

CHICAGOLAND PHARMACEUTICAL DISCUSSION GROUP

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PROGRAM: COMPUTATIONAL MODELING FOR TABLET FILM COATING PROCESSES

DATE: THURSDAY, FEBRUARY 12, 2026

SPEAKER: DR. WILLIAM (BILL) KETTERHAGEN, SENIOR PRINCIPAL RESEARCH ENGINEER, ABBVIE, INC.

Tablet film coating is a critical pharmaceutical unit operation aimed at improving product stability, appearance, and efficacy. However, achieving consistent coating uniformity and mitigating process-induced defects remain key challenges. This presentation discusses the application of computational modeling—specifically the discrete element method (DEM) to characterize and optimize film coating processes. A first example details predictions of both inter- and intra-tablet coating uniformity, offering actionable insights into process performance. In addition, two case studies illustrate (a) the analysis and resolution of tablet breakage occurrences in commercial-scale operations, and (b) the identification and mitigation of tablet scuffing. Both case studies use a Lab Integrated Predictive Tools approach that combines DEM simulations with laboratory-based materials characterization for improved predictability. These outcomes underscore the value of integrative computational tools in diagnosing performance issues and guiding process improvements in pharmaceutical manufacturing.

Dr. Ketterhagen is a Senior Principal Research Engineer in the Process Engineering group at AbbVie Research and Development in North Chicago, Illinois. He has extensive experience in developing and implementing predictive models and engineering solutions in support of pharmaceutical drug substance and drug product development and tech transfer. Dr. Ketterhagen has translated these efforts to business impact to improve the efficiency of process development and robustness of commercial-scale manufacturing processes. His contributions to the field are captured in over 40 peer-reviewed papers, 3 book chapters, and numerous invited presentations at national and international conferences. In 2017, Dr. Ketterhagen received the AIChE PD2M Award for Outstanding Contribution to QbD for Drug Product. Dr. Ketterhagen holds a B.S. in Chemical Engineering from the University of Wisconsin-Madison and a Ph.D. in Chemical Engineering from Purdue University.

TIME: 5:30 PM – SOCIAL HOUR

6:00 PM – DINNER

7:00 PM – MEETING

PLACE: DOVER STRAITS

890 US-45, MUNDELEIN, IL 60060

COST: \$55.00

CLICK ON THE FOLLOWING LINK TO REGISTER: [Register Here](#)

ZELLE PAYMENT AT cpdg2022@gmail.com

OR USE THE FOLLOWING QR CODE (NEXT PAGE):

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THE DINNER MEAL CHOICES ARE THE FOLLOWING:

1. ATLANTIC SALMON FILET – BROILED AND SERVED OVER SAUTÉED FRESH SPINACH WITH BÉARNAISE SAUCE
2. BREAST OF CHICKEN MARSALA – SAUTÉED WITH MUSHROOMS, GARLIC AND MARSALA RED WINE SAUCE
3. JUMBO FRENCH-FRIED SHRIMP – FRESHLY BREADED, FRIED AND SERVED WITH A TANGY COCKTAIL SAUCE
4. PASTA PRIMAVERA – SERVED VETAGABLES (VEGETARIAN)

WHEN REGISTERING, PLEASE INDICATE YOUR SELECTED DINNER MEAL:

Meal Choice: Fish, Chicken, Shrimp. Vegetarian	First Name	Sur (Last) Name	Company

E-MAIL WILL BE SENT

**CPDG ACCEPTS CASH, CHECKS (PERSONAL OR COMPANY) OR THROUGH ZELLE
FIRST FIVE STUDENTS ARE FREE**

**PLEASE MAKE RESERVATIONS EARLY NO-SHOWS WILL BE BILLED ACCORDINGLY
MORE INFORMATION CAN BE FOUND ON THE CPDG WEBPAGE:**

<https://aaps-cpdg.org/>

Firm Registration Deadline of 12:00 p.m., Tuesday, February 10, 2026

**DIRECTIONS TO THE FEBRUARY 12, CPDG MEETING AT DOVER STRAITS
890 US-45, MUNDELEIN, IL**

- **EXIT I-94 AT TOWN LINE RD. (60)**
- **HEAD WEST ON TOWN LINE ROAD (60) AND TURN LEFT ONTO US-45 SOUTH**
- **TURN LEFT TO STAY ON US-45 S**
- **RESTURANT WILL BE ON THE LEFT-HAND SIDE OF THE ROAD**

