

## Frontiers of NMR in Life Sciences (C5)

Scientific Organizers: Kurt Wüthrich, Michael Sattler and Stephen W. Fesik

March 12–16, 2017

Keystone Resort, Keystone, Colorado, USA

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### DEADLINES:

Scholarship Deadline: Nov 15, 2016 [[details](#)]

Discounted Abstract Deadline: Nov 15, 2016 [[details](#)]

Abstract Deadline: Dec 13, 2016 [[details](#)]

Discounted Registration Deadline: Jan 13, 2017 [[details](#)]

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## Conference Program [Print](#) | [View meeting in 12 hr \(am/pm\) time](#)

The meeting will begin on Sunday, March 12 with registration from 16:00 to 20:00 and a welcome mixer from 18:00 to 20:00. Conference events conclude on Thursday, March 16 with a closing plenary session from 17:00 to 19:00, followed by a social hour and entertainment. We recommend return travel on Friday, March 17 in order to fully experience the meeting.

### SUNDAY, MARCH 12

16:00–20:00	<b>Arrival and Registration</b>	<a href="#">Keystone Lodge Lobby</a>
18:00–20:00	<b>Welcome Mixer</b> No registration fees are used to fund alcohol served at this function.	<a href="#">Keystone Lodge-Bighorn Bar</a>

### MONDAY, MARCH 13

07:00–08:00	<b>Breakfast</b>	<a href="#">Longs/Quandary Peaks</a>
08:00–09:00	<b>Welcome and Keynote Address</b> <a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017  * Kurt Wüthrich, ETH Zürich, Switzerland / The Scripps Research Institute, USA  Lewis E. Kay, University of Toronto, Canada NMR: <i>Why Bother?</i>	<a href="#">Grays Peak</a>
09:00–11:15	<b>Innovative Solution NMR Methods for Studying Biological Macromolecules</b> <a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017  * Michael Sattler, Helmholtz Zentrum München & Technische Universität München, Germany  <a href="#">Dominique P. Frueh</a> , Johns Hopkins University School of	<a href="#">Grays Peak</a>

Medicine, USA

*Invited Short Talk: Overcoming Challenges in NMR Studies of Large and Dynamic Nonribosomal Peptide Synthetases*

#### Coffee Break

**Wolfgang Peti**, University of Arizona, USA

*Invited Short Talk: Using Dynamics and Structure to Understand Allostery in Signaling Enzymes*

**Haribabu Arthanari**, Harvard Medical School, USA

*Invited Short Talk: Increasing Resolution of Backbone Experiments: Thinking Beyond the Nyquist Grid*

**Christian Griesinger**, Max Planck Institute for Biophysical Chemistry, Germany

*NMR Based Structural Biology in Immunity and Neurodegeneration/Protectoin*

**Christian Griesinger**, Max Planck Institute for Biophysical Chemistry, Germany

*NMR Based Structural Biology in Immunity and Neurodegeneration/Protectoin*

11:15–17:00

#### On Own for Lunch

11:15–13:00

#### Poster Setup

[Longs/Quandary Peaks](#)

13:00–22:00

#### Poster Viewing

[Longs/Quandary Peaks](#)

16:30–17:00

#### Coffee Available

[Longs Peak Foyer](#)

17:00–19:00

#### Use of NMR in Metabolic Profiling

[Grays Peak](#)

[Registered attendees](#) can view abstracts starting on 02/12/2017

\* **Jane Dyson**, The Scripps Research Institute, USA

**John Lindon†**, Imperial College London, UK

*Talk Title to be Announced*

**Rafael Brüschweiler**, Ohio State University, USA

*NMR and NMR/MS Hybrid Approaches for Targeted and Untargeted Metabolomics*

**Michael A. Kennedy**, Miami University, USA

*NMR Based Metabolic Profiling of Human Diseases*

19:00–20:00

#### Social Hour with Lite Bites

[Longs/Quandary Peaks](#)

No registration fees are used to fund alcohol served at this function.

