

G-CAN 2024 Tenth Annual Research Symposium and Workshops NOVEMBER 13-14, 2024

### Hilton Alexandria Old Town 1767 King Street

### Alexandria, VA 22314 USA

In-Person and Virtual Hybrid Meeting Format

### **2024 SYMPOSIUM OVERVIEW**

### **General Sessions:**

- The Year in Review (Five Lectures: Gout Clinical Research Including Clinical Trials; Gout Basic Research; Urate Biology; Gout and Hyperuricemia Genetics; CPP and BCP Crystal Arthritis)
- Crystal Arthropathy Clinical and Basic Research Mini Symposia
- G-CAN Early Career Investigator Abstract Presentation Session (SPARK and MAPS Awardees)
- G-CAN 2024 H. Ralph Schumacher Memorial Early Career Investigator Award Lecture
- G-CAN Presidential Emerging Career Investigator and Junior Faculty Investigator Awardees Presentation
- G-CAN Gold Medal Award Lecture
- The Great Debate: "First Line ULT: XOI for All or Customized to Mechanism of Hyperuricemia?"
- Two Concurrent Networking Workshops on:
  - > Approaches to Clinical Studies and Trial Design in Hyperuricemia and Gout
  - > Calcific Crystalline Arthritis
- Update on the G-CAN Journal, Gout, Urate, and Crystal Deposition Disease (GUCDD)
- Day 1 Reception Following Day's Sessions

### Notes on this Year's Hybrid Platform:

- All presentations, including workshops, will be live streamed. Those speakers who are not able to attend in person will present in real time via the internet from their location.
   If they are not able to speak at the scheduled time, arrangements will be made to record their presentation ahead of time to be played back at the live session.
- Presentations and workshops are recorded during the symposium and will remain accessible for video on-demand viewing until January 31, 2025; recorded presentations for the Year in Review talks will be posted to the G-CAN website indefinitely for on-demand viewing.
- There will not be physical posters; abstracts selected for the Early Career Investigator MAPS (<u>Mini-Lecture Abstract Presenters Session</u>) lectures will be brief, live presentations with a question-and-answer period.



Questions and responses on individual talks will be available in the chat window of each presentation during the live session. Scan the QR code to open the chat function on your phone or join via <u>slido.com</u> and enter code #g-can to submit questions.

Symposium Website: https://g-can.swoogo.com/2024

### LIVE, IN-PERSON, AND VIRTUAL SYMPOSIUM AGENDA

### All times are in Eastern Time Zone USA

Presentations will be made either live from the meeting venue or virtually via streaming if the speaker is not attending in person. Breakout sessions also will be live streamed so that those who are unable to travel can participate virtually.

### Tuesday, November 12, 2024

- Arrivals, check in to hotel
- Dinner on your own

### Wednesday, November 13, 2024

- 6:30 Registration (Grand Ballroom Foyer)
- 7:00-8:00 Breakfast for Meeting Attendees (Grand Ballroom Foyer)
- 8:00-8:20 Welcome and Introduction to G-CAN, Recognition of Industry Sponsors (Grand Ballroom)
  - G-CAN President: Robert Terkeltaub
  - G-CAN Vice President and Treasurer: Hyon Choi
  - G-CAN Executive Vice Presidents: Nicola Dalbeth, Tuhina Neogi
  - Meeting Co-Chairs: Chio Yokose, Georgios Filippou
  - Chat Function Demonstration: Rebecca Hill
- 8:20-15:30 Plenary Session (Grand Ballroom)

8:20-9:50 Crystal Arthropathy Clinical and Basic Research: The Year in Review Session Chairs: Lisa Stamp, Abhishek Abhishek

This session will **not** have a question-and-answer period. (Recordings will remain on the G-CAN website indefinitely.)

<u>30-minute presentation:</u>

- The Year in Review: Gout Clinical Research, including Clinical Trials *Michael Toprover, New York* (30 minutes)
- <u>15-minute presentations:</u>
  - The Year in Review: Gout Basic Research Monica Guma, La Jolla
  - The Year in Review: Urate Biology Owen Woodward, Baltimore
  - The Year in Review: Gout and Hyperuricemia Genetics Megan Leask, Otago
  - The Year in Review: CPP and BCP Crystal Arthritis Sara Tedeschi, Boston
- 9:50-10:20 Break (Grand Ballroom Foyer)

10:20-12:00G-CAN Early Career Investigator SPARK (Select Presentations of Abstracts<br/>Research Keynotes) Session (Grand Ballroom)<br/>Moderators: Abishek Abhishek, Nicola Dalbeth<br/>6 oral presentations, 10 minutes each, followed by 2 minutes for questions

