

7-14-2019

Conference Program

Samiul Amin
Manhattan College, USA

Paolo Arosio
ETHZ, Switzerland

Miguel Rodrigues
University of Lisbon, Portugal

Follow this and additional works at: https://dc.engconfintl.org/bpcf_iii



Part of the [Biomedical Engineering and Bioengineering Commons](#)

Recommended Citation

Samiul Amin, Paolo Arosio, and Miguel Rodrigues, "Conference Program" in "Biological and Pharmaceutical Complex Fluids III: Protein Self-Assembly, Rheology and Interfacial Properties", Samiul Amin, Manhattan College, USA Miguel Rodrigues, University of Lisbon, Portugal Paolo Arosio, ETHZ, Switzerland Eds, ECI Symposium Series, (2019). https://dc.engconfintl.org/bpcf_iii/34

This Article is brought to you for free and open access by the Proceedings at ECI Digital Archives. It has been accepted for inclusion in Biological and Pharmaceutical Complex Fluids III: Protein Self-Assembly, Rheology and Interfacial Properties by an authorized administrator of ECI Digital Archives. For more information, please contact franco@bepress.com.

Program

**Biological and Pharmaceutical Complex Fluids III: Protein
Self-Assembly, Rheology and Interfacial Properties**

July 14-18, 2019

Schloss Hernstein
Hernstein, Austria

Conference Chairs

Samiul Amin, Manhattan College, USA
Paolo Arosio, ETHZ, Switzerland
Miguel Rodrigues, University of Lisbon, Portugal



Engineering Conferences International

32 Broadway, Suite 314
New York, NY 10004, USA
Phone: 1-212-514-6760

www.engconfintl.org – info@engconfintl.org

Seminarhotel Schloss Hernstein

Berndorfer Strasse 32

2560 Hernstein

Austria

Tel: +43 2633 47 251

Fax: +43 2633 47 251 95

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines.

ECI BOARD MEMBERS

Barry C. Buckland, President
Mike Betenbaugh
Joye Bramble
Nick Clesceri
Peter Gray
Michael King
Raymond McCabe
Eugene Schaefer
P. Somasundaran

Chair of ECI Conferences Committee: Nick Clesceri

ECI Technical Liaison for this conference: Herman Bieber

ECI Executive Director: Barbara K. Hickernell

ECI Associate Director: Kevin M. Korpics

Organizing Committee

Karin Anderson, Pfizer

Mark Auty, Mondalez, UK

Daniel G. Bracewell, University College London, UK

Robin Curtis, University of Manchester, UK

Tapan Das, Bristol-Myers Squibb, USA

Deniz Zeynal Gunes, Nestle, Switzerland

Michael Marlow, Boehringer-Ingelheim, USA

Christopher Roberts, University of Delaware, USA

Shahid Uddin, Medimmune, UK

Erik van der Linden, Wageningen University and Research, Netherlands

Previous conference in this series

***Biological & Pharmaceutical Complex Fluids:
New Trends in Characterizing Microstructure, Interactions & Properties***
July 30 - Aug 3, 2012
Tomar, Portugal

Conference Chairs:
Samiul Amin, Yet2.com Europe Ltd.
Michael Solomon, University of Michigan, USA

***Biological and Pharmaceutical Complex Fluids II: Novel Trends in Characterizing
Interactions, Microstructure and Rheology***
August 10-14, 2014
Durham, North Carolina, USA

Conference Chairs:
Samiul Amin, Malvern Instruments, USA,
Tapan Das, Bristol Meyers Squibb, USA

Sunday, July 14, 2019

- 16:30 - 17:30 Conference check-in
- 17:30 - 19:00 Reception and Wine Tasting in the historic castle
- 19:00 - 20:30 Dinner

Room locations and notes

- Technical sessions will be in the Studio.
- Meals will be in the Panorama Restaurant.
- Social Hours will be in the bar behind the Panorama Restaurant.
- Audio, still photo and video recording by any device (e.g., cameras, cell phones, laptops, PDAs, watches) is strictly prohibited during the technical sessions, unless the author and ECI have granted prior permission.
- Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).
- Speakers – Please leave discussion time as previously directed by your session chair.
- Please do not smoke at any conference functions.
- Turn your mobile telephones to vibrate or off during technical sessions.
- Please write your name on your program so that it can be returned to you if lost or misplaced.
- After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.
- Emergency Contact Information: Because of privacy concerns, ECI does not collect or maintain emergency contact information for conference participants. If you would like to have this information available in case of emergency, please use the reverse side of your name badge.

