 | -0.668 | -0.666 |
| | O7 | -0.660 | -0.658 | -0.657 | -0.658 | -0.656 |
| | O4’ | -0.663 | -0.664 | -0.664 | -0.664 | -0.664 |

$e = 1{,}602*10^{-19}$ C

Table S9. Selected bond lengths [Å] and angles [°] of quercetin conformers (atom numbering Fig. 4)

| **Bond lenghts [Å]** | **Conformers of quercetin** | | | | | |
|---|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** | **6** |
| O3-H3 | 0,977 | 0,977 | 0,977 | 0,966 | 0,982 | 0,965 |
| 03-C3 | 1,355 | 1,356 | 1,355 | 1,360 | 1,352 | 1,359 |
| C3-C4 | 1,449 | 1,450 | 1,450 | 1,463 | 1,467 | 1,481 |
| C4=O4 | 1,256 | 1,257 | 1,256 | 1,246 | 1,236 | 1,220 |
| C4-C10 | 1,434 | 1,433 | 1,434 | 1,449 | 1,456 | 1,476 |
| C10-C5 | 1,422 | 1,422 | 1,425 | 1,424 | 1,420 | 1,420 |
| C5-O5 | 1,340 | 1,341 | 1,340 | 1,338 | 1,352 | 1,352 |
| O5-H5 | 0,987 | 0,987 | 0,986 | 0,993 | 0,964 | 0,964 |
| **Hydrogen bonds [Å]** | | | | | | |
| H3…O4 | 2,019 | 2,012 | 2,014 | - | 1,929 | - |
| O4…H5 | 1,766 | 1,769 | 1,772 | 1,699 | - | - |
| H6…O5 | 2,589 | 2,590 | 2,608 | 2,582 | 2,641 | 2,629 |
| H6…O7 | 2,684 | 2,682 | 2,560 | 2,685 | 2,673 | 2,673 |

Table S10. The NBO atomic charges [e] calculated for quercetin conformers (atom numbering Fig. 4)

| | | Conformers of quercetin | | | | | |
|---|---|---|---|---|---|---|---|
| **Ring** | | **1** | **2** | **3** | **4** | **5** | **6** |
| **A** | C8 | -0,318 | -0,317 | -0,350 | -0,334 | -0,322 | -0,324 |
| | C9 | 0,385 | 0,387 | 0,385 | 0,380 | 0,393 | 0,379 |
| | C10 | -0,262 | -0,270 | -0,261 | -0,265 | -0,254 | -0,247 |
| | C5 | 0,403 | 0,403 | 0,402 | 0,404 | 0,390 | 0,388 |
| | C6 | -0,351 | -0,351 | -0,321 | -0,350 | -0,362 | -0,362 |
| | C7 | 0,366 | 0,366 | 0,366 | 0,368 | 0,357 | 0,354 |
| **Total charge** | | 0,223 | 0,218 | 0,221 | 0,203 | 0,202 | 0,188 |
| **C** | O1 | -0,491 | -0,487 | -0,494 | -0,490 | -0,497 | -0,497 |
| | C2 | 0,314 | 0,320 | 0,311 | 0,283 | 0,297 | 0,254 |
| | C3 | 0,208 | 0,195 | 0,210 | 0,204 | 0,198 | 0,214 |
| | C4 | 0,437 | 0,453 | 0,438 | 0,463 | 0,460 | 0,462 |
| | C9 | 0,385 | 0,387 | 0,385 | 0,380 | 0,393 | 0,379 |
| | C10 | -0,262 | -0,270 | -0,261 | -0,265 | -0,254 | -0,247 |
| **Total charge** | | 0,853 | 0,868 | 0,850 | 0,840 | 0,851 | 0,812 |
| **B** | C1’ | -0,114 | -0,109 | -0,113 | -0,111 | -0,109 | -0,107 |
| | C2’ | -0,229 | -0,201 | -0,231 | -0,225 | -0,234 | -0,227 |
| | C3’ | 0,248 | 0,274 | 0,248 | 0,256 | 0,248 | 0,255 |
| | C4’ | 0,295 | 0,265 | 0,294 | 0,291 | 0,289 | 0,287 |
| | C5’ | -0,243 | -0,271 | -0,242 | -0,238 | -0,242 | -0,238 |
| | C6’ | -0,160 | -0,167 | -0,161 | -0,202 | -0,164 | -0,203 |
| **Total charge** | | -0,203 | -0,209 | -0,205 | -0,229 | -0,212 | -0,233 |
| | O1 | -0,491 | -0,487 | -0,494 | -0,490 | -0,497 | -0,497 |
| | O3 | -0,679 | -0,679 | -0,679 | -0,653 | -0,682 | -0,652 |
| | O4 | -0,688 | -0,691 | -0,686 | -0,622 | -0,610 | -0,545 |
| | O5 | -0,668 | -0,669 | -0,665 | -0,670 | -0,627 | -0,624 |
| | O7 | -0,659 | -0,658 | -0,657 | -0,661 | -0,659 | -0,661 |
| | O3’ | -0,706 | -0,671 | -0,706 | -0,701 | -0,707 | -0,703 |
| | O4’ | -0,663 | -0,699 | -0,663 | -0,662 | -0,666 | -0,665 |

