Pathology Study Comparing LRRK2+/− and LRRK2−/− Mice at Multiple Ages

**Study Overview:** Pathology was assessed in LRRK2+/− and LRRK2−/− mice at multiple ages (Fig. 3A). In addition to histopathological analysis of lung, liver, and kidney, additional readouts, including serum chemistry, urine analysis, and histochemistry, were assessed (Figure 3B).

**Readouts:**
- **Serum Chemistry:** Levels of total protein, albumin, urea, creatinine, glucose, ALT, AST, ALP, and GGT were measured.
- **Urine Analysis:** Protein, glucose, and ketones were assessed.
- **Histochemistry:** Organ-specific staining for lamellar bodies, type II pneumocytes, macrophages, and other markers of pulmonary pathology.

**Pathological Observations:**
- Progressive kidney pathology (nephropathy) was associated with loss of LRRK2 activity.

**Summary:** LRRK2−/− mice exhibited progressive kidney pathology (nephropathy) as assessed by alterations in urinary tract, kidney morphology, and histological staining. These findings were consistent across multiple ages and were not observed in LRRK2+/− mice.

**References:**

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