### **SPARK Awardees**

1. Adwoa Dansoa Tabi-Amponsah, Auckland, New Zealand; Nicola Dalbeth, Mentor

Performance of two gout remission definitions in a two-year randomized controlled trial of nurse-led care versus usual gout care

- 2. Ronger Gu, Shanghai, China; Haibing Chen, Mentor Progression of cardiovascular diseases in people with hyperuricaemia or gout: A prospective study in the UK Biobank
- 3. Sharan K. Rai, Boston, USA; Hyon Choi, Mentor Three novel metabolomic signatures of inflammation for female gout risk: a prospective cohort study over 26 years
- 4. **Brenda Kischkel**, Nijmegen, The Netherlands; Leo Joosten, *Mentor* Unravelling systemic inflammation in gout and CPPD disease: New Insights into Biomarker discovery
- 5. **Carlisle DeJulius**, Ann Arbor, USA; Puja Khanna, *Mentor The intersection of CD38, NAD metabolism, and NLRP3 inflammasome activation in synovial fibroblasts in gouty arthritis*
- 6. **Charles Leroy**, Paris, France; Hang-Korng Ea, *Mentor* Intracellular fate of monosodium urate and calcium pyrophosphate crystals in macrophages and their dissolution
- **12:00-13:00** Lunch (Grand Ballroom Foyer)
- 13:00-13:20Presentation of G-CAN Presidential Emerging Career Investigator Awards<br/>(Grand Ballroom)

**Award Presenters:** *Robert Terkeltaub, Hyon Choi, Nicola Dalbeth, Tuhina Neogi* Four 5-minute talks with no question-and-answer period

#### **Emerging Career Investigator Award Honorees:**

- 1. Tania Crișan
- 2. Chio Yokose
- 3. Natalie McCormick
- 4. Sara Tedeschi

## 13:20-14:00Special Session: The Gut Microbiome in Hyperuricemia and Gout<br/>Moderators: Robert Terkeltaub, Monica Guma, Owen Woodward<br/>15-minute lectures with 5-minute question-and-answer period for each talk

- Gut microbiome dysbiosis and related metabolites in hyperuricemia and gout *Jie Wei, Hunan*
- The Gut Microbiome and Urate Homeostasis Dylan Dodd, Palo Alto

#### **14:00-14:30** Break and Availability of Exhibitors (Grand Ballroom Foyer)

## 14:30-15:10Special Lectures (Grand Ballroom)Moderators: Geraldine McCarthy, Tristan Pascart, Sara Tedeschi15-minute talks with 5 minutes each for questions

- IL-6 as a Therapy Target in CPPD Augustin Latourte, Paris
- Cause or Consequence: Clarifying the role of calcification in OA *Tuhina Neogi, Boston*

### 15:10-15:30G-CAN 2024 H. Ralph Schumacher Memorial Early Career Investigator Award<br/>Lecture

Moderators: Tuhina Neogi, Chio Yokose

10-minute talk with 5-minute question-and-answer period

Awardee: Sydney Grooms - Tony Merriman, Mentor

### 15:30-17:00 WORKSHOP/NETWORKING BREAKOUT SESSIONS

Workshop 1: Clinical Study, Imaging, Flares and Trial Design for Hyperuricemia and Gout (Grand Ballroom)

**Co-Chairs:** Lisa Stamp, Angelo Gaffo

**SESSION 1**: **30 Minutes** Presentation/discussion of data for G-CAN-endorsed gout remission definition, ahead of voting in later session – *Nicola Dalbeth, Dansoa Tabi-Amponsah* 

**SESSION 2: 30 Minutes** Update on gout flare research and G-CAN initiative development – *Angelo Gaffo* 

SESSION 3: 15 Minutes Collaborative gout cohort opportunities/discussion:

- SGLT2 inhibitors, gout, ULT, CKD Chio Yokose, 15 minutes
- Collaborative gout genomics cohort opportunities Tony Merriman

### Workshop 2: CPPD and BCP in Joint Cartilage Calcification

### (Madison Room 2<sup>nd</sup> Floor)

**Co-Chairs:** Abhishek Abhishek, Georgios Filippou, Sara Tedeschi, Geraldine McCarthy

Four 15-minute team talks with approximately 5 minutes for group discussion. Summary to be given at Plenary Session on November 14.