Monday, July 15, 2019

- 07:30 - 08:45 Breakfast buffet
- 08:45 - 09:00 Welcome from Conference Chairs
Paolo Arosio, Miguel Rodrigues
- 09:00 - 10:30 **Session 1: Protein-Protein Interactions**
Chair: Robin Curtis
- 09:00 - 09:30 Marco van de Weert, University of Copenhagen, Denmark
The challenge of formulating high concentration therapeutic peptides
- 09:30 - 10:00 Frank Schreiber, University of Tübingen, Germany
Tuning protein behavior by multivalent charges: Aggregation, diffusion, and adsorption
- 10:00 - 10:30 Olga Matsarskaia, University of Tübingen, Germany
Ion-specific effects for tuning the phase behavior of protein solutions
- 10:30 - 11:00 Coffee break
- 11:00 - 12:30 **Session 2: Protein Aggregation: Thermodynamics, Kinetics & Interactions**
Chair: Miguel Rodrigues
- 11:00 - 11:30 Peter Schurtenberger, Lund University, Sweden
A colloid approach to self-assembling antibodies
- 11:30 - 12:00 Komla AKO, LRP, France
Concept on self-assembly and structure of globular protein fluids
- 12:00 - 12:30 Anna Stradner, Lund University, Sweden
Arrest transitions in protein solutions – insight from combining scattering, microrheology, and computer simulations
- 13:00 - 14:30 Lunch
- 14:30 - 15:30 Optional tour of historic areas of Schloss Hernstein (led by Director Jan Soucek)
- 14:30 - 16:30 Networking / free time / *ad hoc* sessions
- 16:30 - 17:00 Afternoon coffee break
- 17:00 - 18:30 **Session 3: Protein Aggregation: Thermodynamics, Kinetics & Interactions**
Chair: Paolo Arosio
- 17:00 - 17:30 Jingtao Zhang, Merck & Co. Inc., USA
Aggregation challenges in the formulation development of multi-dose peptide products
- 17:30 - 18:00 Vito Foderà, University of Copenhagen, Denmark
Linking protein-protein interactions to the diversity of amyloid-like aggregates
- 18:00 - 18:30 Richard Melien, Martin-Luther-Universität Halle-Wittenberg
Activation energies define kinetic (in)stabilities of therapeutic antibodies
- 18:30 - 19:00 Free time
- 19:00 - 21:30 Dinner followed by Social Hour

Tuesday, July 16, 2019

07:30 - 08:30 Breakfast buffet

Session 4: Protein Novel Applications

Chair: Deniz Gunes

08:30 - 09:00 Cait MacPhee, University of Edinburgh, UK
Bacterial surface layer proteins: a new class of 'smart' switchable surface-active proteins

09:00 - 09:30 Elke Scholten, Wageningen University, Netherlands
Protein aggregates as building blocks for oil structuring

09:30 - 10:00 Nikolai Denkov, Sofia University, Bulgaria
Protein-stabilized emulsions and nanoemulsions

10:00 - 10:30 Clément de Loubens, CNRS, France
Interfacial rheology of microcapsules and dynamics in flow

10:30 - 11:00 Coffee break

Session 5: Novel Characterization

Chair: Robin Curtis

11:00 - 11:30 Paolo Arosio, ETHZ, Switzerland
Microfluidic and nanotechnology based assays for the development of safe biopharmaceuticals

11:30 - 12:00 Hristo Svilenov, LMU München, Germany
Biophysical characterization approaches to aid the selection of protein formulations by predicting their physical stability during long-term storage

12:00 - 12:30 Sarah Hedberg, Imperial College London, UK
Predicting the stability of biotherapeutics in formulation

12:30 - 13:00 Luke Clifton, Rutherford Appleton Laboratory, UK
Neutron scattering: A versatile tool for probing complex solutions and surfaces

