

IUPUI Imaging Research Initiative: Research Center for Quantitative Renal Imaging

Mission: The overall mission of the *Research Center for Quantitative Renal Imaging* is to provide a focused research environment and resource for the development, implementation, and dissemination of innovative, quantitative imaging methods designed to assess the status of and mechanisms associated with acute and chronic kidney disease and evaluate efficacy of therapeutic interventions.

Currently, there is no comprehensive research center within the United States that is solely dedicated to the development of quantitative imaging methods specifically designed to diagnose kidney disease, monitor its progression, and evaluate efficacy of therapeutic interventions. The *Research Center for Quantitative Renal Imaging* represents a very unique resource within the nephrology and medical imaging communities that is distinctly associated with IUPUI and the IU School of Medicine.

Nature of the Center: Our plan is to build upon the individually successful research programs and infrastructure that currently exist within our institution and weave these individual components into a new, unified, and unique *Research Center* focused on developing novel and innovative methods for quantitative imaging of the kidney.

Goals: The *Research Center for Quantitative Renal Imaging* will achieve its mission by:

- *Identifying, developing, and implementing innovative imaging methods that provide quantitative imaging biomarkers for assessing and inter-relating renal structure, function, hemodynamics and underlying tissue microenvironmental factors contributing to kidney disease.*
- *Establishing an environment that facilitates and encourages interdisciplinary collaborations among investigators, helps advance the research careers of junior faculty, and offers research support to investigators focused on developing and utilizing innovative quantitative imaging methods in support of kidney disease research.*
- *Providing a resource to inform the greater research and healthcare communities of advances in quantitative renal imaging and its potential for enhanced patient management and care.*
- *Offering an imaging research resource to pharmaceutical companies and medical device manufacturers engaged in product development associated with the diagnosis and treatment of kidney disease.*