### **TEAM 1:** CPPD GWAS: *Riku Takei, Tristan Pascart, Tony Merriman, Ann Rosenthal*

**TEAM 2:** Calcium Crystals and Novel Approaches to Inflammation Mechanisms: *Leo Joosten, Tania Crisan, Hang-Korng Ea, Geraldine McCarthy* 

**TEAM 3:** CPPD, Pain Symptoms and Extra-articular Disease (including fractures and inflammatory cardiovascular disease comorbidities): *Sara Tedeschi, Ann Rosenthal, Jean Liew* 

**TEAM 4:** Intersection of processes and pathways for articular calcification with clinical manifestations: *Jessica Bertrand, Georgios Filippou, Fabio Becce, Tuhina Neogi* 

- <u>17:30-18:30</u> Reception with wine and hors d'oeuvres for all general meeting attendees (Grand Ballroom Foyer)
- 18:30 Dinner on your own, for general meeting attendees

### Thursday, November 14, 2024

- 7:00-8:00 Breakfast (Grand Ballroom Foyer)
- 8:00-17:30 Plenary Session (Grand Ballroom)

8:00-8:45 The Great Debate: "First Line ULT: XOI for All or Customized to Mechanism of Hyperuricemia?"

Moderators: Tuhina Neogi, Tristan Pascart

15 minutes for each presenter, followed by 5 minutes for each rebuttal and 5 minutes for audience vote

- Audience "Before Vote"
- Xanthine Oxidase Inhibitor for All *Lisa Stamp*, *Christchurch*
- Customized to Mechanism of the Hyperuricemia Fernando Perez-Ruiz, Bilbao
- Rebuttals
- Final audience "After Vote"

8:45-10:00 G-CAN Early Career Investigator MAPS (Mini-Lecture Abstract Presenters Session) Awardees Part 1 - Clinical Research Abstracts Moderator: Chio Yokose, Georgios Filippou 3-minute presentations, 2 minutes for questions MAPS Awardees – Part 1

- 1. **Qi Chen**, Shanghai, China; Haibing Chen, *Mentor* Associations of Physical Volume and Intensity with incident gout: a prospective cohort study in the UK Biobank
- 2. Anouchka Lewis, Dublin, Ireland; Geraldine McCarthy, Mentor Rapid Access Microscopy and Real Time Case Discussion via a Secure Messaging App Improves Diagnostic Accuracy and Management of Acute Hot Swollen Joints
- 3. Chamaya De Silva, Auckland, New Zealand; Nicola Dalbeth, Mentor Mapping Monosodium Urate Crystal Deposition Within Joints in Tophaceous Gout: A Dual Energy CT Study
- 4. Anusha Moses, Enschede, The Netherlands; Tim Jansen, Mentor Gout TrEatment Strategy (GO TEST) Overture trial
- 5. Yunjin Kim, Suwon, South Korea; Sung Kweon Cho, Mentor Association between triglyceride-glucose index and incident gout: study from nationwide cohort of Korea and UK\*
- 6. Ziyi Chen, Shanghai, China; Yinghui Hua, Mentor Osteoarthritis-Driven Inflammatory Imprinting of Synovial Fibroblasts contributes to Gouty Arthritis Exacerbation through m6A modification of S100A4

### 7. **Sung Kweon Cho**, Suwon, South Korea Effects of Long-Term Exposure to Air Pollution on Hyperuricemia and Gout: A Nationwide Cohort Study in Korea\*

- 8. Florina lonete, Bucharest, Romania; Mihai Bojincă, Mentor Should the Hyperuricemia Threshold for Women be Lowered? Examining Gender-Specific Differences in Prevalence and Associated Risk Factors
- 9. **Nils Bürgisser**, Geneva, Switzerland; Kim Lauper, *Mentor Electronic health record-based calcium pyrophosphate deposition disease registry: a feasibility study*
- **10:00-10:30** Break and Availability of Exhibitors (Grand Ballroom Foyer)
- 10:30-11:00G-CAN Gold Medal Award Lecture (Grand Ballroom)Moderators: Hyon Choi, Nicola Dalbeth, Tuhina Neogi, Tony Merriman30 minutes, including time for introduction, no question-and-answer period

Honoree: Robert Terkeltaub, *La Jolla* Lecture Title: Follow the Molecule

- 11:00-11:55Summit Session: Immunometabolism in Crystal-Induced Arthritis<br/>Moderators: Robert Terkeltaub, Isidoro Cobo<br/>15-minute talks, 3 minutes for questions
  - Diet and Metabolism in Crystal-induced Inflammation Hang-Korng Ea, Paris
  - Immunoproteome and Metabolome Leo Joosten, Nijmegen
  - Metabolic and Epigenomic Linkages in Crystal-Induced Arthritis *Isidoro Cobo, Birmingham*

11:55-12:20Lightning Talks - Session 1:<br/>Chairs: Hang-Korng Ea, Nicola Dalbeth, Leo Joosten<br/>10-minute lightning talks with 2 minutes each for questions