19:30–22:00

#### Poster Session 1

[Longs/Quandary Peaks](#)

### TUESDAY, MARCH 14

07:00–08:00

#### Breakfast

[Longs/Quandary Peaks](#)

08:00–11:00

#### Protein-Nucleic Acid Interactions

[Grays Peak](#)

[Registered attendees](#) can view abstracts starting on 02/12/2017

\* **Robert Kaptein**, University of Utrecht, Netherlands

**Frédéric H.T. Allain**, ETH Zurich, Switzerland

*Structures of Protein RNA Complexes using Hybrid Structural Approaches*

**Hashim M. Al-Hashimi**, Duke University, USA

*Visualizing Transient Watson-Crick Mispairs in DNA and RNA Duplexes*

#### Coffee Break

**Pedro Serrano-Navarro**, The Scripps Research Institute, USA

*Invited Short Talk: In vitro Studies of Arginine-serine-rich Domains*

**Teresa Carlomagno**, Universität Hannover, Germany  
*Invited Short Talk: ssNMR of RNA and RNP Complexes*

**Michael Sattler**, Helmholtz Zentrum München & Technische Universität München, Germany  
*Conformational Dynamics of Biomolecular Recognition in Gene Regulation*

11:00–14:30	<b>On Own for Lunch</b>	
11:00–13:00	<b>Poster Setup</b>	<a href="#">Longs/Quandary Peaks</a>
13:00–22:00	<b>Poster Viewing</b>	<a href="#">Longs/Quandary Peaks</a>
14:30–16:30	<b>Workshop 1: Automation in Protein NMR Structure Determination and Other Hot Topics</b>	<a href="#">Grays Peak</a>
	* <b>Martin A. Billeter</b> , University of Gothenburg, Sweden	
	<b>Short Talks Chosen from Abstracts</b>	
16:30–17:00	<b>Coffee Available</b>	<a href="#">Longs Peak Foyer</a>
17:00–19:00	<b>Integrative Structural Biology</b>	<a href="#">Grays Peak</a>
	<a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017	
	* <b>John L. Markley</b> , University of Wisconsin-Madison, USA	
	<b>Andrej Sali</b> , University of California, San Francisco, USA <i>Integrative Modeling of Biomolecular Assembly Structures and Pathways</i>	
	<b>Juli Feigon</b> , University of California, Los Angeles, USA <i>Integrative Structural Biology of Telomerase</i>	
	<b>Michael Nilges</b> , Institut Pasteur, France <i>Integrative Structural Biology of a Type II Secretion Pseudopilus</i>	
19:00–20:00	<b>Social Hour with Lite Bites</b>	<a href="#">Longs/Quandary Peaks</a>
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19:30–22:00	<b>Poster Session 2</b>	<a href="#">Longs/Quandary Peaks</a>

## WEDNESDAY, MARCH 15

07:00–08:00	<b>Breakfast</b>	<a href="#">Longs/Quandary Peaks</a>
08:00–11:00	<b>NMR in Drug Research</b>	<a href="#">Grays Peak</a>
	<a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017	
	* <b>Michael F. Summers</b> , HHMI/University of Maryland, Baltimore County, USA	
	<b>Wolfgang Jahnke</b> , Novartis Institutes for BioMedical Research, Switzerland <i>The Renaissance of NMR Structure Determination for Drug Design</i>	
	<b>Dorothee Kern</b> , Brandeis University/HHMI, USA <i>Evolution of Protein Dynamics Over 3.5 Billion Years at the Heart of Enzyme Catalysis</i>	
	<b>Coffee Break</b>	
	<b>Stephen W. Fesik</b> , Vanderbilt University School of Medicine, USA <i>Cancer Drug Discovery Using Fragment-Based Methods</i>	
	<b>Robert G. Brinson</b> , National Institute of Standards and	

Technology, USA

*Practical NMR Applications for Structural Assessment of Monoclonal Antibody Therapeutics*

