

**The Foundation Fighting Blindness:  
Virtual Workshop on Inflammation in Viral Gene Therapy of the Retina  
September 14 -15, 2020**

**Day 1: Sept 14  
9.00am – 2.00pm EST  
Iceberg of Inflammation:  
Preclinical data - should we worry?**

**Overview of the Day:**

- Q&A based on pre-recorded presentations
  - Ocular Immunology/Viral immunology
- How preclinical models develop our understanding:
  - What is extent of inflammation and immune activation?
  - What protocols are being used to control inflammation?
  - Do animal models inform appropriately?
  - Modifications of vector, capsid and transgene to reduce inflammation

9.00 – 9.10 am

**Welcome and Review of Meeting Goals:**

Brian Mansfield

*9.10am – 9.40am*

**Pre-Workshop Survey Results**

Brian Mansfield

**General Question and Answer on the Pre-meeting Presentations on  
Retina Immunology and Terminology**

Kai Chan, Andrew Dick, and Thomas Langmann

## Preclinical Research

9.40am – 10.10am

**Moderator:** Kai Chan

**Presenters:** 7 min presentation, 3 min Q&A each

- Shannon Boye
- William Beltran
- Kathryn Pepple

10.10 – 10.40am

- General Discussion

**BREAK 10.40 – 10.50am**

10.50am – 11.20am

**Moderator:** Thomas Langmann

**Presenters:** 7 min presentation, 3 min Q&A each

- John Flannery
- Scott Ellis
- Bill Merigan

11.20am - Noon

- General Discussion

**Break Noon – 12.20pm**

12.20pm – 1.00pm

**Moderator:** Paul Sieving

**Presenters:** 7 min presentation, 3 min Q&A each

- Jean Bennett
- Connie Cepko
- Dominick Fischer
- Kai Chan

1.00pm – 1.30pm

- General Discussion

**Break** 1.30 – 1.35pm

## **Round Table Discussions**

1.35pm – 2.00pm

**Moderators:** Kai Chan, Sara Mary Hall

1. Does gene therapy activate immune responses that do not manifest as clinical inflammation?
2. How does inflammation impact efficacy/activity?
3. How do we subvert immune activation?
4. What is the influence of transgene?
5. What is immune status of degenerative retina? Does this influence approach?

**Day 2: Sept 15**

9.00am – 2.00pm EST

**Clinical Inflammation:**

**What we know and contemporary clinical data**

## **Clinical Research**

This session will be a discussion of preclinical and clinical data for gene therapies that have been, or still are, in the clinic. The presentations should focus on:

1. Preclinical data that led to dose decisions and toxicology of concern
2. Data that led to immunosuppression protocol
3. Data on immune responses observed
4. Data on clinical inflammation observed

9.00am- 9.10am

**Welcome:** Brian Mansfield

9.10 – 10.20am

**Moderator:** Joy Cavagnaro

**Presenters:** 7 min presentation, 3 min Q&A each

- Christine Kay

- Tim Stout
- Jose Sahel
- Kanmin Xue
- Paul Sieving
- Mark Shearman
- Ian MacDonald

**Break      10.20 – 10.30am**

*10.30am - Noon*

### **Round Table Discussion**

Discussion of reported observations and trends – are there consensus findings and uncertainties?

**Moderators:** Andrew Dick and Curt Scribner

- Subretinal and intravitreal trials (aim to cover various transgenes, AAV capsids etc)
- Observed inflammation and any adverse events
- Immunosuppressive protocol administered (prophylactic and reactive) and any side effects
- Relationship between dose, inflammation and efficacy
- Comparison between pre-clinical package and clinical data

**Break      Noon – 12.30pm**

*12.30pm – 1.30pm*

### **Clinical Summary of Findings**

**Moderators:** Tim Stout, Janet Cheetham

Is there a consensus guidance:

- What are the current best clinical practices to control the immune response in gene therapy?
- What are the knowledge gaps in our clinical understanding of controlling the immune system response to gene therapy?

1.30pm – 2.00pm

## Meeting Summary

**Moderators:** Kai Chan, Andrew Dick, Sara Mary Hall, Curt Scribner, Brian Mansfield

- Discuss the format of summarizing and disseminating the outcome of the workshop
  - white paper? Publication?
  - Agreement on how to handle process to ensure confidentiality of any sensitive data presented in the workshop
  - Willingness to share findings with regulatory authorities
- Next steps
  - Is there support for a larger conference either sponsored by FFB or with ARVO
  - What would that look like, what content?