# PANIC NMR 2023 CONFERENCE PROGRAM
*(As of Thursday, March 9, 2023)*

## SUNDAY, MARCH 12

| | |
|---|---|
| 10:00 a.m. to 7:00 p.m. | **Registration**<br>*Room: Acorn Ballroom Foyer (1st Floor)* |
| 10:30 a.m. to 12:30 p.m. | **JEOL USA Users Meeting** *(Refreshment Break Service Included)*<br>*Room: Acorn Ballroom (1st Floor)* |
| 12:30 p.m. to 1:30 p.m. | **Users Meeting Lunch**<br>*Room: Acorn Ballroom Foyer (1st Floor)* |
| 1:30 p.m. to 3:30 p.m. | **Mestrelab Research Users Meeting** *(Refreshment Break Service Included)*<br>*Room: Acorn Ballroom (1st Floor)* |
| 4:00 p.m. to 6:00 p.m. | **Bruker Corporation Users Meeting** *(Refreshment Break Service Included)*<br>*Room: Acorn Ballroom (1st Floor)* |
| 6:00 to 7:30 p.m. | **Welcome Reception in the Exhibit Hall with PANIC Exhibitors and PANIC Poster Presentations and Q&A** *All Poster Numbers*<br>*Room: Parthenon Ballroom (2nd Floor)* |
| 7:30 p.m. | **Dinner on Your Own** |



2023 Practical Applications of NMR in Industry Conference
PANIC
March 12 - 15
Nashville, Tennessee USA

## MONDAY, MARCH 13

**7:00 a.m. to 6:00 p.m.**　　**Registration**
*Room: Acorn Ballroom Foyer (1st Floor)*

**7:15 to 8:15 a.m.**　　**Breakfast on Your Own**

**8:15 a.m.**　　**PANIC Chairs' Opening Remarks**
*Room: Acorn Ballroom (1st Floor)*

**8:20 to 9:55 a.m.**　　**Session #1: Across Molecular Modalities Pharma**
*Session Chairs: Anuji Abraham and Amber Balazs*
*Room: Acorn Ballroom (1st Floor)*

8:25 a.m. – **NMR Nanoimaging Reveals Spatial Organization of Lipid Nanoparticle Drug Delivery System**
Speaker: Tatyana Polenova, University of Delaware

8:55 a.m. – **Characterization of Protein Degrader Ternary Complexes Using Protein-detected NMR Spectroscopy**
Speaker: Reto Horst, Pfizer, Inc

9:25 a.m. – **Determining the E/Z-Conformation of Photoisomerizable 5-Methylene Substituted Hydantoins by EXSIDE NMR Analysis**
Speaker: Christopher LeClair, National Center for Advancing Translational Sciences

**9:55 to 10:15 a.m.**　　**Coffee Break in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2nd Floor)*
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**10:15 a.m. to 11:50 a.m.**　　**Session #2: Living in the Materials World**
*Session Chairs: Ryan Nieuwendaal and Anuji Abraham*
*Room: Acorn Ballroom (1st Floor)*

10:20 a.m. – **Characterization of Pharmaceuticals and Health Products by Dynamic Nuclear Polarization Solid-State Nuclear Magnetic Resonance Spectroscopy**
Speaker: Aaron J. Rossini, Iowa State University

10:50 a.m. – **Analyzing Zeolite Catalyst Properties at an Atomic Level by Solid-State NMR**
Speaker: Brad Chmelka, UCSB Chemical Engineering

11:20 a.m. – **Solids NMR Methods for Disordered and Heterogeneous Materials in Energy Storage and Conversion Devices**
Speaker: Kris Harris, Louisiana Tech University
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**11:50 a.m. to 12:50 p.m.**　　**Luncheon in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2nd Floor)*

| | |
|---|---|
| 12:50 to 1:50 p.m. | **PANIC Poster Presentations and Q&A** *All Poster Numbers* |

*Room: Parthenon Ballroom Foyer (2ⁿᵈ Floor)*

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2:00 to 3:35 p.m.   **Session #3: Metabolites: Out of the Sandbox and Into the Real World**
*Session Chairs: Mark Dixon and Amy Freund*
*Room: Acorn Ballroom (1ˢᵗ Floor)*

2:05 p.m. – **Stable Isotope Tracing of Nutrients from Consumption to Energy Production in Humans: Understanding Metabolism in the Fanconi Anemia Population**
Speaker: Lindsey Romick Rosendale, Cincinnati Children's Hospital

2:35 p.m. – **New Tools For NMR-Metabolite Biomarker Discovery: Navigators, NUS and Signal Enhancement**
Speaker: Alessia Trimigno, Olaris Inc.

