Our inaugural issue

Earlier this month, JCI Insight opened to new submissions, which can be uploaded at our submission site. Manuscripts that meet our editorial bar for quality and that are of potential interest to our readership are sent for external peer review by our professional editors. We are indebted to our esteemed board of consulting editors, who have agreed to provide advice on manuscripts in their area of expertise. We have also implemented a transfer process for manuscripts previously considered at the JCI that we believe to be better suited for JCI Insight. We began inviting selected papers through this route at the end of 2015. For those manuscripts that have been previously reviewed at the JCI, the submission and all applicable reviewer comments are transferred to JCI Insight. This process allows our editors to come to a rapid decision based on the original evaluation, and allows authors to proceed with full knowledge of the critiques that have been raised. We also feel that this alleviates the burden placed on the excellent community of reviewers on whom we rely.

In this first batch of articles, we are extremely proud to publish an outstanding collection of preclinical and clinical research from around the globe. Jordan Pober’s group at Yale University explored the basis for acute vascular rejection of transplanted organs. Using a humanized mouse model, the researchers showed that CD4+ T cells are activated by class II MHC on endothelial cells and promote CD8+ cytotoxic T lymphocyte development. Further, eliminating class II MHC expression on endothelial cells using CRISPR/Cas9 prevented CD8+ T effector memory cell responses.

A team led by Bernd Arnold and Hermann-Josef Gröne at the German Cancer Research Center in Heidelberg has provided new evidence that the Wnt pathway modulator Dickkopf-3 (DKK3) contributes to fibrosis in the kidney. DKK3 expression was elevated in tubular epithelia upon stress and was associated with profibrotic T cell responses. Moreover, genetic loss of Dkk3 in mice or antibody blockade of DKK3 mitigated interstitial fibrosis and improved kidney function.

Rui-Ping Xiao and Yan Zhang of Peking University in Beijing and their colleagues uncovered an interaction between the β1-adrenergic receptor (β1AR) and the danger signal pattern recognition receptor RAGE (receptor for advanced glycation end-products), which was previously shown to be activated in the heart by ischemic injury. The current study demonstrated that β1AR stimulation induces cardiomyocyte cell death in a RAGE-dependent manner, and reciprocally, RAGE-induced cardiomyocyte cell death requires β1AR signaling. Further blocking RAGE signaling mitigated myocardial cell death in mice following treatment with the β-adrenergic agonist isoproterenol.

Last, we feature a Clinical Medicine article by Philip Halloran and colleagues at the University of Alberta in Edmonton, who sought to understand whether fibrosis in human kidney transplants is intrinsically progressive or is a defined wound repair response to kidney injury. Transcriptome analysis of 681 human kidney transplant biopsies revealed that mild fibrosis in the months soon after transplant correlated with acute kidney injury transcripts but did not associate with progression to failure. In contrast, fibrosis in later biopsies presented different signatures, with greater fibrillar collagen levels and immune infiltration, likely reflecting ongoing injury.

These studies exemplify the types of exciting clinically relevant research that JCI Insight will publish.
We are delighted to provide this new venue for biomedical researchers and ASCI members to publish high-quality, well-executed human and preclinical model-based research, and we encourage you to consider JCI Insight for your work within this scope. We look forward to serving this community and to the many more insightful research articles to come. We welcome your comments and inquiries at editors@insight.jci.org.

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*The Journal of Clinical Investigation and JCI Insight*