## **Bicyclopyrone: Chemistry Transforming Weed Control**

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Bicyclopyrone (scheme) is a novel triketone herbicide is as a highly potent, but beautifully selective, corn herbicide. It was launched in 2015 in a 4-way mixture with the trade name Acuron<sup>TM</sup>, but products with bicyclopyrone as a single component (Acuron-UNO<sup>TM</sup>) have also reached the market place. This poster highlights the discovery of bicyclopyrone, which began from the naturally occurring HPPD inhibitor *leptospermone*, further development to the nicotinoyl cyclohexane diones, and ultimately transformation to the market product. Synthesis of the nicotinoyl cyclohexane diones is discussed as well as the biological activity of the optimised member of this class, bicyclopyrone.

## Scheme

$$\bigcap_{OHO} \bigcap_{OHO} \bigcap_{OHO} \bigcap_{R_1} \bigcap_{OHO} \bigcap_{OHO} \bigcap_{OHO} \bigcap_{N} \bigcap_{F} \bigcap_$$

Leptospermone

Nicotinoyl cyclohexane diones

Bicyclopyrone