**Problem 1: Calculate the pH of a buffer composed of 0.1M acetic acid (CH3COOH) and 0.6M acetate (CH3COO-) knowing that the acid dissociation constant Ka is 1.8 x 10-5.**

**Problem** 2: Calculate the pH of a buffer solution prepared by dissolving 363 mg of Tris in 10 mL of 0.2M HCl and diluting to 100 mL with water. [Tris: mw 121 g/mol and pKa = 8.08 for the conjugate acid]

Problem 3: Aspirin (acetylsalicylic acid) has a pKa of 3.5. Calculate the ratio of ionized/unionized in the intestine where pH is 6.

Problem 4: How many moles of sodium acetate and acetic acid must you use to prepare 1.00 L of a 0.100 mol/L buffer with pH 5.00.

[*https://pharmaxchange.info/2014/07/applications-and-example-problems-using-henderson%E2%80%93hasselbalch-equation/*](https://pharmaxchange.info/2014/07/applications-and-example-problems-using-henderson%E2%80%93hasselbalch-equation/)

[*https://socratic.org/questions/what-is-an-example-of-a-ph-buffer-calculation-problem*](https://socratic.org/questions/what-is-an-example-of-a-ph-buffer-calculation-problem)