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121 Research Articles

6125 Citations

Research Interests

Mechanisms of Disease
Sepsis

Acute Respiratory Distress Syndrome
Next-Gen Sequencing Technologies

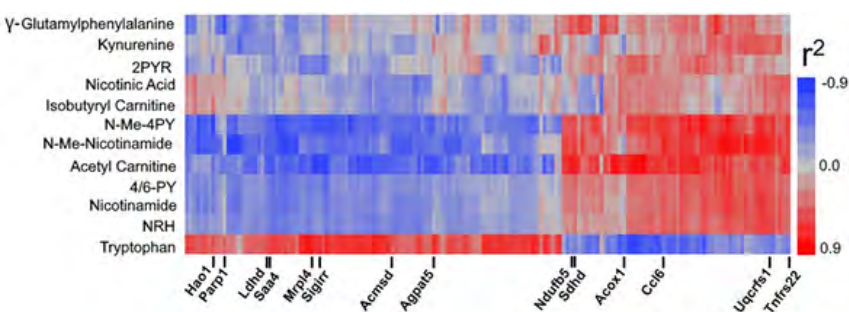
Metabolomics
Mitochondrial Dysfunction

Experimental Capabilities

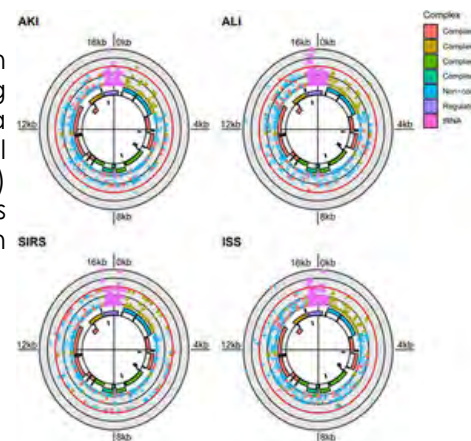
Targeted/Global Metabolomics Analysis
Next Generation Sequencing technologies

Spatial Transcriptomics Analysis
Differential isoform Usage Analysis
of Transcriptomic Datasets

Mitochondrial DNA Damage-
Associated Molecular
Patterns



Solar Manhattan plots depicting plasma mitochondrial DNA (mtDNA) variants associated with severe outcomes.



Cross correlation analysis between hepatic transcriptomic gene expression and serum metabolites demonstrates nicotinamide ribosides impact on known and novel bioenergetic enzymatic pathways in a murine model of pneumonia. 2PYR, 1-ribosylpyridin-2-one-3-carboxamide; N-Me-4PY, N-methyl-4-pyridone-3-carboxamide; 4/6-pyridone-3-carboxamide; Dihyronicotinamide Riboside, NRH.

2021 Scientific Reports

“A Metabolomic Endotype of Bioenergetic Dysfunction Predicts Mortality in Critically Ill Patients with Acute Respiratory Failure”

2022 European Respiratory Journal

“Does Acute and Persistent Metabolic Dysregulation in Covid-19 Point to Novel Biomarkers and Future Therapeutic Strategies?”

2020 American Journal of Respiratory Cell and Molecular Biology

“Metabolomics to Predict Antiviral Drug Efficacy in Covid-19”

2022 Clinical and Translational Medicine

“Novel Attributes of Cell-Free Plasma Mitochondrial DNA in Traumatic Injury”



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