CURRENT RESEARCH AND SCHOLARLY INTERESTS

Diabetes and hypertension are among the most common diseases treated in the US. The combination of these diseases greatly increased the risk of heart attack, stroke, and early death. While over 90% of patients with diabetes have high blood pressure, its cause is unknown. Working in the laboratory of Vivek Bhalla, I am interested in understanding the mechanisms that diabetes contributes to high blood pressure. We currently are focused on the regulatory role of insulin on sodium reabsorption in the kidney, which is a master regulator of blood pressure. Using a mouse model of diabetes and transgenic technologies, we utilize classical metabolic experiments,
expression, electrophysiological, and primary cell culture techniques to understand the role of insulin in regulating sodium transport in the kidney, blood volume in the body, and increased blood pressure in diabetes.

**Teaching**

**GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS**

- Nephrology (Fellowship Program)

**Publications**

**PUBLICATIONS**

- Na⁺-sensitive elevation in blood pressure is ENaC independent in diet-induced obesity and insulin resistance. *American Journal of Physiology-Renal Physiology*
  2016; 310 (9): F812-F820

- Harvest and primary culture of the murine aldosterone-sensitive distal nephron. *American Journal of Physiology. Renal physiology*
  Labarca, M., Nizar, J. M., Walczak, E. M., Dong, W., Pao, A. C., Bhalla, V.
  2015; 308 (11): F1306-15

- Harvest and primary culture of the murine aldosterone-sensitive distal nephron. *American Journal of Physiology. Renal physiology*
  Labarca, M., Nizar, J. M., Walczak, E. M., Dong, W., Pao, A. C., Bhalla, V.
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