

# **STRONG CHILDREN'S RESEARCH CENTER**

## **Summer 2013 Research Scholar**

**Name:** Faraz Khan  
**School:** Rochester Institute of Technology  
**Mentor:** George J. Schwartz, MD

---

### **ABSTRACT**

Title: Isolation of cortical collecting ducts from rabbit kidney by laser capture microdissection

Background: Heterogeneous tissue, such as the kidney, has been an obstacle in analyzing specific cells of interest. Small pieces of complex tissue contain different cellular components which can skew the interpretation of molecular analysis results. Laser capture microdissection (LCM) is a new technique that allows for the procurement of tissue samples that are localized in specific tissue structures. Once these collected samples have undergone a nucleic acid retrieval assay, it is possible for a molecular analysis to be conducted on a specific cell population found in a complex tissue environment.

Objective: The purpose of this study was to verify previous studies for ion transporter expression levels in rabbit cortical collecting ducts (CCDs) using LCM technique. Once a sufficient amount of tissue was procured, an RNA extraction assay was co2