3:05 p.m. – **NMR-Based Metabolomics to Probe Small Molecule Chemical Pathways in the Brain: Towards Novel Treatments for Neurodegenerative Diseases**
Speaker: Fay Probert, The University of Oxford

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3:35 to 3:55 p.m.   **Coffee Break in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2ⁿᵈ Floor)*

3:55 to 5:30 p.m.   **Session #4: Low Field NMR**
*Session Chairs: Matthew Augustine and Frank Delaglio*
*Room: Acorn Ballroom (1ˢᵗ Floor)*

4:00 p.m. – **NMR & 3D X-ray Microtomography Research at the Interface Between Oil Exploration and Geological CO2 Storage**
Speaker: Tito Bonagamba, University of Sao Paulo – Brazil

4:30 p.m. – **Multiplatform Inter-Lab Study of wNMR for Characterization of Injectable Pharmaceutical Products**
Speaker: Katharine Briggs, University of Maryland School of Pharmacy

5:00 p.m. – **Quantification of Vaccine Components by Benchtop NMR**
Speaker: Adam Sutton, Merck

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5:30 p.m.   **Special Session: AMMRL: A Community-Based Resource for Those Who Provide NMR to Their Organizations**
Speaker: Marc ter Horst, University of North Carolina, Chapel Hill
*Room: Acorn Ballroom (1ˢᵗ Floor)*

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6:10 p.m.   **Dinner on Your Own**

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|---|---|
| 7:00 a.m. to 6:00 p.m. | **Registration**<br>*Room: Acorn Ballroom Foyer (1st Floor)* |
| 7:00 to 8:00 a.m. | **Travel Awardee Breakfast, sponsored by** AstraZeneca<br>*(Invitation Only)*<br>*Room: View on 2 (2nd Floor)* |
| 8:00 a.m. | **PANIC Chairs' Opening Remarks**<br>*Room: Acorn Ballroom (1st Floor)* |

8:05 to 9:40 a.m.   **Session #5 What we Taught the Machines: NMR in the Era of Deep Learning**
*Session Chairs: Frank Delaglio and Amy Freund*
*Room: Acorn Ballroom (1st Floor)*

8:10 a.m. – **Computational Structural Biology in the Era of Deep Learning**
Speaker: John Moult, University of Maryland

8:40 a.m. – **Using Deep Learning to Unleash the Full Potential of NMR Spectroscopy**
Speaker: D. Flemming Hansen, University College London

9:10 a.m. – **Machine Learning for the Automated Analysis of NMR Spectra of Small and Large Molecules at Low and High Field**
Speaker: Rafael Bruschweiler, Ohio State University
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9:40 to 10:00 a.m.   **Coffee Break in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2nd Floor)*

10:00 a.m. to 11:35 a.m.   **Session #6: Proton and Heteronuclear qNMR Solutions**
*Session Chairs: Klas Meyer and Amber Balazs*
*Room: Acorn Ballroom (1st Floor)*

10:05 a.m. – **Post-Purification Workflow with qNMR: Simplified, Sustainable, and Accurate Assay-Ready Liquid Stocks**
Speaker: Sylvain Demanze, AstraZeneca

10:35 a.m. – **The Role of 19F qNMR in Human Absorption, Distribution, Metabolism and Excretion Studies of PAXLOVID**
Speaker: Raman Sharma, Pfizer

11:05 a.m. – **Site-Specific Carbon Isotope Measurements of Vanillin Reference Materials by Nuclear Magnetic Resonance Spectroscopy**
Speaker: Mai Le, National Research Council Canada
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11:35 a.m. to 12:50 p.m.    Luncheon, Sponsored by BRUKER
**Integration of Benchtop NMR in PAT Orchestrations for Process Optimization and Intelligent Production on Demand**
Speaker: Anna Codina, Bruker Corporation
*Room: Acorn Ballroom (1ˢᵗ Floor)*

12:50 to 1:50 p.m.    **Dessert in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2ⁿᵈ Floor)*

1:50 to 2:35 p.m.    **PANIC Poster Presentations and Q&A** *All Poster Numbers*
*Room: Parthenon Ballroom Foyer (2ⁿᵈ Floor)*