13:00 - 14:30 Lunch

14:30 - 16:30 Tour of Pecher (resin) Museum in Hernstein – recognized by UNESCO as an “intangible cultural heritage” (short walk to the museum; tour in English)

16:30 - 17:00 Afternoon coffee break

Session 6: Novel Characterization

Chair: Peter Schurtenburger

17:00 - 17:30 Hanna Jankevics, Malvern Panalytical Ltd, UK
Key stability attributes used from target protein development to process optimization

17:30 - 18:00 Jeffrey Bodycomb, Horiba, USA
Multi-laser nanoparticle tracking analysis (NTA): Evaluating protein aggregation

18:00 - 18:30 Lorenzo Gentiluomo, Wyatt Technology Europe, Germany
The development of therapeutic proteins can be hindered by poor decision-making strategies in the early stage

Tuesday, July 16, 2018 (continued)

- 18:30 - 19:00 Dilip Sethi, Imperial College London, UK
A novel technique to characterize the surface hydrophobicity of proteins using inverse liquid chromatography
- 19:00 - 21:30 Dinner followed by Social Hour

Wednesday, July 17, 2019

07:30 - 09:00 Breakfast buffet

09:00 - 10:30 **Session 7: Protein Rheology and Microrheology in Bulk**
Chair: Anna Stradner

09:00 - 09:30 Daniel Molnar, Boehringer Ingelheim, Germany
Possible obstacles and pitfalls during biopharmaceutical processing of high concentration liquid formulations (HCLF)

09:30 - 10:00 Christoph Grapentin, Lonza, Switzerland
Predicting viscosity of high concentration Mab formulations based on data from high throughput characterization methods

10:00 - 10:30 Josef Hartl, Boehringer Ingelheim, Germany
Multiple interactions and complex viscosity: The impact of frequency rheology for the development of high concentration protein formulations

10:30 - 11:00 Coffee break

11:00 - 12:30 **Session 8: Protein Structuring and Rheology at Interfaces**
Chair: Paolo Arosio

11:00 - 11:30 Inas Elbially, LMU Muenchen, Germany
Compression and protein-protein interactions as triggers for aggregation of monoclonal antibodies at interfaces

11:30 - 12:00 Ian Shieh, Genentech, USA
Predicting, characterizing, and controlling interfacial antibody adsorption and aggregation

12:00 - 12:30 Joel Kaar, University of Colorado, USA
Understanding the stabilization of proteins in heterogeneous surface environments

12:30 - 14:30 Lunch

14:30 - 16:30 Networking / free time / *ad hoc* sessions

16:30 - 17:00 Afternoon coffee break

17:00 - 19:00 **Session 9: Processing Impacts and Characterization**
Chair: Michael Marlow

17:00 - 17:30 Karoline Bechtold-Peters, Novartis, Switzerland
Insights into freeze-thaw processes for therapeutic protein formulations

17:30 - 18:00 Miguel Rodrigues, University of Lisbon, Portugal
A perspective on cold processing of proteins.

18:00 - 18:30 Vitor Geraldés, University of Lisbon, Portugal
Implications of porous-flow in the design of freeze-thaw systems for biopharmaceuticals and rational scale-down methodology

18:30 - 19:00 Eduardo Melo, University of Algarve, Portugal
Stability of protein formulations at sub-zero temperatures by isochoric cooling

19:00 - 21:00 Conference Banquet followed by Social Hour

Thursday, July 18, 2019

07:30 - 09:00	Breakfast buffet
09:00 - 11:00	<u>Session 10: Protein Aggregation, Interaction with Surfactants & Bionanotechnology</u> Chair: Jintao Zheng
09:00 - 09:30	Hannah Kientz, Hoffmann-La Roche, Switzerland <i>Evaluation of alternative surfactants as stabilizers for therapeutical protein formulations</i>
09:30 - 10:00	Mridul Sarker, Nanyang Technological University, Singapore <i>Structural integrity of protein nanocage at liquid-liquid Interface</i>
10:00 – 10:30	General Discussion
10:30 - 11:30	Coffee break
11:30 – 12:00	Conference wrap-up and future plans
12:00 - 13:30	Lunch (Note: Boxed lunches will be available by prior request on sign-up list)
13:30	Departures