

## Miriam Daniels, Ph.D.

Managing Scientist | Chemical Regulation & Food Safety  
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### Professional Profile

Dr. Daniels is an experienced managing scientist in the areas of residues, metabolism and dietary risk assessment, primarily for Crop Protection. She provides expert scientific advice on the residues data requirements for European approvals of active substances and the authorization of plant protection products, and also the setting and modification of maximum residues levels (MRLs) and import tolerances at EU, UK and global (JMPR/CODEX) levels. She is skilled in evaluating pesticide metabolism and residues data packages, conducting data gap analyses, estimating the transfer of residues into animal commodities (including fish), performing dietary risk assessments, planning and managing residues study programs, and writing study summaries and residues regulatory dossiers (now including for IUCLID submission).

Dr. Daniels has over thirteen years' experience in the Crop Protection Industry, with experience of both research and development activities and has previously held leadership and technical expert positions in consumer safety/dietary risk assessment and in early phase insecticide research. She is expert in the pick-up, spray behaviour, cuticular uptake, movement and metabolism of pesticides in insect and plant. She has a particular interest in the evaluation of combined/cumulative dietary risk of pesticide mixtures and has participated in cross-industry working groups in cumulative risk assessment.

### Academic Credentials & Professional Honors

Ph.D., Biological Sciences, University of Birmingham, UK, 2008

B.Sc., Biological Sciences, University of Birmingham, UK, 2003

### Prior Experience

Senior Consultant - Residues, TSG Consulting, 2018–2019

Technical Expert and Team Leader - Consumer Safety, Syngenta, 2017–2018

Team Leader - Insecticide Biokinetics, Syngenta, 2012–2017

Research Scientist - Insecticide Biokinetics, Syngenta, 2008–2012

### Patents

WO2020169651A1 WIPO (PCT): Use of spiropidion, 2020-08-27 (Robert Senn, Stephen Johnson, Miriam Daniels)

## Publications

Muehlebach M, Buchholz A, Zambach W, Schaetzer J, Daniels M, Hueter O, Kloer DP, Lind R, Maienfisch P, Pierce A, Pitterna T, Smejkal T, Stafford D, Wildsmith L, Spiro N-methoxy piperidine ring containing aryldiones for the control of sucking insects and mites: discovery of spiropidion. *Pest Management Science* 2020 76 3440-3450

Jones CM, Daniels M, Andrews M, Slater R, Lind RJ, Gorman K, Williamson MS, Denholm I, Age-specific expression of a P450 monooxygenase (CYP6CM1) correlates with neonicotinoid resistance in *Bemisia tabaci*, *Pesticide Biochemistry and Physiology* 2011 101 53-58

Bass C, Puinean AM, Andrews M, Cutler P, Daniels M, Elias J, Paul VL, Crossthwaite AJ, Denholm I, Field LM, Foster SP, Lind R, Williamson MS, Slater R, Mutation of a nicotinic acetylcholine receptor  $\beta$  subunit is associated with resistance to neonicotinoid insecticides in the aphid *Myzus persicae*. *BMC Neuroscience* 2011 12 12-51

Daniels M, Bale JS, Newbury HJ, Lind RJ, Pritchard J, A sublethal dose of thiamethoxam causes a reduction in xylem feeding by the bird cherry-oat aphid (*Rhopalosiphum padi*), which is associated with dehydration and reduced performance, *Journal of Insect Physiology* 2009 55 758-765

## Project Experience

Design of residues testing strategies for pesticide active substances under development for EU active substance approval submissions

Preparation and evaluation of proposals for the residue definition of pesticide active substances

Authorship of metabolism and residues sections of new submission or renewal dossiers for active substances in Europe, including associated analytical methods

Authorship of MRL evaluation reports for EU submission and CODEX working papers for JMPR submission

Data gap analyses, residue trial scoping and preliminary dietary risk assessments to support MRL modification proposals, MRL reviews and/or product authorisations