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내 용	<p>퀴놀론 모핵의 합성은 기존에 알려진 합성 방법인 Gould-Jacobs 방법과 Bayer 방법에 의해서 Intermediate로 사용된 7-chloro-1-ethyl-6-fluoro-1,4-dihydro-4-oxoquinoline-3-carboxylic acid와 1-cyclopropyl-7-chloro-6-Fluoro-1,4-dihydro-4-oxoquinoline-3-carboxylic acid를 합성 하였다. Heteroaromatic tin compound는 furan, thiophene, 3-bromopyridine, 2-fluoropyridine에 n-BuLi을 사용하여 metallation한후 electrophile로 tributyltin chloride를 사용하여 2-tributylstannofuran, 2-tributylstannothiophene, 3-tributylstannopyridine, 2-fluoro-2-tributylstannopyridine을 합성할 수 있었다. 이상의 Intermediate와 tin compounds를 p-alladium촉매하에서 반응시켜 1-ethyl-7-(2-furanyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline-carboxylic acid (compound 3), 1-ethyl-7-(2-thiophenyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 5), 1-ethyl-7-(3-pyridinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 7), 1-ethyl-7-(2-fluoro-3-pyridinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 9), 1-cyclopropyl-7-(2-furanyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 4), 1-cyclopropyl-7-(2-thiophenyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 6), 1-cyclopropyl-7-(3-pyridinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 8), 1-cyclopropyl-7-(2-fluoro-3-pyridinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinoline carboxylic acid (compound 10)를 합성하였다.</p>