



2024 ISLFD International Conference

May 6th-10th, 2024

Turin, Italy

Student Contest in Freeze Drying

Monday, May 6th, 2024

Politecnico di Torino

14:00-18:00

PoliTo's Student Contest in Freeze Drying

The 2nd PoliTo Student Contest on Drying and Freeze-Drying is an international competition organized for the second time by Politecnico di Torino, as a side-event of the ISLFD-24 Conference. It is addressed to M.Sc. and Ph.D. students and aims to stimulate innovative ideas for applications in the area of freeze-drying for pharmaceuticals, sustainable food, energy, and environmental processes.

Workshop in Freeze Drying

Tuesday, May 7th, 2024

Unione Industriali, Piemonte room

9:00-12:00

Fundamentals in freeze drying

Steve **Nail**

14:00-17:00

Cycle development, scale up and PATs in freeze drying

Jos **Corver**

ISLFD 2024 Conference

Wednesday, May 8th, 2024

Unione Industriali, Piemonte room

8:15-8:30

Welcome

Kevin **Tebrinke**, President, *ISLFD*

8:30-9:10

Keynote, TBD

Steve **Nail**

SESSION I. FUNDAMENTALS

9:10-9:35

Insights into thermal interactions during freezing of pharmaceuticals in vials

Roberto **Pisano & Fiora Artusio**. *Politecnico di Torino*

9:35-10:00

Behold the freezing step - insights from fluid dynamics with implications on process control and product quality

Miguel **Rodrigues**. *Universidade de Lisboa*

10:00-10:25

Case studies in the use of through-vial impedance spectroscopy (TVIS) in the determination of critical process parameters of a lyophilization process

Geoff **Smith**. *De Montfort University*

10:25-10:40

Panel discussion

10:40-11:00

Break & Poster session



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SESSION II. FORMULATION & CHARACTERIZATION	
11:00-11:25	<i>Formulation and process optimisation for lyophilised ChAdOx1 vaccines</i> Paul Dalby . University College London
11:25-11:50	--- Elizabeth Topp . Purdue University
11:50-12:15	<i>Advanced physical characterization and stability of lyophiles: protein/protein interaction, water clusters, and solid-state acidity</i> Evgenyi Shalaev . AbbVie
12:15-12:40	<i>Predicting solid formulation stability by measuring its fundamental relaxation processes</i> Marcus Cicerone . Georgia Tech
12:40-13:00	<i>Panel discussion</i>
13:00-14:00 LUNCH	
14:00-14:40	<i>Keynote. 35 years of using and studying freeze drying: what did we learn?</i> Gerhard Winter . Ludwig-Maximilians-Universität München
SESSION III. EMERGING TECHNOLOGIES	
14:40-15:05	<i>From late-night leftovers to lyophilization: quasi-random field (qRF) microwave heating for pharmaceutical freeze-drying</i> Andrew Strongrich . Purdue University
15:05-15:30	<i>GMP-ready continuous and controlled freeze-drying</i> Thomas De Beer & Jos Corver . Ghent University & RheaVita
15:30-15:55	<i>Spray freeze-drying of pharmaceuticals: Modeling applications & Challenges</i> Sebastiao Israel Borges . Pfizer
15:55-16:10	<i>Panel discussion</i>
16:10-16:30 Break & Poster session	
16:30-18:00	Roundtable discussion



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Thursday, May 9th, 2024

Unione Industriali, Piemonte room

8:30-9:10 *Keynote on emerging technologies & regulatory aspects*
Maxwell **Korang-Yeboah**, FDA

SESSION IV. PROCESS ANALYTICAL TECHNOLOGIES (I)

9:10-9:35 *New insights into the stabilization of proteins In lyophilisate*
Wolfgang **Friess**. Ludwig-Maximilians-Universität München

9:35-10:00 *Using PAT technologies to optimise lyophilization of biologics*
Paul **Matejschuk**. MHRA

10:00-10:30 Break & Poster session

SESSION IV. PROCESS ANALYTICAL TECHNOLOGIES (II)

10:30-10:55 *The use of Design of Experiments in Lyo Formulation Development*
Kevin **Ward**. Biopharma

10:55-11:20 *Vapour flow monitoring in lyophilization. The new PAT tool to develop & validate lyophilisation process under QbD approach*
Jaume **Vallet Xicoy**, COMSER

11:20-11:40 *Panel discussion*

11:40-12:30 *Challenges in lyophilisation: competitions of ideas. [Awards ceremony]*
Antonello **Barresi**. Politecnico

12:30-13:30 LUNCH

13:30-14:30 *Spotlight Poster Presentations*
Bakul **Bhatnagar**. Pfizer

14:30-16:00 **Poster session & Sponsor exhibition**

17:00-... **Italy Winery tour & Gala dinner**



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Friday, May 10th, 2024

Unione Industriali, Piemonte room

8:30-9:10 *Keynote. Freeze-drying and cultural heritage: from the key role to salvage water damaged archival and library materials, and archaeological artifacts, to the creation of artworks*

Davide Fissore. Politecnico di Torino

SESSION V. APPLICATIONS (I)

9:10-9:35 *The challenge of probiotics preservation: strategies and tools to identify stress mechanisms and sites of cell damage induced by dehydration processes*

Fernanda **Fonseca.** Université Paris-Saclay

9:35-10:00 *Freeze drying of a Microbiome Ecosystem Therapies*

Sophie Declomesnil. Maat Pharma

10:00-10:25 *tBd. Learnings from implementation of production scale controlled nucleation Technology*

Arnab **Ganguly.** Amgen

10:25-10:40 *Panel discussion*

10:40-11:00 Break & Poster session

SESSION V. APPLICATIONS (II)

11:00-11:25 *Use of annealing to optimize freeze-drying cycle of vaccines*

Bernadette **Scutellà.** GSK Vaccines

11:25-11:50 ---

tBd. Sanofi

11:50-12:15 ---

Mark **Smith.** Pfizer

12:15-12:40 *tBd. [smart URS and minimized testing and qualification process for Lyos]*

Maik **Guttzeit.** Bayer

12:40-12:50 *Panel discussion*

12:50-13:40 LUNCH

SESSION VI. EQUIPMENT

13:40-14:00 ---

tBd. Tofflon

14:00-14:20 ---

tBd. IMA

14:20-14:40 ---

tBd. Millrock Technology

14:40-14:55 *Panel discussion*



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SESSION VII. YOUNG SCIENTISTS

14:55-15:50 *The three best poster abstracts*
Fiora **Artusio**. *Politecnico di Torino*

15:50-16:20 *Closing and remarks*
Kevin **Tebrinke**, President, ISLFD

16:20-... **Turin city tour**