

Chair of Infection Pathogenesis (IPAT)

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IPAT aims to unravel how immune systems develop and interact with microbes and parasites to shape health and disease outcomes, using the pig as a translational model. We study the mechanisms by which mucosal and systemic immune responses are induced, regulated, or subverted during parasitic infection using the pig as a host. A major focus lies on helminth infections, where we dissect parasite-driven immunomodulation and the balance between protective and regulatory immunity. These insights inform vaccine design, diagnostics, and novel therapeutic strategies. In parallel, we investigate the biology of parasitic worms—including developmental processes, survival strategies, and host adaptation—to identify mechanisms relevant for infection dynamics and prevention. Complementary work explores infection-related interventions in pigs and piglets—such as CAR-T cells, phage therapy, or microbiota transfer.