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2:35 to 4:10 p.m.    **Session #7: Polymers, Petro, and Pores**
*Session Chairs: Sarah Mattler and Ryan Nieuwendaal*
*Room: Acorn Ballroom (1ˢᵗ Floor)*

    2:40 p.m. – **Intermolecular Dipolar Cross-Relaxation of Nano-Confined Fluids**
Speaker: Jin-Hong Chen, Aramco Americas

    3:10 p.m. **– Measurement of PVC Swelling for Coating Applications**
Speaker: Hattie Ring, 3M

    3:40 p.m. – **2D T1-T2 NMR to Determine Oil and Water Saturations in Shale**
Speaker: Stacey Althaus, Aramco Services

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4:10 to 4:40 p.m.    **Coffee Break and Awards Ceremony in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2ⁿᵈ Floor)*

4:40 to 6:15 p.m.    **Session #8: Food and Agriculture (but Mostly Weed)**
*Session Chairs: Matthew Augustine and Tim Bergeron*
*Room: Acorn Ballroom (1ˢᵗ Floor)*

    4:45 p.m. – **Application of NMR Spectroscopy in the Cannabis Industry - Small Steps for a Small Lab**
Speaker: John Edwards, Process NMR Assoc

    5:15 p.m. – **Creation of an NMR Library of H1-C13 Atomic Fingerprints of Pure Cannabis Components for Characterization of Cannabis and Cannabis Products**
Speaker: Alan Benesi, UC Irvine

    5:45 p.m. – **New Applications of Low Field Nuclear Magnetic Resonance in Soil Science**
Speaker: Etelvino Novotny, Embrapa (Brazillian Agricultural Research Co)

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6:25 p.m.    **Dinner on Your Own**

| | |
|---|---|
| 7:00 a.m. to 3:30 p.m. | **Registration**<br>*Room: Acorn Ballroom Foyer (1st Floor)* |
| 7:15 to 8:15 a.m. | **Breakfast on Your Own** |
| 8:15 a.m. | **PANIC Chairs' Opening Remarks**<br>*Room: Acorn Ballroom (1st Floor)* |
| 8:20 to 9:55 a.m. | **Session #9: Biophysical Biopharma**<br>*Session Chairs: Gennady Khirich and Subrata Mishra*<br>*Room: Acorn Ballroom (1st Floor)* |

8:25 a.m. – **NMR Characterization of Biologics**
Speaker: Mark McCoy, Merck & Co

8:55 a.m. – **Solid-State NMR Characterization of Lyophilized Formulations of Monoclonal Antibodies**
Speaker: Luke Arbogast, Eli Lilly & Company

9:25 a.m. – **Ranking mAb-excipient Interactions in Biologics Formulations by NMR Spectroscopy and Computational Approaches**
Speaker: Chunting Zhang, Bristol Myers Squibb

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| | |
|---|---|
| 9:55 to 10:10 a.m. | **Coffee Break**<br>*Room: Acorn Ballroom Foyer (1st Floor)* |
| 10:10 a.m. to 11:45 a.m. | **Session #10: Exotica**<br>*Session Chairs: Matthew Augustine and John Cort*<br>*Room: Acorn Ballroom (1st Floor)* |

10:15 a.m. – **First Demonstration of 1-13C Pyruvate Hyperpolarization via SABRE in-vivo**
Speaker: Austin Browning, North Carolina State University

10:45 a.m. – **Towards Using Portable NMR to Real-Time Track Biomass Cavitation Extraction**
Speaker: Brandon Cutler, UC Davis

11:15 a.m. – **Mapping the Vanadium Solvation Spectrum in Redox Flow Battery Electrolytes using Multinuclear NMR**
Speaker: Vijay Murugesan, PNNL

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11:45 a.m.          **Lunch**
Participants will eat their lunch in Acorn Ballroom during Session #11
*Room: Acorn Ballroom Foyer (1st Floor)*

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12:00 to 1:35 p.m.     **Session #11: Energy**
*Session Chairs: John Cort and Sarah Mattler*
*Room: Acorn Ballroom (1st Floor)*

12:05 p.m. – **Broadband Heteronuclear Correlation Techniques for Overcoming Magnetic Susceptibility Broadening in NMR of Coin Cell Batteries**
Speaker: Keith Fritzsching, Sandia

