

# CHOP Research Institute Summer Scholars Program



## **Struan Grant, Ph.D.**

Human Genetics and Molecular Biology

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**Basic Research:** Research most often conducted in a laboratory setting that is designed to enhance our scientific knowledge base (does not involve human subjects)

### **Genomics of Metabolic and Endocrine Traits**

I discovered the main gene for type 2 diabetes. I also led the biggest gene hunt for childhood obesity to date. My lab is trying to figure out how these genes actually confer these risks through functional assays in order to ultimately produce better treatment options for these diseases.

- **Potential summer research project:**

The functional assays involve cell culture work, CRISPR, chromatin capture and the application of ultra-high throughput whole genome sequencing technology to templates derived from specific DNA, mRNA and chromatin immune-precipitated templates.

- **Students will learn the following techniques:**

**(1)** Chromatin capture; **(2)** Cell culture; **(3)** CRISPR, and **(4)** ChIP-seq (chromatin immune-precipitation followed by ultra-high throughput DNA sequencing).

Please click [here](#) to read more about Dr. Grant