



# 30<sup>th</sup> IUA World Congress 2022

## Introducing the Global Thrombosis Forum (GTF)

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# GTF was initiated



- **December 11, 2011:** GTF was initiated at the Laddu house with Dr. Jawed Fareed, Anita Houde, Ajay Houde, Amey Houde and Amruta Houde, Atul and Jayashree Laddu.



# The Mission of GTF



- Promote awareness of thrombosis in the community and save precious lives.
- Promote research by the high school students at institutions such as Albany College of Pharmacy and Health Sciences, Harvard University, Loyola University, PACO (Promoting Awareness of Clotting Outcomes) Foundation.
- Train the school scholars in the art of research, presentations at national and international society meetings
- Publish full research articles in **peer reviewed journals.**



# Major milestones of GTF



## 2013:

- First **proclamation for thrombosis** awarded by the Governor of the State of Georgia.

## 2014:

- First summer internship for GTF Scholars was held at Loyola University under the mentorship of **Prof. Jawed Fareed**, PhD, Professor of Pharmacology and Pathology and Head of Thrombosis and Hemostasis Research at **Loyola University**.



# Major milestones of GTF (cont'd)



## 2016:

- Atul Laddu/GTF awarded **Servant's Heart Award** by the Governor of the State of GA.
- GTF scholars presented its very first poster at the Heparin Centennial Symposium, "*Scientific and Clinical Developments and their Impact on the Understanding of the Pathogenesis of Thrombosis and its Management*" at Loyola University Medical Center.
- **High School Scholar's Day** was introduced at **Loyola University** to honor the GTF Scholars.

# Major milestones of GTF (cont'd)



## 2017:

- The first GTF symposium on the thrombosis and management of medically complex dental patients was held in Atlanta, with **Eduardo Ramacciotti, MD, PhD** as the Keynote speaker. Several high school scholars gave their research presentations at this symposium.



## 2018:

- Summer internships at the Albany College of Pharmacy and Health Sciences (ACPHS) under **Shaker Mousa, PhD**, were introduced for GTF Scholars.



# Major milestones of GTF (cont'd)



## 2019:

- The Cardiovascular Research Institute Symposium was held at Loyola University, with several high school scholars presenting their research data.
- The Beginning Researchers Involved in Discovery through Guidance and Exploration (BRIDGE) event was introduced at ACPHS, where GTF Scholars presented their research.
- **Two separate awards:** The Late Brij Bihari Lal Mathur **research scholarship** awards were announced by Dr. Atul & Jayashree Laddu and Dr. Mrs. Usha Mathur.



# Major milestones of GTF (cont'd)



## 2020:

- A symposium on Anticoagulation in GI Tract: An update on GI disorders: Diagnostic and Therapeutic Considerations was held where several GTF Scholars presented their research.

## 2021:

- CV Symposium: COVID-19 and Cardiovascular Effects, First Rajan Laddu Memorial Lecture was initiated, CLOVES SYNDROME: Keynote Speaker: **Alfonso Tafur, MD**, Northshore University Health System. Several GTF Scholars presented their research.



- GTF was elected as the **Associate Society of IUA** ([www.angiology.org](http://www.angiology.org))



# Major milestones of GTF (cont'd)



## 2022:

- Pulmonary Embolism Symposium in young children: Second Rajan Laddu Memorial Lecture: Keynote speaker: **Samuel Goldhaber, MD**, Harvard University, Boston, MA. Several GTF Scholars presented their research.



## 2023:

- Symposium: DVT and PE: making a diagnosis and creating a treatment plan
- Keynote speaker: **Stephan Moll, MD**, University of North Carolina Health System.
- Several GTF Scholars will be presenting their research.



# The GTF style of research



- The GTF students are encouraged to conduct full research on their projects, thus allowing them to share their ideas with minimal supervision and showcasing them in real life in front of well-known institutions such as the Albany College of Pharmacy and Health Sciences, Harvard, Loyola, the International Society of Thrombosis and Hemostasis, the International Union of Angiology.
- One of the goals of GTF is to demonstrate how high school students, under proper guidance, are capable of accomplishing their own research and projects. This pedagogy has been proven widely successful in GTF and in other organizations as well.
- Over 40 scholars have graduated from GTF since inception and the numbers are steadily increasing year over year. Their research publications are listed in the Appendix at the end of this presentation.

# GTF achievements



- In the month of August 2022, the Mars Society in their newsletter and press release concluded its “International Mission to Mars” Design Class & Competition for High School Students.
- Shriya Sawant, one of the GTF Scholars, used the GTF style of research (students being allowed to conduct full research on their assignments, thus allowing them to share their ideas with minimal supervision).

