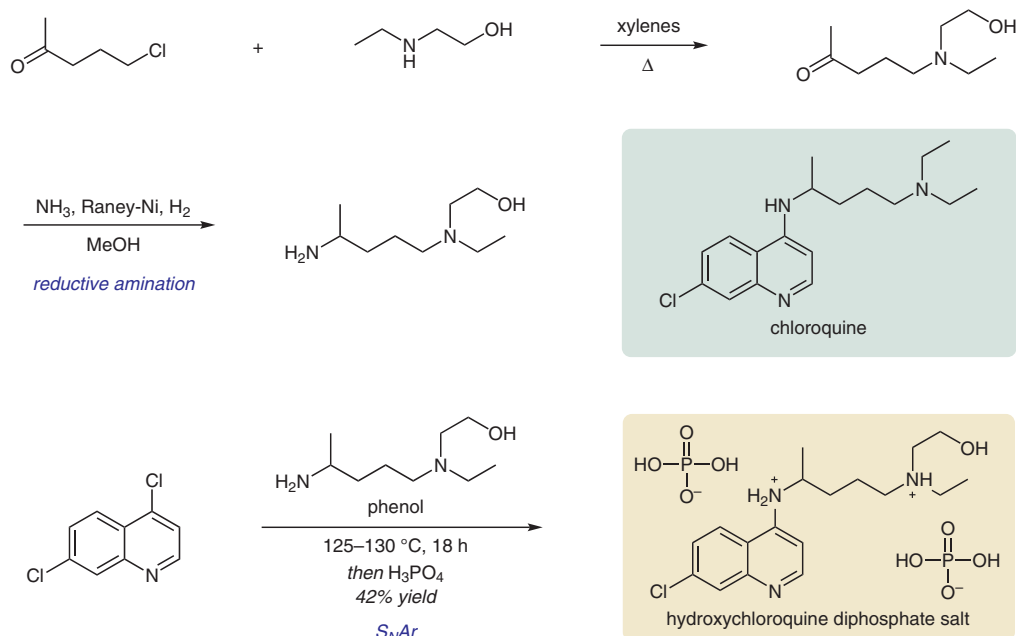


A. R. SURREY, H. F. HAMMER (STERLING-WINTHROP RESEARCH INSTITUTE, RENSSELAER, USA)  
The Preparation of 7-Chloro-4-(4-(*N*-ethyl-*N*- $\beta$ -hydroxyethylamino)-1-methylbutylamino)-quinoline and Related Compounds  
*J. Am. Chem. Soc.* **1950**, *72*, 1814–1815.

## Hydroxychloroquine – An Antimalarial to Fight COVID-19?



**Significance:** Hydroxychloroquine (HCQ) and chloroquine (CQ) have long been used as treatments for malaria and autoimmune diseases. Surrey and Hammer detailed the synthesis of HCQ, a potent antimalarial in 1950. In an effort to identify available drugs to fight SARS-CoV-2 it has been reported that CQ and HCQ in combination with azithromycin might have the potential to combat COVID-19.

**Comment:** HCQ is synthesized by reacting a di-amine with 4,7-dichloroquinoline in an  $\text{S}_{\text{N}}\text{Ar}$  reaction. The di-amine is synthesized by condensing 5-chloro-2-pentanone with *N*-ethylethanolamine, followed by reductive amination with ammonia. HCQ showed good antimalarial activity and recently has been found to inhibit SARS-CoV-2 infection *in vitro* (*Cell Discovery* **2020**, *6*, 16).