



## 4<sup>th</sup> Jerusalem Conference on Quality and Pharma Sciences A unique podium for highlighting applications of quality by design (QbD) to the Pharma Sciences

May 20-22<sup>nd</sup>, 2014

Belgium House ([www.bb.huji.ac.il](http://www.bb.huji.ac.il)), The Edmond Safra Campus  
The Hebrew University of Jerusalem

Conference direct e-mail: [pharmacy@ekmd.huji.ac.il](mailto:pharmacy@ekmd.huji.ac.il)

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## PROGRAM

**Day 1: May 20<sup>th</sup>, 2014**

8:30 **Registration**

9:00 **Opening:** *Prof. Simon Benita, Head School of Pharmacy Institute for Drug Research*

9:10 **Keynote:** Attaining and Sustaining Pharmaceutical Product Quality - A Quality Culture Approach  
*Louis W. Yu, Ph.D. Executive V.P. Quality Control, Perrigo*

### 1. A Pharmaceutical Quality

Chairperson:

9:50 (2) **A2** The Role of Organization Learning to prevent Pharmaceutical Quality Drift from Quality Suitability  
*Claudio Pincus, President of the Quantic Group, USA*

10:20 (3) **A3** Pharmaceutical Quality and Clinical Research Quality: The interaction  
*Dr. Yafit Stark, Teva, Israel*

10:40 **Coffee Break**

### 2. B Analytical Methods

Chairperson:

11:00 (1) **B1** Analytical Method Development - A Life Cycle Quality by Design

*Rosario Lo Brutto, Director, Analytical R & D Teva, USA*

11:30 (2) **B2** Uncertainties in Analytical Methods  
*Professor Dany Gibson, Hebrew University, School of Pharmacy, Jerusalem, Israel*

12:00 (3) **B3** Statistical Models for GR&R (Gauge Repeatability and Reproducibility) Studies

*Professor David Steinberg, Tel Aviv University, Israel*

12:30 **Lunch**



### 3. C DOE in Pharmaceutical Research

Chairperson:

- 14:00 (1) **C1** A Design of Experiments (DoE) Approach to Optimized Fabrication of Magnetic Maghemite Nanoparticles for Imaging and Gene Silencing  
*Professor M. Lellouche, Bar Ilan University, Israel*
- 14:30 (2) **C2** TBD  
*Speaker from Sol-Gel*
- 15:00 (3) **C3** QbD in Liposome Development  
*Professor Yechezkel (Chezy) Barenholz, Hebrew University, Medical School, Jerusalem, Israel*
- 15:30 **Day 1 closure**

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18:00 **Conference Dinner**

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### Day 2: May 21<sup>st</sup>, 2014

8:30 **Registration**

9:00 **Keynote:** Rapid Screening Methods for FDA Pharmaceutical Surveillance  
*Dr. Lucinda (Cindy) Buhse, Director, FDA Division of Pharmaceutical Analysis, FDA St. Louis, USA*

### 4. D Regulatory Updates

Chairperson:

- 9:40 (1) **D1** FDA - Update on Office of Pharmaceutical Quality  
*Keith Webber - Head of Regulatory Review, Perrigo*
- 10:10 (2) **D2** Using Dashboards to Integrate and Communicate Process Understanding  
*Martin Owen, GlaxoSmithKline, UK*
- 10:40 (3) **D3** International Quality Operations: Approaches to Quality Metrics and Continuous Improvement  
*Stacy Berkshire, Perrigo*

11:10 **Coffee Break with light meal**



## 5. E QbD in Pharmaceutical Development

### Chairperson:

- 12:00 (1) **E1** Applications of non-standard DOE in QbD  
*Inna Ben-Anat, Teva*
- 12:30 (2) **E2** QbD development of topical products  
*Michal Arnon, Perrigo*
- 13:00 (3) **E3** QbD in formulations of generics  
*Dr. Tzviel Sheshkin and Hadassah Zuckerman, Taro*

## 6. F Quality Challenges in 2020 Drug Products

- 13:30 Panel – Moderator: Prof Philip Lazarovici  
*Dr. Yafit Stark, Teva*  
*Prof. Louis Yu, Perrigo*  
*Prof. Mel Weinswig, UW, USA*  
*Prof. Ron Kenett, KPA, Hebrew Univ. and Univ of Turin*  
*Rosario Lo Brutto, Analytical R & D Teva,*  
*Dr. Lucinda Buhse, FDA Central Laboratories, USA*  
*Claudio Pincus, Quantic Group, USA*

14:30 **Day 2 closure**



**Day 3: May 22<sup>nd</sup>, 2014**

A Special Introductory Workshop on:

***Statistical Tools Supporting the New Process Validation Guidelines***

Presenters: ***Prof Ron Kenett and Prof David Steinberg***

The FDA new Process Validation Guidelines cover 3 stages in the lifecycle of the product. The first phase is the design of the product and production process, the second phase is qualification of the process and the third phase is ongoing monitoring of the process. The January 2011 guidelines on process validation offer new possibilities and challenges and require the application of various statistical methods. The new approach is scientific based and builds on all quality by design guidelines. The guideline is driving industry to move from an inspection focus, where things are inspected and the output of an inspection is pass/fail, to a deeper understanding and a more in-depth analysis of what is going on. The three stages and the corresponding main statistical tools supporting them are listed below.

Stage 1: **Process Design**; Development through submission – **Statistical Design of Experiments (DOE)**.

Stage 2: **Process Qualification**; Submission through launch - **Acceptance Sampling Plans**

Stage 3: **Continued Process Verification**; During the commercial manufacturing of the product – **Statistical Process Control (SPC)**.

This introductory workshop is designed to provide participants with a guided tour through the statistical design of experiments (DOE), acceptance sampling and statistical; process control (SPC).

The material presented in the workshop is based on the second edition of: *Modern Industrial Statistics with applications in R, MINITAB and JMP* by Kenett and Zacks, Wiley 2014 (<http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1118456068.html>). Real life examples and simulations will be provided using JMP.

**Workshop agenda:**

- 9:00 Introduction to QbD and the New Process Validation Guideline
- 9:30 **Design of Experiments (DOE)**
- 11:15 **Coffee Break**
- 11:45 **Acceptance Sampling**
- 14:00 **Lunch Break**
- 14:45 **Statistical Process Control (SPC)**
- 16:30 Closure