11:00–14:30	<b>On Own for Lunch</b>	
11:00–13:00	<b>Poster Setup</b>	<a href="#">Longs/Quandary Peaks</a>
13:00–22:00	<b>Poster Viewing</b>	<a href="#">Longs/Quandary Peaks</a>
14:30–16:30	<b>Workshop 2: NMR in Integrative Structural Biology Projects and Other Hot Topics</b>	<a href="#">Grays Peak</a>
	* Ad Bax, NIDDK, National Institutes of Health, USA	
	Short Talks Chosen from Abstracts	
16:30–17:00	<b>Coffee Available</b>	<a href="#">Longs Peak Foyer</a>
17:00–19:00	<b>Advances in Solid State NMR Methods in Biology</b> <a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017	<a href="#">Grays Peak</a>
	* <b>Arthur G. Palmer, III</b> , Columbia University, USA	
	<b>Bernd Reif</b> , Technische Universität München, Germany <i>Soluble Protein Complexes Investigated by MAS Solid-State NMR</i>	
	<b>Marc Baldus</b> , Utrecht University, Netherlands <i>Cellular Solid-State NMR Applied to Membrane Protein Complexes</i>	
	<b>Paul Schanda</b> , Institut de Biologie Structurale, France <i>Invited Short Talk: Functional Dynamics in a Half-Megadalton Large Enzyme Complex as Seen by Solid-State NMR</i>	
	<b>Christopher P. Jaroniec</b> , Ohio State University, USA <i>Invited Short Talk: Structural Studies of Y145Stop Prion Protein Amyloids</i>	
19:00–20:00	<b>Social Hour with Lite Bites</b> No registration fees are used to fund alcohol served at this function.	<a href="#">Longs/Quandary Peaks</a>
19:30–22:00	<b>Poster Session 3</b>	<a href="#">Longs/Quandary Peaks</a>

**THURSDAY, MARCH 16**

07:00–08:00	<b>Breakfast</b>	<a href="#">Longs/Quandary Peaks</a>
08:00–11:00	<b>In-Cell NMR and Intrinsically Disordered Proteins</b> <a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017	<a href="#">Grays Peak</a>
	* <b>Astrid Gräslund</b> , Stockholm University, Sweden	
	<b>Ichio Shimada</b> , University of Tokyo, Japan <i>Studying Proteins Inside Eukaryotic Cells in NMR</i>	
	<b>Richard W. Kriwacki</b> , St. Jude Children's Research Hospital, USA <i>Structure &amp; Dynamics of IDPs from NMR; Applications from Small Molecule Interactions to Phase Separation</i>	
	<b>Coffee Break</b>	
	<b>Peter E. Wright</b> , The Scripps Research Institute, USA <i>NMR Characterization of Intrinsically Disordered Regulatory Proteins</i>	
	<b>Martin Blackledge</b> , Institut de Biologie Structurale, France <i>Large Scale Conformational Dynamics and Biomolecular Function from NMR</i>	
11:00–17:00	<b>On Own for Lunch</b>	

16:30–17:00	<b>Coffee Available</b>	<a href="#">Longs Peak Foyer</a>
17:00–18:45	<p><b>Solution NMR Studies of Membrane Proteins</b></p> <p><a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017</p> <p>* <b>Stephen W. Fesik</b>, Vanderbilt University School of Medicine, USA</p> <p><b>Kurt Wüthrich</b>, ETH Zürich, Switzerland / The Scripps Research Institute, USA <i>NMR Studies of G Protein-coupled Receptors (GPCR) in Solution</i></p> <p><b>Daniel Nietlispach</b>, University of Cambridge, UK <i>Invited Short Talk: Investigating the Dynamic Landscape of GPCRs</i></p> <p><b>Katherine A. Henzler-Wildman</b>, University of Wisconsin at Madison, USA <i>Invited Short Talk: The Small Multidrug Resistance Transporter EmrE Sacrifices Efficiency to Achieve Promiscuity</i></p> <p><b>Gerhard Wagner</b>, Harvard Medical School, USA <i>Membrane Protein Studies in Micelles and Nanodiscs</i></p>	<a href="#">Grays Peak</a>
18:45–19:00	<p><b>Meeting Wrap-Up: Outcomes and Future Directions (Organizers)</b></p> <p><a href="#">Registered attendees</a> can view abstracts starting on 02/12/2017</p>	<a href="#">Grays Peak</a>
19:00–20:00	<p><b>Social Hour with Lite Bites</b></p> <p>No registration fees are used to fund alcohol served at this function.</p>	<a href="#">Longs/Quandary Peaks</a>
20:00–23:00	<p><b>Entertainment</b></p> <p>Entertainment is not subsidized by conference registration fees nor any U.S. federal government grants. Funding for this expense is provided by other revenue sources.</p>	<a href="#">Longs/Quandary Peaks</a>

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**FRIDAY, MARCH 17**


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**Departure**

\*Session Chair †Invited, not yet responded.

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