



# Diabetic Retinopathy (DR)

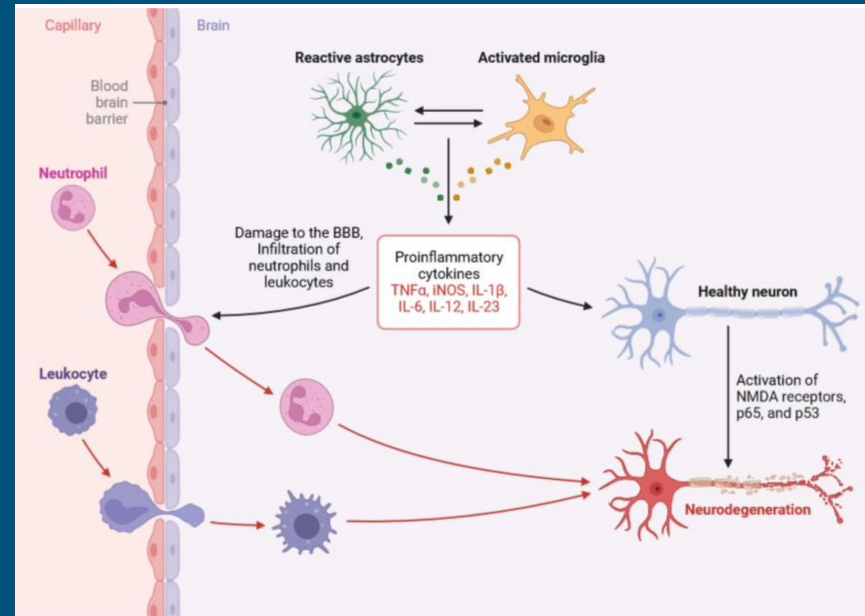
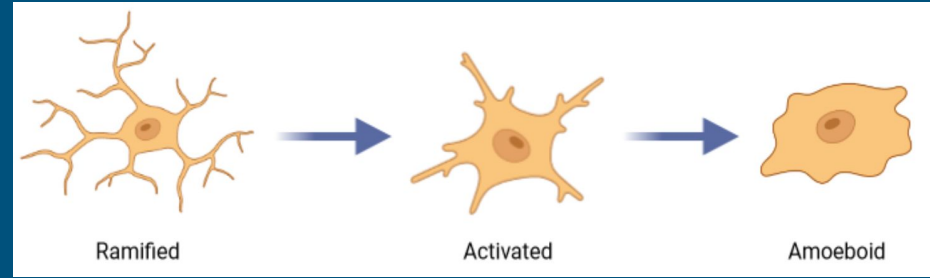
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# Background of DR

- 60% of diabetic patients
- Disease of the microvasculature- small BV
- Vision loss & blindness
- Microglia
  - Immune cells
  - Link CNS to immune system
  - Homeostasis- phagocytosis, maintain BBB
- Resting- long, thin processes
- Activated- short, thick processes
  - Angiogenesis- weak and leaky vessels



# TAK1 and LPS

TAK1- Transforming **growth factor** activated kinase-1

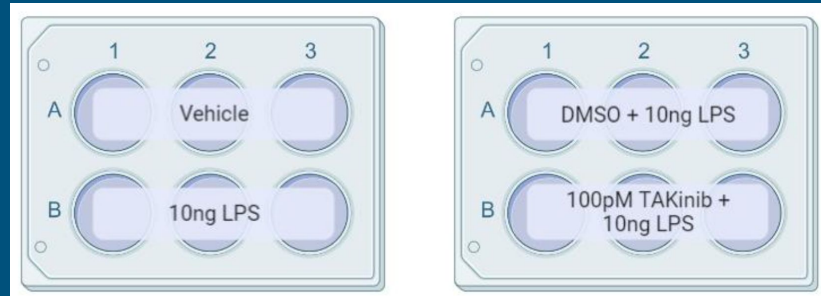
- Helps activate microglia
- Inhibition can help stop progression of DR

LPS- Lipopolysaccharide

- Endotoxin that triggers immune response

## Methods

- Stained cytoplasm and nucleus
- Fluorescence imaging at 40X
- Cell morphology using ImageJ
  - Perimeter

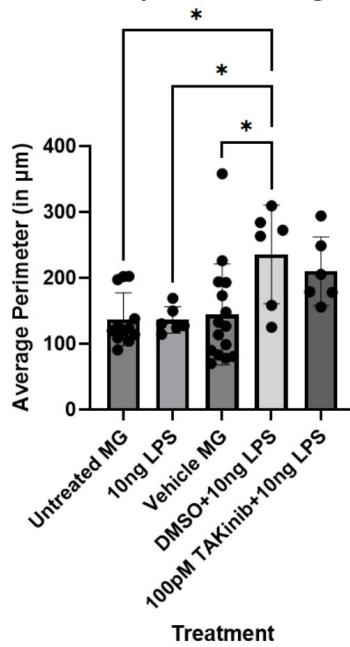


# Results/Conclusion

4.

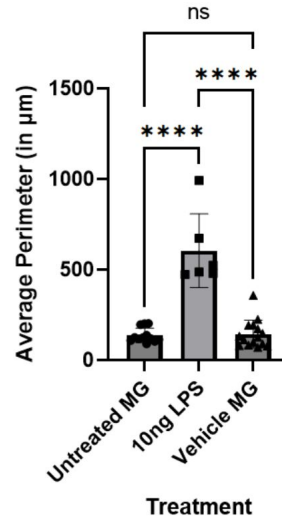
## RESULTS

Average Perimeter Comparison Among All Treatment Groups



5.

Average Perimeter Treatment Comparison 1



6.

Average Perimeter Treatment Comparison 2

