

Advancing Agricultural Herbicides through Chemistry

A Webinar Hosted by the Chemical Sciences Roundtable

May 12, 2022

11:00 AM – 12:30 PM EDT

Synthetic chemical herbicides are considered by many to be essential for productive American agriculture. Many farmers rely on the widespread application of herbicides throughout the growing cycle of various crops in order to combat weeds. However, herbicide resistance is a growing problem that is becoming increasingly concerning. Herbicides with new modes of action have been slow to emerge, and some of the most widely applied herbicides today are nearing half a century in use. One current technique to combat resistance is to use mixtures of herbicides with different modes of action, however this is only a short-term solution. New classes of herbicides will be needed in the long term. Several barriers exist to the development and deployment of a new herbicide class, including: high development costs, the length of time needed to develop, test, and secure approval for a new class, as well as evolving weed resistance. This webinar, hosted by the Chemical Sciences Roundtable, will discuss the nature and magnitude of herbicide resistance and explore opportunities and directions needed to better control weeds in agriculture.

AGENDA

- 11:00 AM **Welcome and Introductions**
 Jessica Wolfman, *Research Associate*
- 11:05 AM **Evolution of herbicide resistance in weeds: an ever-increasing threat to global food security**
 Mithila Jugulam, *Kansas State University*
- 11:25 AM **How to get new herbicides? An overview from an agchem perspective**
 Jens Lerchl, *BASF Global Research & Development Agricultural Solutions*
- 11:45 AM **New herbicide modes of action from nature**
 Stephen O. Duke, *University of Mississippi*
- 12:05 PM **Discussion**
 Moderated by Mark Jones, *Chemical Sciences Roundtable Member*
- 12:30 PM **Webinar Concludes**