Cover Illustration: Diagram of the Portal System of Felis domestica (Domestic Cat). The mesenteries and a portion of the intestine are removed to reveal various veins which drain major abdominal organs, such as the stomach, pancreas, spleen and intestines. Ultimately, these veins lead to the portal vein which carries deoxygenated blood directly to the liver, where it mixes with oxygenated blood from the hepatic artery. Blood percolates through a labyrinth of capillaries and sinusoids of the liver lobules passing phagocytic Kupffer cells and hepatocytes. Here it is processed and modified before returning to the heart via the hepatic veins and inferior (posterior) vena cava. Thus, life sustaining nutrients as well as drugs or toxic substances, which are absorbed by the digestive system, pass through the liver before circulating throughout the body.