

TCR/BCR repertoire = 500

UMI count (fraction of the repertoire)	Amino acid sequence of CDR3	Nucleotide sequence of CDR3	Genomic segments
249909 (17.823%)	CASSSSQWTEAFY	TGTGTCAGAGAGCTCGGGACAGGATATGAACACTGAGCTTCTTT	J Segment TRBJ1-
77851 (5.552%)	CSAGPSSSEQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-
52042 (3.589%)	CSKNGSSYQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-
44284 (3.159%)	CSATWTRNPPQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ1-
39133 (2.749%)	CASLTSQSTQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-
25095 (1.799%)	CASSLQSSQPNQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ1-
23128 (1.649%)	CASSLQSSQPNQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-
22884 (1.632%)	CASSLQSSQPNQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-
15746 (1.123%)	CSATWTRNPPQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-
14119 (1.021%)	CASSVAPMPEQYF	TGTGACAGCCCGGGGGGAGGAGGACAGTACTTC	TRBJ2-

HLA evolutionary divergence (HED)  
Divergent allele advantage – First empirical evidence from non-model species

Long-tailed giant rat

CDR3 Leu-1	V Segment	J Segment
45	TRBV7-9	TRBJ1-
36	TRBV29-1	TRBJ2-
39	TRBV28	TRBJ2-
42	TRBV20-1	TRBJ1-
45	TRBV7-9	TRBJ1-
48	TRBV28	TRBJ2-
45	TRBV7-3	TRBJ2-
42	TRBV6-5	TRBJ1-
36	TRBV20-1	TRBJ2-
40	TRBV3-1	TRBJ2-
42	TRBV20-1	TRBJ2-
48	TRBV13	TRBJ2-
45	TRBV5-1	TRBJ2-
45	TRBV5-6	TRBJ2-

# Immune evolution in bats

IF YOU TURN A PICTURE OF HANGING BATS UPSIDE DOWN.

# SOCIETY FOR IMMUNE POLYMORPHISM

# 2023 ANNUAL REPORT

Residue 127

Mismatches at residues 90 and 127 are considered as putative permissible

48th ANNUAL MEETING OCTOBER 24-28, 2023 LAS VEGAS, NV

## NON HLA LA LA LAND

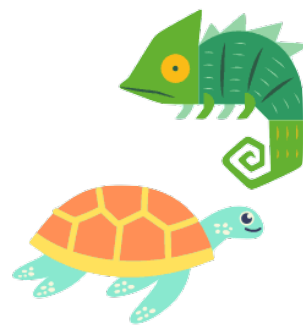
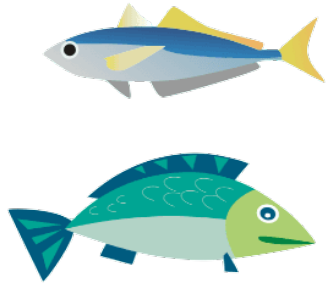
Background | Mtb – Worldwide

- ~1.8 billion infected worldwide
- ~10 million new cases a year
- ~11% of new cases are drug resistant
- ~1.5 million deaths a year
- Leading cause of death for HIV positive individuals
- Point of Care diagnostic and

Estimated TB incidence per 100,000 population per year

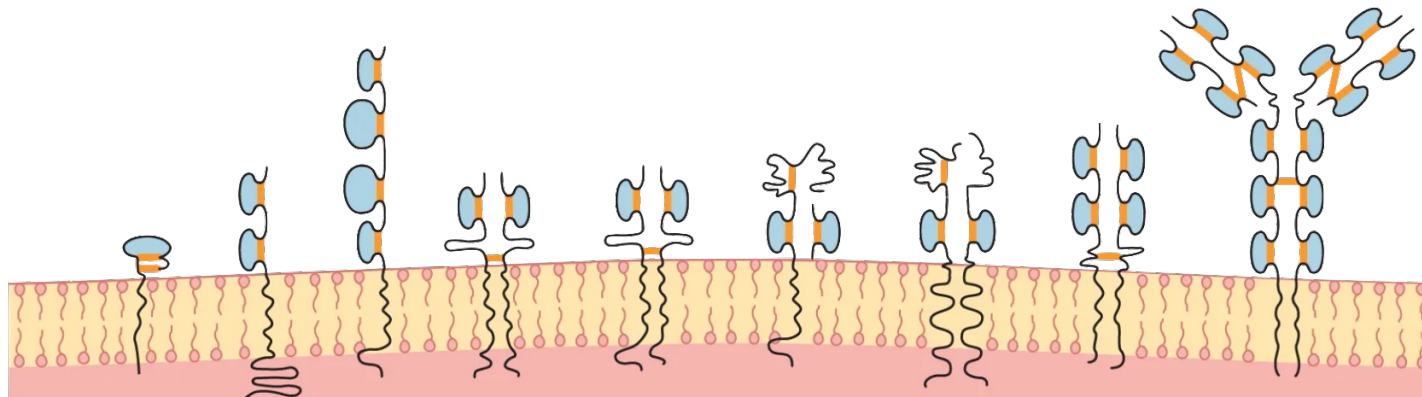
- 0-24.9
- 25-99
- 100-199
- 200-299
- ≥300
- No data
- Not applicable

WHO Global TB Report, 2016



## MISSION

The *Society for Immune Polymorphism* is an international membership organization of scientists and clinicians dedicated to understanding the **genetic and functional variation of the vertebrate immune system** and the role played by this variation in evolutionary biology, disease and health.



# **SOCIETY ACTIVITIES**

**2022**

In the last quarter of 2022, the initial Board of Directors was elected and appointed, and the Society's bylaws were adopted.



