

**From:** Paul Reeves <pharma@smiconferences.co.uk>  
**To:** Kester, Tonykester@aging.sc.gov  
**Date:** 3/23/2016 8:51:13 AM  
**Subject:** GSK Vaccines Explain Key QbD Principles with Freeze-Dried Vaccine Components

---

**£400 EARLY BIRD SAVING EXPIRES 31ST MARCH**

SMi Presents the 4th Annual Conference in the Successful Global Series:

**Lyophilisation Europe**

4 - 5 July 2016 | Holiday Inn Kensington Forum, London UK

Register online at: [www.lyophilisation-europe.com](http://www.lyophilisation-europe.com)

---

## EXCLUSIVE: GSK Vaccines Present Opening Keynote on Freeze-Dried Vaccine Components

Dear Mr Tony Kester,

Join our global series of pharmaceutical freeze drying events when [Lyophilisation Europe](#) returns to London this July for its 4th annual show. The application of quality by design (**QbD**) and **optimising drug formulation** will be just some of the major spotlights at this year's event.

**Daniela Stranges** and **Emanuele Tomba**, both leading scientists from **GSK Vaccines**, will be making a joint opening keynote address on QbD principles to design process robustness studies of a freeze dried vaccine component.

Through project updates, the presentation will explore process parameter set points in relation to **combination vaccines** through the definition of QTPP and product CQA's. Manufacturing control strategy and risk assessment will also be discussed. [Click here](#) for details.

**PLUS:** Don't miss the chance to hear another exclusive keynote from **GSK's Freeze Drying Scientist, Erwan Bourles**, on the use of **PAT tools** and statistical analysis to determine optimal freeze drying cycle parameters to preserve product from collapse.

Other event highlights will include unique insight into:

- The optimisation of freeze drying cycles through a case study driven presentation by Head of Pharmaceutical Engineering at **Sanofi**, Mostafa Nakach.
- Challenges in spray drying processes and formulation development delivered by

**DOWNLOAD BROCHURE**

- **Novo Nordisk's** Principle Scientist, Sune Klint Andersen
- Freeze drying of highly concentrated protein formulations by Patrick Garidel from **Boehringer Ingelheim**

Download a brochure today for further details on sessions covering modeling process development, process analytical technologies (PAT) and new excipients.

#### GET INVOLVED:

- **How to Register: LAST CHANCE TO SAVE £400. EARLY BIRD EXPIRES 31ST MARCH**  
Visit [www.lyophilisation-europe.com](http://www.lyophilisation-europe.com)
- SMI Group offer direct access to key decision makers through tailored **sponsorship** and exhibitor packages. For details contact Alia Malick on +44 (0)20 7827 6168 or email [amalick@smi-online.co.uk](mailto:amalick@smi-online.co.uk)
- For **delegate enquiries** contact Fateja Begum on +44 (0)20 7827 6184 or email [fbegum@smi-online.co.uk](mailto:fbegum@smi-online.co.uk)

#### PLUS POST CONFERENCE INTERACTIVE WORKSHOP:

Extend your stay to attend the **interactive workshop** taking place on 6th July.

**TITLE:** Design and scale up of a freeze drying process | 08.30 – 12.30

**HOST:** Paul Matejtschuk, Principal Scientist and Section Head, **NIBSC**; and Kevin Ward, Director of R&D, **Biopharma Process Systems Ltd**

#### OTHER EVENTS OF INTEREST:

2nd Annual Conference: Lyophilization USA  
27 - 28 April, Iselin, New Jersey, USA  
[www.lyophilization-usa.com/P177EMSP4](http://www.lyophilization-usa.com/P177EMSP4)

Register online at [www.lyophilisation-europe.com](http://www.lyophilisation-europe.com)

You are registered as: kester@aging.sc.gov/ Your unique contact code is: 92804565 (p-177 EM - 2S 92804565)  
If you do not wish to receive further email messages, please go to <http://www.smi-online.co.uk/unsubscribe/>