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## **DEVELOPMENT OF THE FIRST TRANSDERMAL RODENTICIDE SYSTEM, AN ALTERNATIVE TO ANTICOAGULANT MULTI-FEEDING**

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**Abstract** PiedPiper was born out of the desire to move rodenticide control away from the current multi-feed technology that leads to toxin resistant rats and mice. Our approach was to develop a single application methodology that would prevent the protracted times to death and also avoid the increase in tolerance to the anticoagulants. The primary step was to find a “suitable” toxin – i.e. a toxin which has had limited exposure in the field so as not to compromise its efficacy and could be developed into a transdermal application. Our compound of choice was cholecalciferol coupled with a solvent that readily traverses the dermis which could be formulated for aerosol use and dispensed as a single application treatment on to the back of a rodent that has been attracted into our custom designed Pest Control Device. The project has been funded by a number of grants such as EU FP7 R4SME and EU FP7DA – the first results were obtained in 2012 and these have been followed up with further independent trials in Romanville (France), Aston University (UK) and in the field at University of Nairobi (Kenya). All trials were successful and show that this is a highly innovative and effective system for rodenticide control in both urban and rural areas.

