

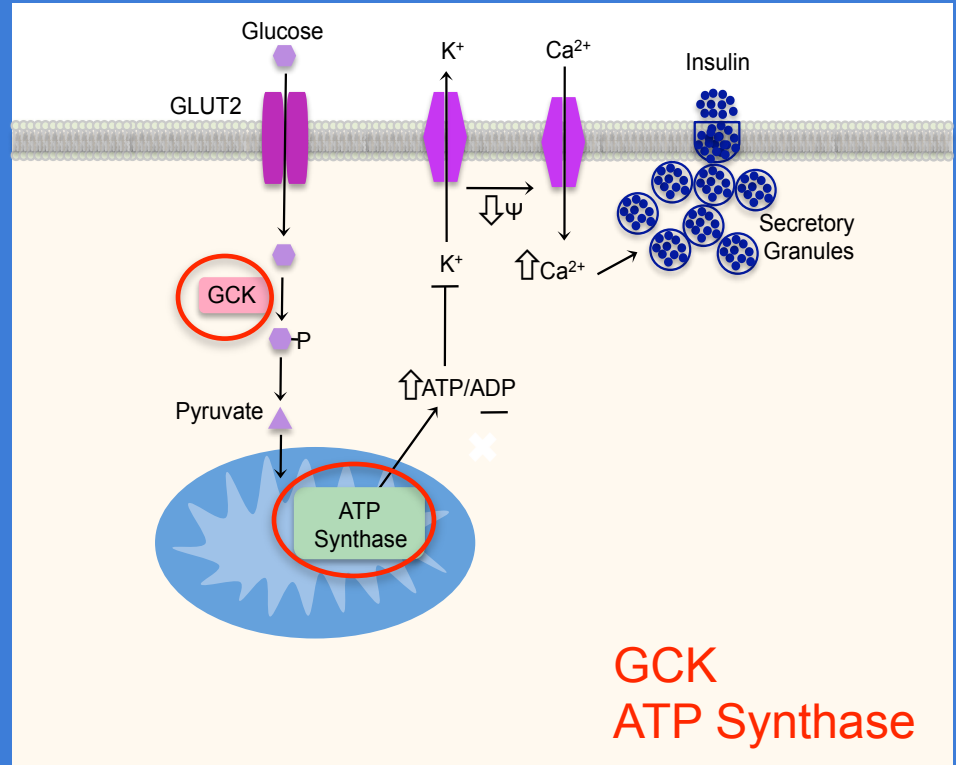
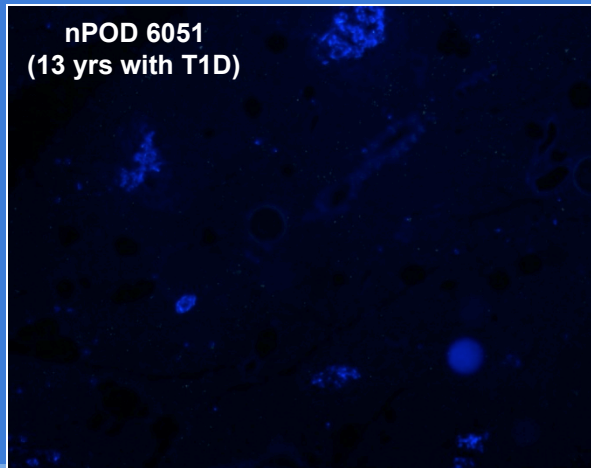
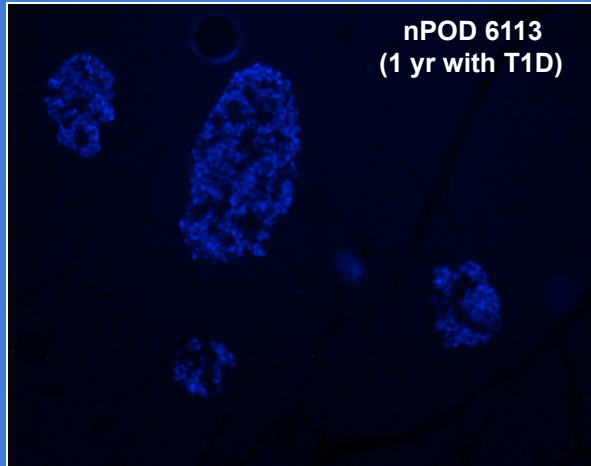
# Downregulation of Glucokinase and Mitochondrial ATP Synthase in Islets from Type 1 Organ Donors