12:35 p.m. – **Quantitative Low-field 19F NMR Analysis of Carbonyl Groups in Bio-oils**
Speaker: Bridget Tang, Aston University

1:05 p.m. – **Elucidating Structural Characteristics of Renewable Products from a Two-step Ex Situ Hydropyrolysis Vapor Upgrading Process by One- and Two-dimensional NMR Spectroscopy**
Speaker: Jinfeng Lai, Phillips 66

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1:35 to 1:45 p.m.     **Break**

1:45 to 3:20 p.m.     **Session #12: Methodology/Processing**
*Session Chairs: Subrata Mishra and Mark Dixon*
*Room: Acorn Ballroom (1st Floor)*

1:50 p.m. – **Covariance NMR to Rescue Challenging Biomolecular Projects – Finding Needles in Haystacks**
Speaker: Dominique Frueh, Johns Hopkins School of Medicine

2:20 p.m. – **Design of NMR Supersequences for Small Molecule Application**
Speaker: Eriks Kupce, Bruker Corporation

2:50 p.m. – **NMR-Guided Directed Evolution**
Speaker: Ivan V. Korendovych, Syracuse University

3:20 p.m.          **Closing Remarks**
*Room: Acorn Ballroom (1st Floor)*

## *Thank You!*

# PANIC NMR 2023 CONFERENCE SPEAKERS

*(As of Monday, March 6, 2023)*

Stacey Althaus
Aramco Services
**2D T1-T2 NMR to Determine Oil and Water Saturations in Shale**

Luke Arbogast
Eli Lilly & Company
**Solid-State NMR Characterization of Lyophilized Formulations of Monoclonal Antibodies**

Alan Benesi
UC Irvine
**Creation of an NMR Library of H1-C13 Atomic Fingerprints of Pure Cannabis Components for Characterization of Cannabis and Cannabis Products**

Tito Bonagamba
University of Sao Paulo – Brazil
**NMR & 3D X-ray Microtomography Research at the Interface Between Oil Exploration and Geological $CO_2$ Storage**

Brandon Cutler
UC Davis
**Towards Using Portable NMR to Real-Time Track Biomass Cavitation Extraction**

Katharine Briggs
University of Maryland School of Pharmacy
**Multiplatform Inter-Lab Study of wNMR for Characterization of Injectable Pharmaceutical Products**

Austin Browning
North Carolina State University
**First Demonstration of 1-13C Pyruvate Hyperpolarization via SABRE in-vivo**

Rafael Bruschweiler
Ohio State University
**Machine Learning for the Automated Analysis of NMR Spectra of Small and Large Molecules at Low and High Field**

Jin-Hong Chen
Aramco Americas
**Intermolecular Dipolar Cross-Relaxation of Nano-Confined Fluids**

Brad Chmelka
UCSB Chemical Engineering
**Analyzing Zeolite Catalyst Properties at an Atomic Level by Solid-State NMR**

Anna Codina
Bruker Corporation
**Integration of Benchtop NMR in PAT Orchestrations for Process Optimization and Intelligent Production on Demand**

Sylvain Demanze
AstraZeneca
**Post-Purification Workflow with qNMR: Simplified, Sustainable, and Accurate Assay-Ready Liquid Stocks**

John Edwards
Process NMR Assoc
**Application of NMR Spectroscopy in the Cannabis Industry - Small Steps for a Small Lab**

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**Broadband Heteronuclear Correlation Techniques for Overcoming Magnetic Susceptibility Broadening in NMR of Coin Cell Batteries**

Dominique Frueh
Johns Hopkins School of Medicine
**Covariance NMR to Rescue Challenging Biomolecular Projects – Finding Needles in Haystacks**

D. Flemming Hansen
University College London
**Using Deep Learning to Unleash the Full Potential of NMR Spectroscopy**

Kris Harris
Louisiana Tech University
**Solids NMR Methods for Disordered and Heterogeneous Materials in Energy Storage and Conversion Devices**

Reto Horst
Pfizer, Inc
**Characterization of Protein Degrader Ternary Complexes Using Protein-detected NMR Spectroscopy**

Ivan V. Korendovych
Syracuse University
**NMR-Guided Directed Evolution**

Eriks Kupce
Bruker Corporation
**Design of NMR Supersequences for Small Molecule Application**

