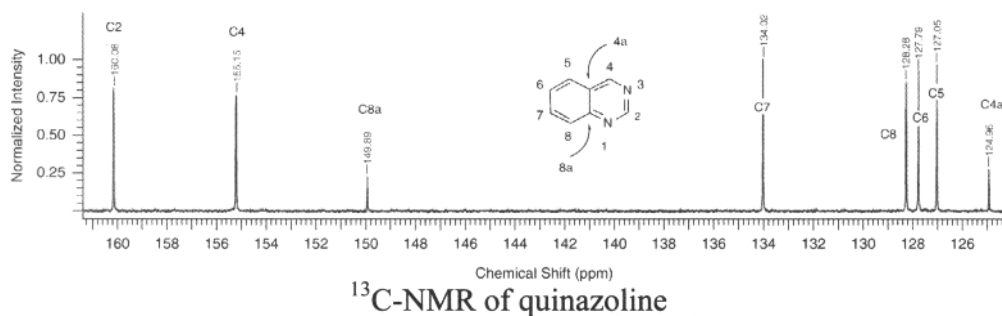


respectively. This is due to the deshielding effects of the heteroatoms in the diazine ring. Of the remaining carbon signals, C8a (149.9 ppm) is located farthest downfield due to proximity of N1 followed by C7, C8, C6, C5, and C4a.



Quinazolines and quinazolinones are found in a diverse array of synthetic and naturally occurring compounds, and they have been shown to have an equally diverse number of properties including soporitic, sedative, tranquilizing, analgesic, anti-convulsant, anti-tussive, myorelaxant, anti-rheumatic, anti-hypotensive, anti-allergic, bronchodilating, anti-diabetic, anti-cancer and antimicrobial.<sup>1</sup> Examples of compounds approved for commercial sales are shown below. The quinazoline prazosin (Minipress) is used to treat high blood pressure, and the quinazolines gefitinib (Iressa), erlotinib (Tarceva), lapatanib (Tyverb), vandetanib (Zactma) and trimetrexate are used in the treatment of various cancers. As of 2010, these compounds combined have generated billions of dollars in sales worldwide. 4-Quinazolinones such as nolatrexed and raltitrexed are also used to treat cancer, and more recently, nolatrexate, has been shown to be an effective anti-parasitic agent. Other 4-quinazolinones, such as albaconazole, are used as anti-fungals, while afloqualone (Arofuto) has been used as a muscle relaxant. Finally, the 2-quinazolinone proquazone (Biarison) has been used as an effective nonsteroidal anti-inflammatory drug (NSAID).