Lightfoot, Y.L., Grieshaber, S.S., Wilhem, J., Zhang, L., Campbell-Thompson, M., Schatz, D., Atkinson, M.A., Mathews, C. E.

Funding provided by the JDRF nPOD



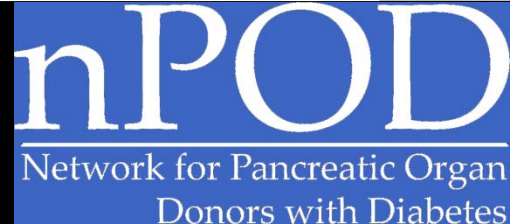
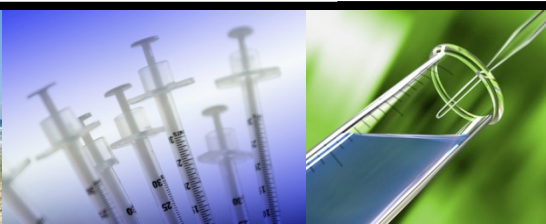
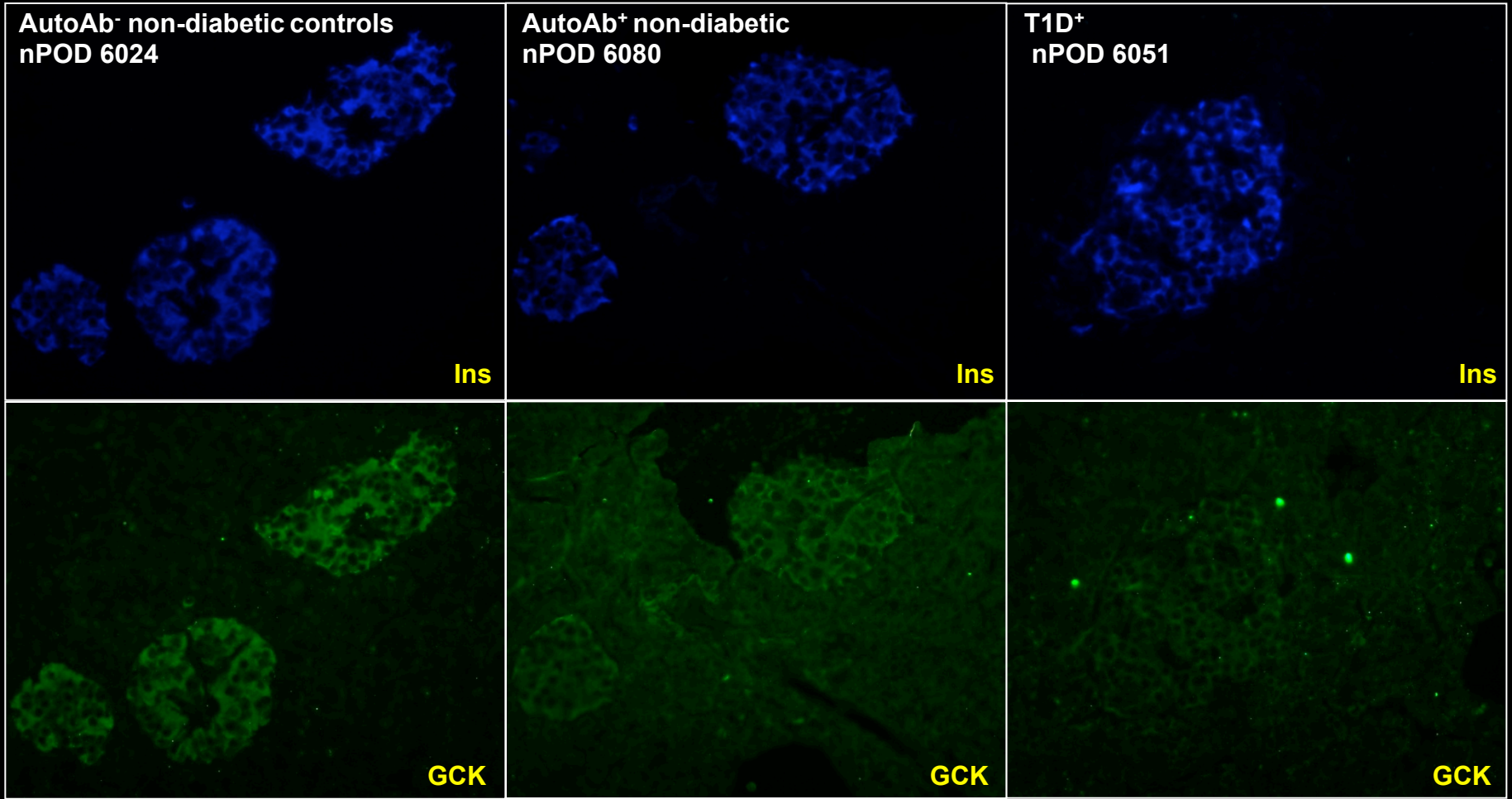
# Preserved Endogenous Insulin in a Subset of T1D Patients: Why do these patients stop secreting insulin?