Jinfeng Lai
Phillips 66
**Elucidating Structural Characteristics of Renewable Products from a Two-step Ex Situ Hydropyrolysis Vapor Upgrading Process by One- and Two-dimensional NMR Spectroscopy**

## CONFERENCE SPEAKERS *(Continued)*

Mai Le
National Research Council Canada
**Site-Specific Carbon Isotope Measurements of Vanillin Reference Materials by Nuclear Magnetic Resonance Spectroscopy**

Christopher LeClair
National Center for Advancing Translational Sciences
**Determining the E/Z-Conformation of Photoisomerizable 5-Methylene Substituted Hydantoins by EXSIDE NMR Analysis**

Mark McCoy
Merck & Co
**NMR Characterization of Biologics**

John Moult
University of Maryland
**Computational Structural Biology in the Era of Deep Learning**

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Embrapa (Brazillian Agricultural Research Co)
**New Applications of Low Field Nuclear Magnetic Resonance in Soil Science**

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University of Delaware
**NMR Nanoimaging Reveals Spatial Organization of Lipid Nanoparticle Drug Delivery System**

Fay Probert
The University of Oxford
**NMR-Based Metabolomics to Probe Small Molecule Chemical Pathways in the Brain: Towards Novel Treatments for Neurodegenerative Diseases**

Hattie Ring
3M
**Measurement of PVC Swelling for Coating Applications**

Lindsey Romick Rosendale
Cincinnati Children's Hospital
**Stable Isotope Tracing of Nutrients from Consumption to Energy Production in Humans: Understanding Metabolism in the Fanconi Anemia Population**

Aaron J. Rossini
Iowa State University
**Characterization of Pharmaceuticals and Health Products by Dynamic Nuclear Polarization Solid-State Nuclear Magnetic Resonance Spectroscopy**

## CONFERENCE SPEAKERS *(Continued)*

Raman Sharma
Pfizer
**The Role of 19F qNMR in Human Absorption, Distribution, Metabolism and Excretion Studies of PAXLOVID**

Adam Sutton
Merck
**Quantification of Vaccine Components by Benchtop NMR**

Bridget Tang
Aston University
**Quantitative Low-field 19F NMR Analysis of Carbonyl Groups in Bio-oils**

Marc ter Horst
University of North Carolina, Chapel Hill
**AMMRL: A Community-Based Resource for Those Who Provide NMR to Their Organizations**

Alessia Trimigno
Olaris Inc.
**New Tools For NMR-Metabolite Biomarker Discovery: Navigators, NUS and Signal Enhancement**

Chunting Zhang
Bristol Myers Squibb
**Ranking mAb-excipient Interactions in Biologics Formulations by NMR Spectroscopy and Computational Approaches**

Are you interested in accessing the conference's full session abstracts? Head to
https://panicnmr.com/speaker-abstracts-2023-nashville/

Are you interested in checking out the conference's poster abstracts? Head to
https://panicnmr.com/poster-abstracts-2023-nashville/

# PANIC NMR 2023 POSTER PRESENTATIONS

*(As of Sunday, March 12, 2023)*

1. **When Does Computer-Assisted Structure Elucidation (CASE) Spare You from Recording (IN)ADEQUATE?**
   Dimitris Argyropoulos, ACD Labs

2. **J-Couplings in Siloxanes Measured with INEPT-PIETA**
   Jay Baltisberger, Wacker Chemical Corporation

3. **Operando Multidimensional NMR Monitoring of Flow Photochemical Reactions**
   Margherita Bazzoni, CEISAM, Nantes Universite, cnrs

4. **Reference Materials for Quality Assurance/Control in Metabolomics Research Applications**
   Fabio Casu, National Institute of Standards and Technology

5. **New Product development; From the What to The Why**
   Tomris Coban, Kingston University / KASNMR Ltd

6. **The Importancy of NMR for Oil and Fats Industry After Lethal Yellowing and Trans-fat Banishment**
   Daniel Consalter, Fine Instrument Technology

7. **Ultraclean Pure Shift NMR with Optimal Water Suppression for Analysis of Aqueous Pharmaceuticals Mixtures**
   Guilherme Dal Poggetto, Merck & Co.

