

One North Pharmaceutical Research Institute (OneNorth Nanjing)

presents

Hands-on Workshop on Pelletization, Pellet Coating and MUPS Tableting

Workshop Venue: Level 2, Block C3, Maple Science Park,
Qixia District, Nanjing, China 210000

29 Oct – 1 Nov 2024

Objective:

The dosage form containing multi-particulates represents an interesting class of delivery products that possesses versatility and elegance. From this workshop, participants will gain useful insights and knowledge from the updated comprehensive overview of making pellets by extrusion-spheronization. Pellets containing a drug can be coated by fluidized bed coating for controlled release. Alternatively, drug layering onto nonpareils followed by sustained layer overcoating can prolong drug release. The design of multi-unit pellet system (MUPS) tablets will be demonstrated. Through concise lectures by experts and hands-on practicals, important skills would be imparted to the participants. Participants will also be taught methods to prepare and process pellets into useful multi-particulate dosage forms. Accompanying lectures will provide an in-depth understanding of the design of multi-particulate delivery systems.

About ONN:

One North Pharmaceutical Research Institute, Nanjing (OneNorth Nanjing; ONN) is a pharmaceutical technology hub with founding parties from GEA-NUS Pharmaceutical Processing Research Laboratory (PPRL), National University of Singapore (NUS) and its alumni, including HaiWei Technologies in September 2019, with support from the Nanjing Economic and Technological Development Zone. ONN started with a 2020 m² facility and has cutting-edge analytical equipment and several technology platforms. With the closure of GEA-NUS PPRL in July 2023, most of the pilot processing equipment were acquired by ONN. ONN management team include past academics from the NUS, former scientists from global pharmaceutical companies and investor cum entrepreneur with venture capital.

Course Conductors

Dr Dilwyn Patterson, GEA Pharma Systems, UK.



Dilwyn Patterson was educated at the University of Manchester, UK where he graduated with a PhD in materials science. He is currently retired. Before retiring, he held the position of Product & Senior Process Manager, GEA APC Pharma Solids for batch granulation and coating technologies. Dilwyn provided technical support for the design and operation of batch processing equipment and systems. The role also incorporated on-site trouble shooting and providing assistance in optimizing customers' processes. His previous jobs included Sales Manager the UK and Ireland, 1989-94, for Asia and Australasia, from 1994-99 and 2000-17 for Ireland, Japan, South Korea and Taiwan. From 2017-22, he was the Product Manager and Senior Process Specialist for batch granulation, coating and pelletizing. Dilwyn has worked with the pharmaceutical industry for more than 30 years, supplying granulation, drying, pelletizing and coating equipment and systems and during this time has gained considerable experience in each of these technologies. He has regularly given lectures/presentations at seminars and academic courses. He is currently a process and technical consultant working with GEA.

Dr Ramy Elsergany, King Salman Intl Univ, Egypt



Ramy Elsergany graduated with a MSc from Tanta University in 2013. He spent 5 years at SIGMA Pharmaceutical Industries, Egypt, in R&D before becoming an assistant lecturer at Tanta University. In 2016, he pursued his doctorate degree at GEA-NUS PPRL with a research scholarship from the NUS. During his PhD studies, he worked on particle engineering for multi-particulate drug delivery. He undertook an internship at the Institute of Pharmaceutics and Biopharmaceutics, Heinrich Heine University, Germany and also visited the GEA Process Engineering Test Centre, Wommelgem, Belgium to conduct some research experiments. In 2022-23, he undertook a postdoctoral research associateship at the University of Minnesota. In 2023, Ramy joined King Salman International University, Egypt, as an assistant professor. Ramy is also a consultant to some pharmaceutical companies in Egypt. He has published in several established research journals on pharmaceutics and pharmaceutical technology.

Dr Paul Heng, National University of Singapore



Paul Heng obtained his BSc (Pharm) and PhD in pharmaceutical technology from NUS. He then joined the Department of Pharmacy, NUS and retired in 2022. In 1997, he established GEA-NUS PPRL which focused on solids processing and product development. He is now an Honorary Fellow at NUS and adjunct professor with Airlangga University and China Pharmaceutical University. In 2019, he co-founded ONN. In academia, he successfully graduated over 60 doctorate program students, along with several masters students, and has over 330 international refereed research journal articles. He is the editor-in-chief of the Asian J Pharm Sci and is in the editorial boards of several other journals.

Workshop Programme

29 Oct – 1 Nov 2024

Schedule: *Theory & Practice*
29 – 31 October: 0900 – 1800 hr
1 November: 0900 – 1300 hr

Theory:

- Particle layering
- Science of spheroid formation
- Extrusion-spheronization: Production of pellets
- Extrusion-spheronization: Scale-up
- Precision Coater system including scale-up
- Flexstream® coating system including scale-up
- Functionality of pelletization aid
- Cushioning agents for MUPS tableting
- Characterization of pellets and MUPS tablets
- MUPS tablets – Design and challenges

Practice:

- Producing particulates by spray drying
- Practical on extrusion-spheronization
- Pellet coating using the Precision Coater
- Practice in drug layering and coating by FlexStream®
- Compaction using a compaction simulator
- Preparation of MUPS tablets

Others:

- Course materials will be supplied.
- Daily lunches and teas will be provided.
- Limited class size. Registration subjected to availability & on a first-come-first-served basis.
- Workshop will be in English and Chinese translations will be provided.

I hear and I forget. I see and I remember. I do and I understand.

Chinese Proverb



REGISTRATION FORM & QUERIES

Send to: secretariat@geanus.com

Organizer: OneNorth Nanjing, China

Co-organizer: Geanus Technology, Singapore