- Novel Biomarkers in Gout Natalie McCormick, Boston
- Impact of Urate-Lowering Therapy and Gout Flares on the Proteome Hang-Korng Ea, Paris
- <u>12:20-12:30</u> Presentation of First Annual G-CAN Junior Faculty Investigator Prize: Chairs: Robert Terkeltaub, Nicola Dalbeth, Tuhina Neogi, Hyon Choi 10 minutes

Honoree: Natalie McCormick, PhD, Boston

- **12:30-13:30** Lunch and Availability of Exhibitors (Grand Ballroom Foyer)
- 13:30-13:45Special Presentation (Grand Ballroom)15 minutes

**G-CAN Journal**: Gout, Urate, and Crystal Deposition Disease (GUCDD) – Tony Merriman, Tristan Pascart

# 13:45-14:45G-CAN Early Career Investigator MAPS (Mini-Lecture Abstract Presenters<br/>Session) Awardees – Part 2 Basic Research Abstracts (Grand Ballroom)<br/>Moderator: Chio Yokose, Georgios Filippou<br/>3-minute presentations, 2 minutes for questions

- 1. **Mariana Urquiaga**, Birmingham, USA; Tony Merriman, *Mentor Association of prostatectomy with serum urate changes*
- 2. Allyson Covello, New York, USA; Michael Pillinger, Mentor Prevalence and Severity of Osteoarthritis in the Spines of Patients with Gout Versus Non-Gout Controls
- 3. **Antonio Avilés Hernández**, Alicante, Spain; Andrés Mariano, *Mentor Prognostic value of hyperuricemia in developing cardiovascular events in patients with chronic inflammatory arthritis: a 10-year prospective study*
- 4. Seong-ho Cho, Suwon, South Korea; Sung Kweon Cho, Mentor The Association Between Anemia and Hyperuricemia: A Serendipitous Finding from Machine Learning to Confirmation Through Epidemiological Methods\*
- 5. **Junhyoung Park**, Suwon, South Korea; Sung Sweon Cho, *Mentor The genotype-guided approach to hypouricemia diagnosis*\*
- 6. **Valentin Nica**, Cluj-Napoca, Romania; Leo Joosten, *Mentor* Monocytes with Neutrophil-like Transcriptomic Signature observed in Gout and Asymptomatic Hyperuricemia
- 7. **Georgiana Cabău**, Cluj-Napoca, Romania; Leo Joosten, *Mentor Urate-induced immunometabolic adaptations of myeloid cells*
- 8. Xiaojing Lin, Shanghai, China; Haibing Chen, Mentor "Role and Mechanism of m<sup>6</sup>A demethylase FTO in acute gout"

## 14:45-15:15Summary and Panel Discussions of Concurrent Workshops by Session<br/>Chairs

12 minutes each with 3 minutes for questions

- Approaches to Clinical Studies and Trial Design in Hyperuricemia and Gout *Lisa Stamp, Angelo Gaffo*
- Calcific Crystalline Arthritis Abhishek Abhishek, Georgios Filippou, Sara Tedeschi, Geraldine McCarthy
- **15:15-15:30** Break (Grand Ballroom Foyer)
- **15:30-18:00** Crystal Arthropathy Mini Symposium (Grand Ballroom)
- 15:30-15:45Voting on G-CAN-Endorsed Gout Remission DefinitionNicola Dalbeth and Dansoa Tabi-Amponsah

### 15:45-17:30 Lightning Talk Session 2

Moderators: Nicola Dalbeth, David Mount

10 minutes each, followed by 2 minutes for questions per talk

- The DIEGO Pilot Trial: a DIEt for the Treatment of GOut Anna Kretova, Amsterdam
- G-CAN CPPD Nomenclature Project Progress Report Silvia Sirotti, Milan
- + Hydrogen sulfide as a cartilage calcification limiting approach Sonia Nasi, Lausanne
- The Pro-Resolving Lipidome in Crystal-Induced Arthritis *Monica Guma, La Jolla*
- • Gout Genomics Megan Leask, Otago
- Trend to younger onset of hyperuricemia and gout in China *Mingshu Sun, Qingdao*
- Urate Transport by Vitamin C Transporters *Tappei Takada, Tokyo*
- An Artificial Intelligence-Based Gout Management System Reduced Chronic Kidney Disease Incident and Improved Target Serum Urate Achievement – *Changgui Li, Qingdao*
- Mechanism of XOR inhibition by allopurinol and its effect on purine metabolism *Mai Sekine, Tokyo; Kimiyoshi Ichida, Mentor*

17:30-17:45Adjourn and Final CommentsRobert Terkeltaub, Hyon Choi, Chio Yokose, Georgios Filippou

Friday, November 15, 2024

**Checkout/Departures** 

Virtual presentation
Virtual Pre-recorded presentation

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