8. **Quantitative NMR Spectroscopy - Alcoholic, Non-Alcoholic and Low-Alcohol Beverages - Quality Control**
   John C. Edwards, Process NMR Associates, LLC

9. **Quantitative NMR - Fraudulent Food and Nutritional Supplement Analysis - A World of ChemisTwin: A Novel Online Platform for Electronic Reference Materials**
   John C. Edwards, Process NMR Associates, LLC

10. **Single-Sided NMR for the Characterization of Hydrogels**
    Daniel Gruber, Colorado University Boulder

11. **Assay Determination of Pharmaceutical Materials by Solution-State qNMR**
    Akshar Gupta, Vertex Pharmaceuticals

12. **A Structural Study of a Cryptococcus neoformans GXM Synthetic Decasaccharide**
    Audra Hargett, FDS - HHS

13. **Adaptation of Flow-NMR to Heterogeneous Reactions**
    Heike Hofstetter, University of Wisconsin – Madison

## POSTER PRESENTATIONS *(Continued)*

14. **Detection of Robusta Coffee in Arabica coffee by 1H NMR Spectroscopy**
Diganta Kalita, VDF-FutureCeuticals

15. **Using MRI to Study High Pressure Nutrient Infusion**
Julia Kerr, Lawrence Livermore National Laboratory

16. **A High-Throughput HPLC-MS/NMR Platform in Pharmaceutical Industry**
Martin Koos, Pfizer Inc.

17. **Probing the Structure and Dynamics of Ipglycermide Cyclic Peptide Analogues by NMR Spectroscopy**
Samuel Kotler, National Center for Advancing Translational Sciences, NIH

18. **Investigation of Actinometers for LED NMR Spectroscopy**
Nuwanthik Dilrukshi Kumarage, University North Carolina, Chapel Hill

19. **Catalyst and Methanol Free Injection of SABRE Hyperpolarized [1-13C]Pyruvate Detected In Vivo**
Keilian Macculoch, North Carolina State University

20. **High Pressure Vapor Liquid Equilibrium Measurements of binary hydrocarbon and water mixtures using Nuclear Magnetic Resonance (NMR) Spectroscopy**
Samantha Miller, National Institute for Standards and Technology (NIST)

21. **pH-Dependent Amyloid Aggregation of the Pmel17 Repeat Domain Characterized by NMR**
Daniel Morris, NIH

22. **Droplet Size Analysis of Food Emulsions using TD-NMR: Multimodal and Unimodal Distribution**
Eduardo Nascimento, Bruker BioSpin GmbH

23. **Quantitative Composition Analysis of Industrially Relevant Complex Mixtures with Benchtop 1H NMR Spectroscopy**
Sergio Alejandro Ortiz-Restrepo, Institute of Technical & Molecular Chemistry at RWTH Aachen University, Germany

24. **Using qNMR to Study the Kinetics of Reactions of Thioesters in Aqueous Solution**
Desmond Boateng Ofosu, St. Louis University

25. **ChemisTwin: A Novel Online Platform for Electronic Reference Materials**
Albert Farre Perez, MiliporeSigma

26. **Benchtop Nuclear Magnetic Resonance Assays According to United States Pharmacopoeia - National Formulary Monographs**
Susie Riegel, Nanalysis

27. **NMR-Informed Kinetic Monte Carlo Models for Evaluating Polysaccharide Reactivity**
Ben Reiner, Dow Chemical

28. **New Product Development; From the What to the Why**
Cameron Robertson, Kingston University / KASNMR Ltd

29. **Development of An External Calibration qNMR Workflow in Small-Molecule Pharmaceutical R&D**
    David Russell, Genentech

30. **Developing an Automated Sample Preparation Workflow for NMR-Based Analysis Platforms**
    Savanah L. Saldana-Shumaker, NIH/NCATS

31. **NMR a Valuable Tool for Quality Control in the Vaccine Industry – Comparison of qNMR with ELISA Immunoassay**
    Patricia Sepulcri, Sanofi-Vaccine Division

32. **Measuring the Diffusivity of Aqueous Polyvinylpyrrolidone (PVP) Solutions Using Unilateral NMR**
    Cassandra Stoffer, National Institute of Standards and Technology

33. **Newly Implemented Techniques for the Analysis of Diverse Applications with the Spinsolve**
    Curt Zanelotti, Magritek

34. **Quantification of Low-level Impurities using JASON**
    Iain Day, JEOL – UK

35. **Liquid-Observed Vapor Exchange (LOVE) NMR: A Method for Probing Dehydrated Protein Structure at the Residue Level**
    Candice Crilly, University of California, Santa Barbara

###

This year, the Poster Presentations **will not** alternate by odd and even numbers.