$e = 1{,}602*10^{-19}$ C

**Table S11. The cytotoxic activity of studied compounds in relation to different cancer cell lines**

| Compound | Parameters | Cell lines | Ref. |
|---|---|---|---|
| Chromone | - | - | - |
| Flavone | IC50 > 50.000 nM | A549 | [1] |
| 3-Hydroxyflavone | LC50=40.4 μM | TIG-1 | [2] |
| | LC50= 64.0 μM | HUVEC | |
| | IC50= 20 ± 2 μM | B16 melanoma cells/ Lewis lung cells | [3] |
| 3,7-Dihydroxyflavone | GI50=17.4 ± 2.0μM | MCF-7 | [4] |
| | GI50=15.4 ± 1.2 μM | NCI-H460 | |
| | GI50=23.0 ± 1.0 μM | A375-C5 | |
| Galangin | IC50= 48 ± 4 μM | B16 melanoma cells/ Lewis lung cells | [3] |
| | IC50=275.48 μM | V79 | [5] |
| | IC50=145.0 μmol/L[a] | B16F10 | [6] |
| Kaempferol | LC50=221 μM | TIG-1 | [2] |
| | LC50=167 μM | HUVEC | |
| | IC50= 51 ± 5 μM | B16 melanoma cells/ Lewis lung cells | [3] |
| | IC50= 31 ± 8 μM | EAhy 926 endothelial cells | |
| | IC50=30.92 ±0.05 μM | HepG2 | [7] |
| | IC50=88.02 ±001μM | CT26 | |
| | IC50=70.62 ±0.05 μM | B16F1 | |
| Quercetin | LC50=4.45mM | RAW264.7 | [8] |
| | IC50=118.1±5.55 μM[a] | CT-26 | [9] |
| | IC50=110.7±4.30 μM[a] | LNCaP | |
| | IC50>120 μM μM[a] | PC3 | |
| | IC50=99.3±6.11 μM[a] | PC12 | |
| | IC50=105.4±5.2 μM[a] | MCF-7 | |
| | IC50=64.9±3.5 μM[a] | MOLT-4 | |
| | IC50=54.3±4.5 μM[a] | U266B1 | |
| | IC50=66.5±3.57 μM[a] | Raji | |
| | IC50=>120 μM[a] | CHO | |
| | IC50=50 μM | PC3 | [10] |
| | IC50=50 μM | LNCaP | |
| | IC50= 35.5±1.1 μM | HeLa | [11] |
| | IC50=20.9±0.9 μM | NIH-3T3 | |
| | LC50= 303 μM | TIG-1 | [2] |
| | LC50= 61.0 μM | HUVE | |
| | IC50= 26 ± 4 μM | B16 melanoma cells/ Lewis lung cells | [3] |
| | IC50= 36 ± 2 μM | EAhy 926 endothelial cells | |

[a]for 24h


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