# BOARD OF DIRECTORS

## OFFICERS & COMMITTEE CHAIRS



Steve Mack  
*President &  
Board Chair*



Jason Krawic  
*Secretary*  
*Membership &  
Development*



Loren Gragert  
*Treasurer*



Neema Mayor  
*Membership &  
Development*



Jill Hollenbach  
*Publicity &  
Community  
Engagement*



Danillo Augusto  
*Diversity, Equity &  
Inclusion*



Charles Khor  
*Literature &  
Publications*



Martin Maiers  
*Web & Social  
Media*



Erin Adams



Aisha Souquette



Paul Norman



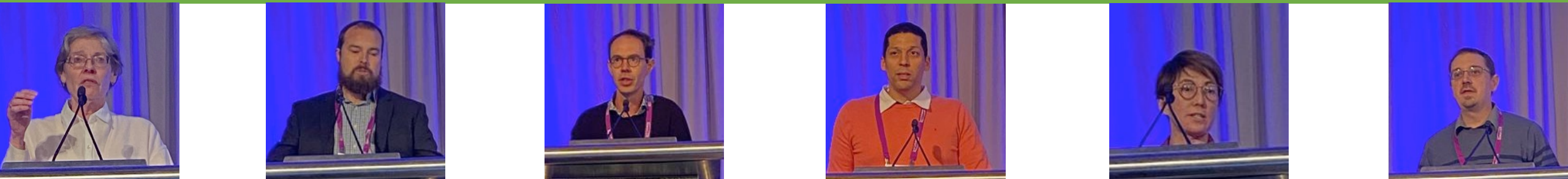
Janelle Noble

# SOCIETY ACTIVITIES

2022



The Society organized the **Genetic and Functional Variation of the Vertebrate Immune System** pre-meeting symposium, showcasing thirteen speakers at the 48<sup>th</sup> Annual ASHI Meeting in Las Vegas, Nevada.



# SOCIETY ACTIVITIES

## 2023

This year, the Society incorporated, the final two Directors were appointed, and the society held three events.

**April:** The Society organized the **Advances in Clinical Immunogenomics** Joint Session at the 36<sup>th</sup> European Immunogenetics and Histocompatibility Meeting in Nantes, France.



# SOCIETY ACTIVITIES

**October:** The Society organized Plenary Session II, **MHC Genomics – How Evolutionary Diversity of the MHC May Have Clinical Relevance**, at the 49<sup>th</sup> Annual ASHI Meeting in San Antonio, Texas.

**November:** The Society held its first educational webinar, **Best Practices for Manuscript Review**, providing insight and editorial expertise into the peer-review process for scientific manuscripts.



The screenshot shows a Zoom webinar interface. At the top, three video thumbnails are visible for participants: Aisha Souquette, James Mathew, and Danilo Augusto. The main content area displays the Society for Immune Polymorphism logo on the left, which features a stylized human figure with arms raised in a circle. To the right of the logo, the title "Best Practices for Manuscript Review" is written in green. Below the title, the date "Tuesday, November 14, 2023" is shown. Underneath, the presenters and moderator are listed:

<b>Presented by</b>		<b>Moderated by</b>
Danillo Augusto, PhD <i>Assistant Professor, University of North Carolina</i>	James Mathew, PhD <i>Research Professor, Northwestern University</i>	Aisha Souquette, PhD <i>Research Associate, University of Maryland School of Medicine</i>

At the bottom of the slide, there is a small blue button that says "Start sharing your screen" and a "1:00" timer.



# SOCIETY ACTIVITIES

## COMING IN 2024

The Society is organizing a special issue of *Frontiers in Immunology*, titled **A New Perspective in Immune Polymorphism**, focused on the HLA, KIR and LILR genes, which will be published in 2024.

 frontiers | Frontiers in Immunology

7.3

Impact Factor

9.4

CiteScore

687,217

Citations

## A New Perspective in Immune Polymorphism (The HLA, KIR, and LILR genes)

This Frontiers in Immunology Research Topic is intended to showcase new and ongoing research that advances our understanding of the following subtopics:

- The roles played by the HLA, KIR and LILR genes in human health and their therapeutic applications.
- To underscore the need for the integrated analysis of these genes for advancing understanding of the immune system.

## Topic Editors

**Seik-Soon Khor**

Nanyang Technological University

**Martin Maiers**

National Marrow Donor Program

**Danillo G. Augusto**

University of North Carolina at Charlotte

**Jason Krawic**

University of Oklahoma Health Sciences Center

**Aisha Souquette**

St. Jude Children's Research Hospital



# SOCIETY COMPOSITION

The Society currently includes 148 members from 10 European nations, four Asian nations, two North American nations, one South American nation, one African nation and one Pacific nation, with academic, industrial and clinical affiliations.

Members range in experience from graduate student and post-doctoral researcher to research director, professor and laboratory director, with a variety of clinical, therapeutic and research interests.



# MEMBERSHIP

Society membership is open to all persons interested in the advancement of the Society's Mission.

Those with expertise in immune polymorphism research or clinical applications of immune polymorphism research may join the society as **Full Members**. Those who are interested in learning about and gaining experience in the field of Immune Polymorphism are welcome to join the Society as **Trainee Members**.

Collection of **membership dues** will begin in March of 2024. Annual membership dues are \$100 US for Full Members, \$40 US for post-doctoral Trainee Members, and \$20 US for pre-doctoral Trainee Members. Membership applications from upper-middle income nations can be discounted by 50%, and those from low-middle-income and low-income nations can be discounted by 100% upon request.