To ensure that each presenter has ample opportunity to showcase their work, all poster presentations will take place during the dates/times listed below.

**Sunday, March 12**
6:00 to 7:30 p.m.
**Welcome Reception in the Exhibit Hall with PANIC Exhibitors**
*Room: Parthenon Ballroom (2nd Floor)*
**and**
**and PANIC Poster Presentations and Q&A**
*Room: Parthenon Ballroom Foyer (2nd Floor)*

**Monday, March 13**
12:50 to 1:50 p.m.
**PANIC Poster Presentations and Q&A**
*Room: Parthenon Ballroom Foyer (2nd Floor)*

**Tuesday, March 14**
1:50 to 2:35 p.m.
**PANIC Poster Presentations and Q&A**
*Room: Parthenon Ballroom Foyer (2nd Floor)*

# THANK YOU TO OUR 2023 SPONSORS AND EXHIBITORS

*(As of Thursday, March 9, 2023)*

## SUPERCONDUCTOR

**(Booth #1) Bruker** offers advanced preclinical imaging solutions for a broad spectrum of application areas, such as oncology, neurology, cardiology, inflammation, infectious diseases, functional and anatomical neuroimaging, cardiac imaging and stroke models. Our range of imaging modalities includes PET/SPECT/CT Imaging, MRI, PET/MRI Imaging, microCT, Multiphoton and Intravital Confocal Microscopy and MALDI Imaging

www.bruker.com

## RESONATOR

**(Booth #4) JEOL USA Inc.** has more than seven decades of experience in manufacturing top-of-the line scientific equipment for MassSpec, TEM, SEM, NMR and LHC to name a few. JEOL offers NMR systems that cover the entire range of modern NMR methods, from routine small molecule studies to novel solids and biomolecular applications.

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## COSY

**(Booth #3) iChrom Solutions.** For over 15 years, iChrom Solutions has been providing answers for laboratories needing Integrated Laboratory Automation. Beginning in the early 2000's, iChrom has been the exclusive North American dealer for automated, online SPE sample preparation products from Spark Holland in the Netherlands.

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**(Booth #10) Mestrelab Research** offers innovative scientific software for analytical chemistry data processing & reporting, solutions for automating data workflows, ELNs, request-to-result solutions, knowledge-based systems, and AI-ready data management. Our tools support NMR, LC-GC/MS, and optical spectroscopic data, extracting meaningful chemical information and offering data storage & intelligent database mining.

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**US Pharmacopeia (USP)** is an independent, scientific nonprofit organization that has focused on building trust in the supply of safe, quality medicines since 1820. We are a public health organization that uses rigorous science and public quality standards setting to protect patient safety and improve global health.

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**Cryomech** designs and manufactures cryocoolers and other cryogenics equipment. Cryomech's Helium Recovery Systems have been very useful for NMR users to conserve precious liquid helium. Since 1963, Cryomech has provided customers with Gifford-McMahon and Pulse Tube Cryocoolers and Custom-built Cryostats. Our complete offering can be viewed on: www.cryomech.com

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## INDIVIDUAL SPONSOR
**Luciano Mueller**

## STUDENT TRAVEL GRANT AWARD SPONSOR

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www.astrazeneca.com

## EXHIBITOR

**(Booth #8)** **Alegre Science Inc** is a provider of NMR equipment and technology for imaging, spectroscopy and industrial analysis. We have the singular goal to provide software, consulting and technology which gratifies our clients. Our brands include Q.One, Pure Devices, Turbospec, Fine Instruments, Droplet Lab as well as Alegre Science branded products.

www.alegrescience.com

**(Booth #9)** **Magritek** is the global leader in manufacturing cryogen-free benchtop Nuclear Magnetic Resonance (NMR) spectrometers for the analytical instrument market. Magritek's revolutionary Spinsolve family of benchtop NMR models offer the highest sensitivity and resolution available in the market.

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**(Booth #5)** **Oxford Instruments America Inc.** offers a range of benchtop NMR spectroscopy and time domain (TD-NMR) relaxometry solutions to enable novel research and optimize quality control. Our X-Pulse NMR spectrometers, with unique broadband multi-nuclei selection, identify molecular structure and monitor reaction dynamics. MQC+ analyzers provide fast, simple and accurate QA/QC solutions in multiple industries.

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