Flavanone (4), flavone (4), and tangeretin (4) differentially affected the activities of cytochrome P540 1A (3) and 2B (3) isozymes in rat (7) liver (1). Flavone and, to a lesser extent, tangeretin, increased activities of ethoxyresorufin O-deethylase (3), methoxyresorufin O-demethylase (3), and pentoxyresorufin O-dealkylase (PROD) (3), whereas flavanone mainly enhanced PROD activity. Immunoblot analysis (10) indicated that flavone and tangeretin increased cytochrome P450 1A1, 1A2, and 2B1 (3), whereas flavanone only enhanced the cytochrome P450 2B isozymes. Northern blot study (10) showed that flavone and tangeretin increased the level of the cytochrome P450 1A2 mRNAs (1). These results suggest that the induction of P450 1A2 by flavone and tangeretin might involve a transcriptional and/or post-transcriptional mechanism.