ipriflavone/Rutin-G via spray drying, indicating a 4.3-fold increase in the area under the plasma concentration-time curve compared with that of untreated ipriflavone. These phenomena could be applicable to food ingredients involving hydrophobic flavones for producing healthy food with a high quality.

Gajdziok, J. and B. Vranikova (2015). "Enhancing of drug bioavailability using liquisolid system formulation." *Ceska Slov Farm* 64(3):55–66.

One of the modern technologies of how to ensure sufficient bioavailability of drugs with limited water solubility is represented by the preparation of liquisolid systems. The functional principle of these formulations is the sorption of a drug in a liquid phase to a porous carrier (aluminometasilicates, microcrystalline cellulose, etc.). After addition of further excipients, in particular a coating material (colloidal silica), a powder is formed with the properties suitable for conversion to conventional solid unit dosage forms for oral administration (tablets, capsules). The drug is subsequently administered to the GIT already in a dissolved state, and moreover, the high surface area of the excipients and their surface hydrophilization by the solvent used, facilitates its contact with and release to the dissolution medium and GI fluids. This technology, due to its ease of preparation, represents an interesting alternative to the currently used methods of bioavailability improvement. The article follows up, by describing the specific aspects influencing the preparation of liquid systems, on the already published papers about the bioavailability of drugs and the possibilities of its technological improvement. Key words: liquisolid systems bioavailability porous carrier coating material preformulation studies.

Gualdesi, M. S. et al. (2014). "Preformulation studies of novel 5'-O-carbonates of lamivudine with biological activity: solubility and stability assays." *Drug Dev Ind Pharm* 40(9):1246–1252.

As a part of preformulation studies, the aim of this work was to examine the solubility and stability of a series of 5′-*O*-carbonates of lamivudine with proven antihuman immunodeficiency virus activity. Solubility studies were carried out using pure solvents (water, ethanol and polyethylene glycol 400 [PEG 400]), as well as cosolvents in binary mixture systems (water-ethanol and water-PEG 400). These ionizable compounds showed that their aqueous solubility is decreasing as the carbon length of the substituent moiety increases but being enhanced as the pH was reduced from 7.4 to 1.2. Thus, 3TC-Metha an active compound of the series, with an intrinsic solubility at 25°C of 17 mg/mL, was about 70 times more soluble than 3TC-Octa (0.24 mg/mL), and at pHs of 1.2, 5.8 and 7.4 had intrinsic solubilities of 36.48, 19.20 and 15.40 mg/mL, respectively. In addition, the solubility was enhanced significantly by using ethanol and PEG 400 as cosolvents. A stability study was conducted in buffer solutions at pH 1.2, 5.8, 7.4 and 13.0 and in human plasma at 37°C. Stability-indicating high-performance liquid chromatography procedure was found to be selective, sensitive and accurate for these compounds and good recovery, linearity and precision were also observed.

Ibrahim, K. A. et al. (2017). "Formulation, evaluation and release rate characteristics of medicated jelly of vitamin C." *Pak J Pharm Sci* 30(2(Suppl.)):579–583.

Medicated jelly formulations are patient friendly dosage form for pediatric, geriatric and dysphagic patients. These formulations offer rapid dissolution and absorption