# GTF achievements (cont'd)



- Shriya extended her efforts and interviewed Stephan Moll, MD, a World-renowned hematologist from the UNC who was called by NASA to treat the blood clot in an astronaut.
- One of the judges at the competition mentioned that the Mars Society was very impressed by the choice of human medical and health science issues by GTF, which included the idea of studying thrombosis on Mars.



# Conclusions



- GTF is a very young organization (reaching age 10 in 2022) that has saved countless lives by promoting the **awareness of thrombosis** in the communities.
- GTF has been very successful in promoting **high school scholars to conduct research** at institutions such as Albany College of Pharmacy and Health Sciences, Harvard University, Loyola University, PACO (Promoting Awareness of Clotting Outcomes) Foundation.
- GTF scholars have **presented their research** at National and International Scientific meetings and written research article in several peer reviewed journals.
- The GTF scholars are adding support to the Power of High School students and proving that the remark, "**The youth is our future, and the Future is here**" is very appropriate.

# Acknowledgements



- We would like to thank Professor Pedro Pablo Komlos, MD, PhD; Professor Eduardo Ramacciotti, MD, PhD; Jawed Fareed, PhD, and the organizers of the International Union of Angiology for giving us a forum to introduce you to our organization.
- We would like to thank our mentors Ms. Priya Lokasundaram and Dr. Atul Laddu for providing guidance in this presentation.

# Appendix: List of publications by GTF Scholars



1. Akshay Kulkarni (FASEB)

[Biomarkers, inflammation, and thrombosis in Hepatocellular Carcinoma](#)

2. Anjali Bhave & Sharan Krishnappan (ASH)

[Impact of Anticoagulant and Antiplatelet on the Thrombotic Risk in Cancer Associated Thrombosis](#)

3. Divya Joshi (FASEB)

[Altered Coagulation Parameters and D-Dimer Measurements in Sepsis are useful in Scoring the Risk Stratification](#)

4. Manoj Niverthi (FASEB)

[A Comparison of GMP Manufactured Ovine Mucosal Enoxaparin and Branded Porcine Enoxaparin](#)

# Appendix: List of publications by GTF Scholars (cont'd)



5. Prasad Shetye & Sanket Gavankar (JCath)

[Using the Caprini Risk Score to Increase VTE Awareness in the Community: The Know Your Score Project](#)

6. Priya Joshi (FASEB)

[Molecular Pathogenesis of Bone Degenerative Disease and Associated Inflammatory Processes](#)

7. Rajan Laddu (FASEB)

[Differentiation of the anti-coagulant effects of Activated Protein C and Recombinant Thrombomodulin as studied in whole blood and retrieved plasma](#)



# Appendix: List of publications by GTF Scholars (cont'd)



8. Rajan Laddu (FASEB)

[Relative Neutralization of Heparin from Different Origins by Protamine, Polybrene, Platelet Factor 4, and synthetic heparin antagonist PMX](#)

9. Richa Bhome (ASPET)

[Successful Accomplishments for the Founder of the Georgia Thrombosis Forum \(GTF\)](#)

10. Rithik Raina & Vishnu Venkitasubramony (FASEB)

[Comparative Studies on the Oral Anticoagulant Activities of Orally Active Anti-Xa and Anti-IIa Agents in Whole Blood and Plasma and their Neutralization by FEIBA](#)

# Appendix: List of publications by GTF Scholars (cont'd)



11. Rohil Badkundri (IUA)

[One Hundred Years of Heparin: Heparin Centennial at Loyola University:  
http://www.angiology.org/guidelines-education/heparin-centennial.aspx](http://www.angiology.org/guidelines-education/heparin-centennial.aspx)

13. Sharan Krishnappan (FASEB)

[A Comparison of Mass and Potency Equated Bovine and Porcine Heparins](#)

14. Sharan Krishnappan (ASPET)

[Interview with Atul R. Laddu, MD, PhD, President and CEO of Global  
Thrombosis Forum](#)

15. Sneha Nimkar (FASEB)

[Biomarkers of Inflammation and Thrombosis in Patients Undergoing Total  
Joint Replacement](#)

# Appendix: List of publications by GTF Scholars (cont'd)



16. Varun Rangnekar (FASEB)

[Comparative Pharmacokinetic Profile of Three Batches of Ovine Enoxaparin and One Batch of Branded Enoxaparin](#)

17. Varun Rangnekar (FASEB)

[Ovine Mucosal Enoxaparin Exhibit Comparable Pharmacokinetic Profiles to Porcine Mucosal Enoxaparin](#)

18. Vishnu Venkitasubramony (FASEB)

[Differential Effects of Dabigatran, Rivaroxaban, Apixaban, Edoxaban and Betrixaban on Fibrinokinetics and their Modulation by FEIBA](#)

19. Vishnu Venkitasubramony (FASEB)

[Biological and Pharmacological Profiling of Pentosan Polysulfate \(PPS\) in Comparison to Heparin and its Relative Neutralization by Protamine Sulfate](#)