

## David P. Witte, MD

Professor, Director of Pathology, Director of Integrative Morphology Core  
Department of Pediatrics; Division of Pathology

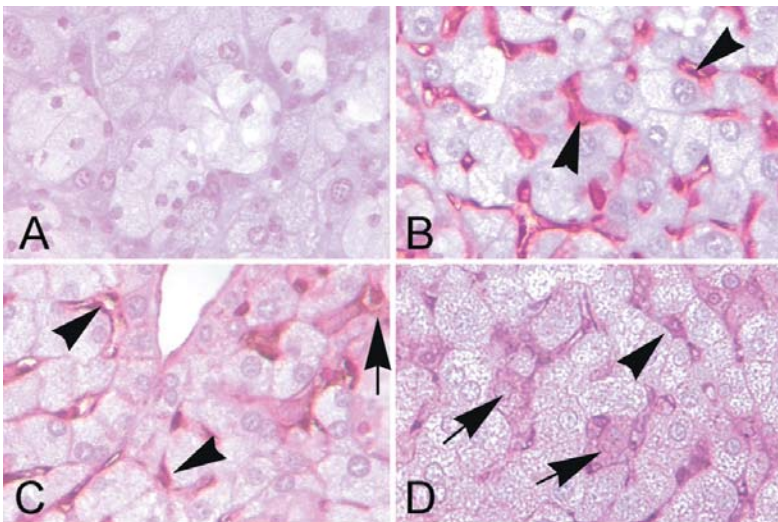
### Description of Research:

In addition to his role as Director of the Integrative Morphology Core, Dr. Witte is a co-investigator in several projects studying gene regulation of development and characterizing animal models of liver and intestinal disease. Dr. Witte's background includes more than fifteen years of combined anatomic pathology training and professional pathology experience utilizing morphologic based methodology including anatomic dissection and macroscopic observation, light and electron microscopy, specialized histochemical staining techniques, immunohistochemistry, and characterizing gene expression patterns by in situ hybridization. Dr. Witte has been involved with the detailed characterization of the expression pattern of more than 25 developmentally regulated genes in the mouse embryo including homeobox containing transcription factor genes and other critical developmentally regulated genes necessary for implantation or normal organ morphogenesis and the detailed mapping of gene regulatory elements.

### Collaborations:

Dr. Witte collaborates with many of the investigators using the **Integrative Morphology Core** to advance the knowledge of the underlining mechanisms of digestive diseases.

### Representative Figure:



Anti-hLAL immunohistochemical staining of *lal*<sup>-/-</sup>; *MMR*<sup>+/+</sup> (A–C) and *lal*<sup>-/-</sup>; *MMR*<sup>-/-</sup> (D) mouse livers. *lal*<sup>-/-</sup>; *MMR*<sup>+/+</sup> mice were given IP injections of PBS (A), phLAL (B), and chLAL (C), and *lal*<sup>-/-</sup>; *MMR*<sup>-/-</sup> mice were given IP injections of phLAL (D). The amount of hLAL given to each mouse was 79 µg. Mice were killed 4 h after injection. Liver and spleen were processed for immunohistochemical staining by use of anti-hLAL antibody. Positive signals were in Kupffer cells of the livers (B–D, arrowheads) and in hepatocytes (C and D, arrows). Original magnification, X 400. Fig. 6 from *Am J Hum Genet*, 2005; 77:1061-1074.