**nPOD**  
Network for Pancreatic Organ  
Donors with Diabetes

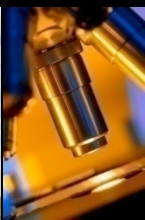
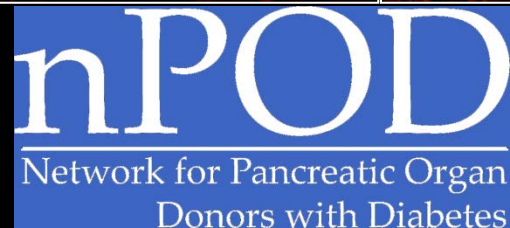
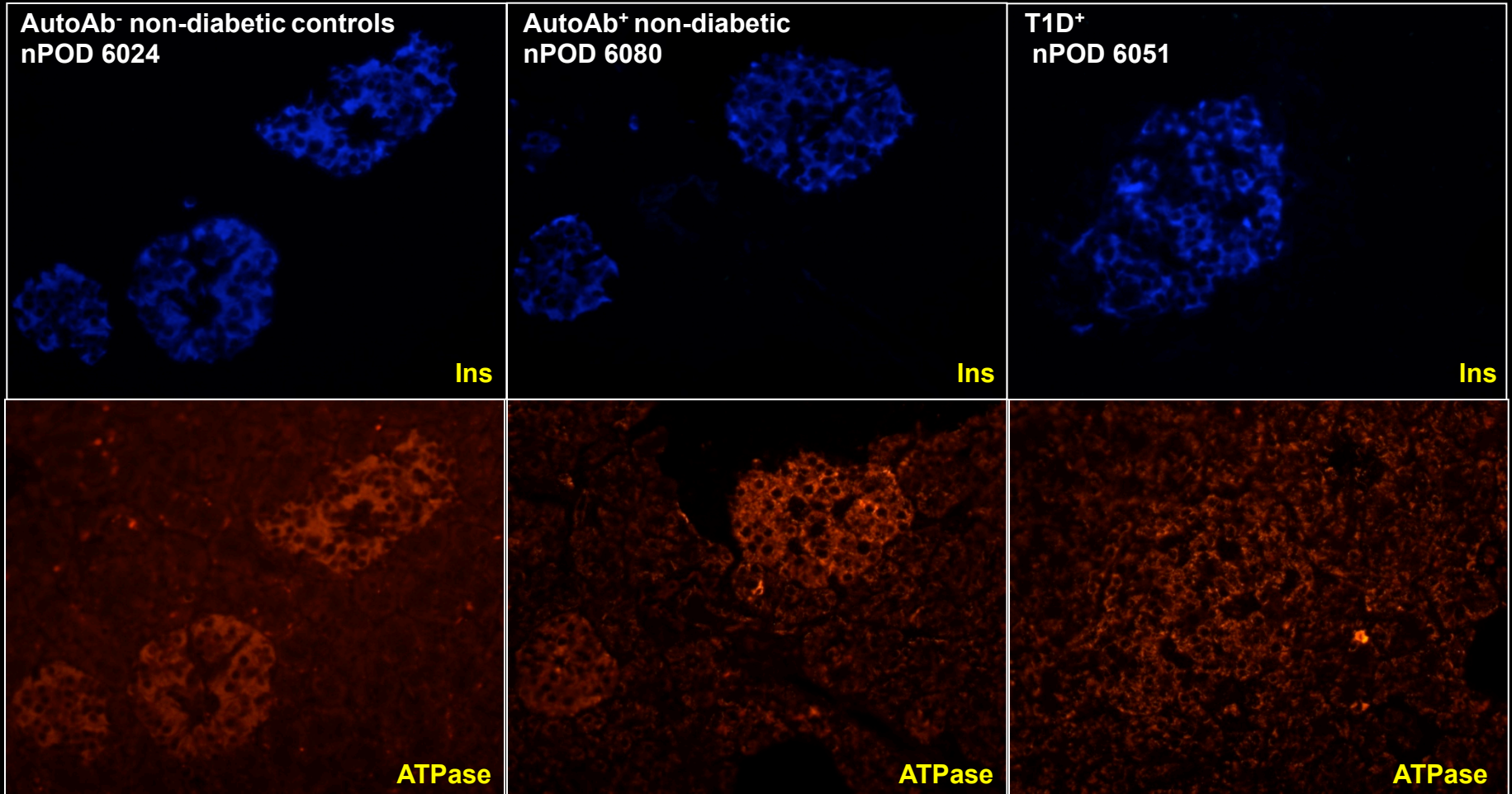


