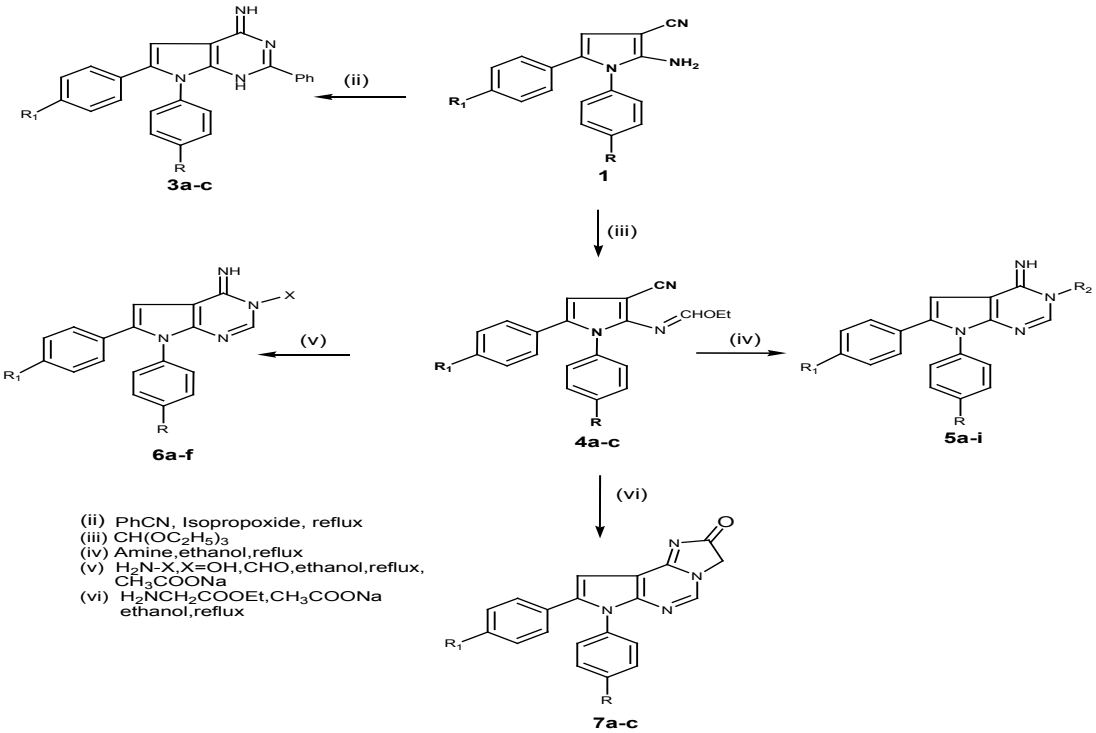
Khaled M H Hilmy, Med chem 2016, 6:8(Suppl)
http://dx.doi.org/10.4172/2161-0444.C1.025

Synthesis and biological evaluation of novel pyrrolo[2,3-d]pyrimidine derivatives as breast anti cancer

Khaled M H Hilmy
Monufyia University, Egypt

Compounds 2a-c obtained through reaction of 1a-c with benzonitrile. On the other hand, compounds 3a-c, 4a-i and 5a-f were synthesized. Also, some new 7,8-diaryl-3H-imidazo[1,2-*c*]pyrrolo[3,2-*e*]pyrimidin-2(*7H*)-ones 6a-c were obtained through reaction of compounds 3a-c with ethyl glycinate. The synthesized compounds 2a-c, 4a-i, 5a-f and 6a-c were tested for *in-vitro* anti-tumor activity against the breast cancer (MCF7). Some of the tested compounds exhibited cell growth inhibitory activity. Also, compounds 6a, 6b, and 6f (with IC_{50} values 2.13, 2.28, and 2.28µg/mL) respectively are more active than Doxorubicin (with IC_{50} value 2.97 µg/mL).



R= H, 4-CH_3, 4-Cl & R_1= H, 4-Cl, 4-CH_3 & R_2= -CH_2CH_3,-$(CH_2)_2CH_3$,-$(CH_2)_6CH_3$
Scheme1. Synthesis of pyrrolo[2,3-*d*]pyrimidine derivatives

Biography

Khalid M H Hilmy has completed his PhD from Azhar University Cairo, Egypt and Post-doctoral studies from Odense University Chemistry Department, Odense, Denmark. He has published more than 40 papers in reputed journals.

hilmykhaled@yahoo.com