California Northstate University’s College of Medicine (CNUCOM) celebrated its 4th Annual Research Day on the 13th of December 2019. The purpose for this day is give students a forum to with university-wide audience allowing them to showcase their accomplishments relating to their yearlong engagement in research.

All trainees get an opportunity to present their research findings as podium or poster presentation. This year we had 40 projects on poster display and 12 podium presentations.
The event commenced with keynote addresses by Dean Joseph Silva, (Dean, College of Medicine, Vice President of Academic & Medical Affairs – CNU), and Dr. Catherine Yang (Vice President of Academic Affairs, Associate Dean of Medical Education – CNU).

**Success in medical Research: Avoiding the Pitfalls**

Dean Silva highlighted the parameters of success in the realm of Medical research and stressed pitfalls to avoid to make research an ongoing life-long process. He drew examples from his professional career and stressed the importance of embracing the unexpected.

**Professional Journey Engaging in Innovation**

Associate Dean and Vice President of Academic Affairs, Dean Yang based her presentation on the pursuit of innovation and learning to spot the extraordinary in the mundane.
Basic Sciences Research Awards
Emily Nguyen, Tiffany Shao, Harmanprit Randhawa, Rogelio Molina

Clinical Research Award
Jason Kuan, Cindy Ma, Austin Thompson, Melanie Yoshihara & Karen Lei

Poster winners:
Andy Lin, Michael Sa, Thong Tieu

Case Report Award
Raven Brower, Venus Shabgahi, Ida Ghlichloo

Congratulations!
Introduction

The incidence of diabetes mellitus in the United States is rapidly growing, becoming a major health concern for all Americans. In 2018, 31.5% of adults in the United States were diagnosed with diabetes, and this number is projected to increase.

Diabetes mellitus is a chronic disorder characterized by hyperglycemia resulting from a disturbance in glucose metabolism. The condition is classified as type 1 or type 2 diabetes. Type 1 diabetes is an autoimmune disease where the body's immune system mistakenly attacks and destroys the insulin-producing beta cells in the pancreas. Type 2 diabetes occurs when the body becomes resistant to insulin or when the pancreas is unable to produce enough insulin.

Recent studies have shown that abnormalities in the complement system contribute to the development and progression of diabetes. The complement system is a critical component of the immune system, playing a role in fighting infections and regulating the inflammatory response.

In this study, we aimed to investigate the role of complement factors C3 and C5 in the pathogenesis of diabetes. The study involved animal models and cellular experiments to understand the mechanisms involved.

Results - Fluorescent Microscope Images

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<thead>
<tr>
<th>Figure 1</th>
<th>Figure 2</th>
<th>Figure 3</th>
<th>Figure 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
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Discussion

The data obtained from our experiments revealed significant changes in the expression of complement factors C3 and C5 in diabetic models. These findings suggest a potential role for complement activation in the development of diabetic complications.

Further research is needed to fully understand the mechanism by which complement factors contribute to diabetes and to explore potential therapeutic targets.

Conclusions

The role of complement activation in diabetic retinopathy is an area of active research, and our findings provide new insights into the pathophysiology of the disease. Future studies are warranted to further investigate the role of complement factors C3 and C5 in diabetes and to develop novel therapeutic strategies.