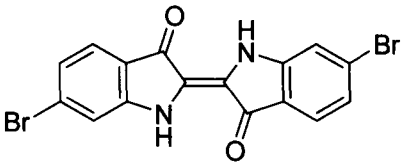
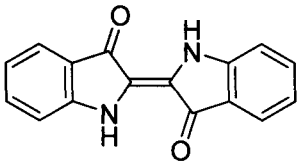
extracted from the indigo plant. In 1882, Baeyer developed the Baeyer–Drewson indigo synthesis using inexpensive 2-nitrobenzaldehyde and acetone in the presence of sodium hydroxide. Baeyer's revolutionary synthesis made indigo an easily accessed dye that all commoners could afford. Indigo, in no small way, contributed to the rise of the German chemical industry although William Perkin in England was the first to synthesize Mauve, a purple dye from the coal tar ingredients aniline and toluidine.[1]

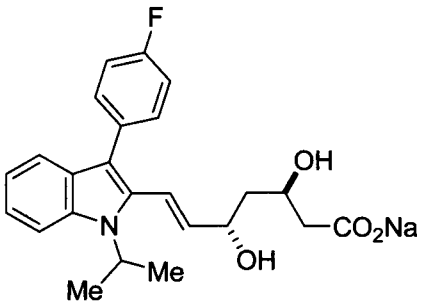



Tyrian purple




indigo

The central importance of indole derivatives such as serotonin and tryptophan in living organisms has inspired medicinal chemists to design and synthesize thousands of indole-containing pharmaceuticals. Chief among them is fluvastatin sodium (Lescol), an HMG-CoA reductase inhibitor. Although fluvastatin is very potent *in vitro*, its *in vivo* potency is lower than many other statins. The combination of an electron-rich indole core and an allylic alcohol might contribute to its instability in peptic acid. Rosuvastatin calcium (Crestor), with its allylic alcohol attached to an electron-deficient heterocycle pyrimidine, is much more potent *in vivo* than fluvastatin. With peak sales of $734 million in 2003, fluvastatin was not among the top-selling statins.[2]




fluvastatin sodium (Lescol)

In addition, sumatriptan succinate (Imitrex), a serotonin receptor (5-$HT_{1B1D}$) agonist used to treat migraines had annual sales in the United States of $970 million in 2008. Following the highly effective and commercially successful sumatriptan, three "me-too" indole-containing anti-migraine drugs