# GCK Expression is Reduced in T1D Patients & At-Risk Individuals

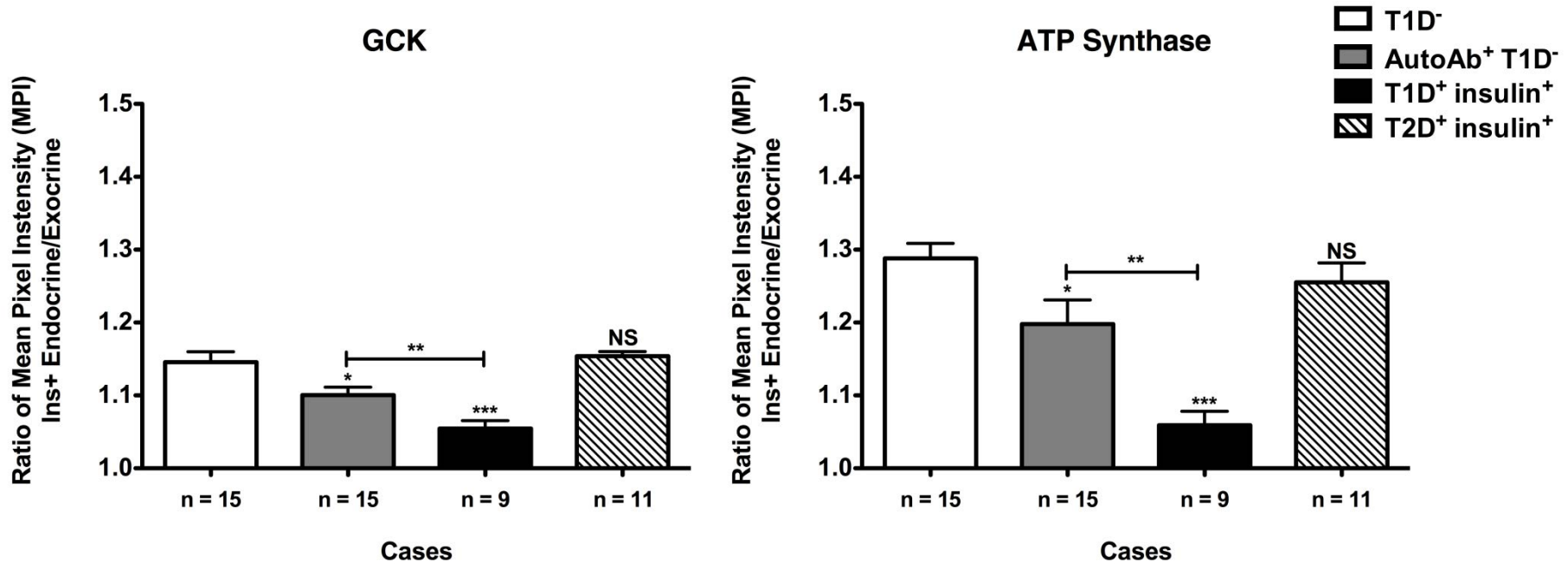




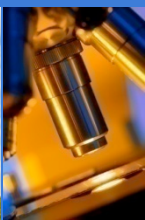
# ATP Synthase Expression is Reduced in T1D Patients & At-Risk Individuals



# Reduction of GCK & ATP Synthase in T1D Patients & At-Risk Individuals



**nPOD**  
 Network for Pancreatic Organ  
 Donors with Diabetes

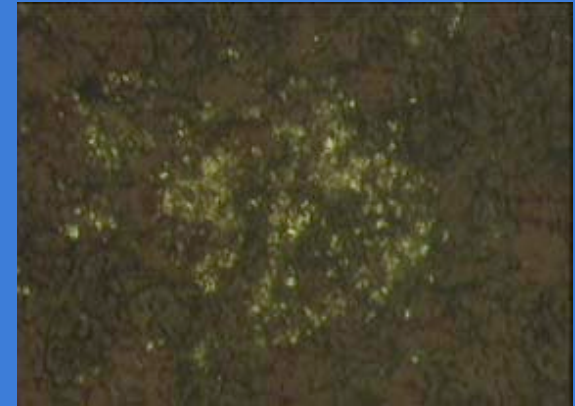


# Summary

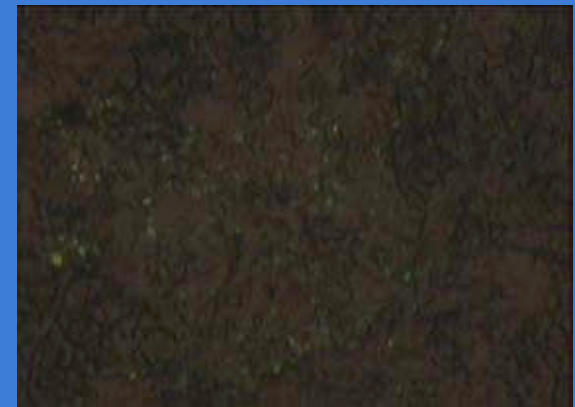
Key proteins involved in GSIS are reduced in at-risk and T1D patients that **produce but do not secrete** insulin

# Future Directions

1. Perform Laser-Capture Microdissection of nPOD tissues and isolate RNA
2. Determine signals that inhibit GSIS utilizing human islets



Human islet before LCM



Human islet after LCM

