2019-2020 POCC Lecture Series

January 30, 2020, 7:30 PM

6:30 reception in the Nobel Hall
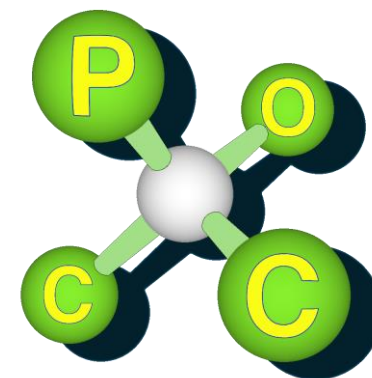
Dr. Cheryl Hayward

Pfizer

Antibody Drug Conjugates as a Novel Cancer Treatment: Scaling Highly Potent Bifunctional Duocarmycin Derivatives

Carolyn Hoff Lynch Lecture Hall Chemistry Building, University of Pennsylvania

The Philadelphia Organic Chemist's Club

POCClub.org

Women in Chemistry Lecture at the POCC

Cheryl Myers Hayward is a Director in the Chemical Research and Development Group at Pfizer. She received a BA in chemistry from the University of Pennsylvania researching with Professors Joullié and Dailey, and continued her education at Yale University where she received her PhD in organic chemistry working on the total synthesis of Rapamycin with Professor Danishefsky. She joined Pfizer in 1993 and worked in the CVMED medicinal chemistry group where she assumed responsibility for the atherosclerosis team in 1999. In 2007, she joined the CRD leadership team, where she has worked predominantly in early development with accountability for the early oncology portfolio including Pfizer's linker-payload strategy for antibody drug candidates. She has supported commercial work on the Palbociclib back-up and assumed a role as Pharm Sci team leader for the pediatric crizotinib program. Most recently, she has returned to Medicinal Chemistry in a temporary role leading the Internal Medicine Synthesis Group. Cheryl's husband Matthew is also a chemist and they have two grown daughters.

Abstract: Antibody Drug Conjugates (ADCs) offer a unique potential pharmaceutical treatment for oncology that marries the targeting capabilities of monoclonal antibodies (mAb) with the potency of cytotoxic small molecules, the payload. Modification of the mAb, payload, and the linker connecting the two provides opportunities to modify the MOA, potency, ADME, and safety. This presentation will discuss bifunctional Duocarmycin derivatives as one payload option. The high potency and chemical complexity result in unique challenges for scaling.

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