A GENOMICS APPROACH TO MEBR REPLACEMENTS FOR NEMATODE CONTROL

Andrew Kloek* Divergence, Inc., Barry Shortt, Chelly Hresko, Jeremy Williams, and Jim McCarter

Divergence is developing safe and effective nematode control technologies that can be highly complementary to new methyl bromide alternatives. Based upon a comparative and functional genomics pipeline selecting for genes both specific and essential to nematodes, Divergence has developed a number of targets amenable to chemical inhibition. Divergence's lead chemistry, DC7651 and other molecules in this class, mimic the natural substrate of one of these lead enzyme targets, DIV8338. In greenhouse assays DC7651 has demonstrated efficacy in soil against *M. incognita*, *H. glycines*, and *B. longicaudatus.* DC7651 is a synthetic derivative of a naturally occurring plant metabolite with a favorable regulatory pathway based on the mammalian and non-target species safety profile of the compound and the class. Divergence is currently working to optimize commercially viable formulations and the mode and frequency of delivery for optimum efficacy. Additional leads from this class are also being tested.