

## IOM Pesticide biomonitoring project

### Summer Newsletter, July 2013



### Hello and Welcome

Welcome to the fifth newsletter for our project '*Biological monitoring of pesticide exposures in residents living near agricultural land*'.

As we reported previously, the data and sample collection part of the study is now complete. We are now going through the time consuming and challenging task of analysing and interpreting all of the data. In this newsletter we provide some information on what this involves.

I thank you for your continued interest in this project and we look forward to communicating the results of this work to you in early 2014.

*Karen Galea*

Dr. Karen Galea (Project leader)  
Email: [karen.galea@iom-world.org](mailto:karen.galea@iom-world.org)

### Community researchers

As the data and sample collection for the project has now been completed the involvement of our community researchers has come to an end.

I hope you don't mind me taking this opportunity to publically thank Ashley, Daphne, Fiona, Julie, Lou, Sue, and Tim for their hard work and efforts in the project.

We hope that at least some of our community researchers will join us again to assist with the dissemination of the project results in 2014. However, should you have any questions about the project in the meantime, please contact Dr. Karen Galea, email: [karen.galea@iom-world.org](mailto:karen.galea@iom-world.org) or telephone 0131 499 8034.

### Data and sample collection

You may be interested in learning more about what happens with all of the information and samples we collected during the project. To help explain this it is useful to revisit the aims and objectives of this work.

Our study aims to investigate pesticide exposure during and outside the spraying season for residents living next to agricultural fields. This information will help assess whether the methods used by the UK government agency to determine whether pesticides are safe for use are appropriate for assessing exposure amongst residents living near fields.

The urine samples collected from residents are being analysed in the laboratory to determine the levels of metabolites (breakdown products) of selected pesticides passed out in the urine (*actual levels*).

Separately, spray information obtained from participating farmers is used to

predict pesticide exposure using methods that are applied by the UK government agency to determine that the pesticides can be safely applied under the given spray and weather conditions.

We will then predict the levels of pesticide metabolites expected in the urine given this exposure, using a series of mathematical equations that are based on current knowledge of the breakdown process of pesticides in the human body (*estimated levels*).

The estimated and actual levels will then be compared. This will provide us with information on whether the methods used are sufficiently protective.

In addition to this, we will compare levels in urine samples collected by residents following spray days with levels in urine samples when no spraying occurred (background samples). This will take into consideration information residents provided on their activities during the days before the urine sample collection, as well as any other use of pesticides, for example, within the home.

Further information on the urine sample and data analysis can be found in our published study protocol. A copy of this can be obtained from <http://www.biomedcentral.com/content/pdf/1471-2458-11-856.pdf>.

Further information on the regulation of pesticides in the UK can be found at <http://www.pesticides.gov.uk/guidance/industries/pesticides>.

### **Project results**

We anticipate that the results will become publicly available early 2014 and look forward to presenting this information to you then.

### **Publications/conference presentations**

We recently presented an overview of the project at the 'Modelling spray drift exposure from ground applications' workshop held at the University of Cranfield in June 2013 which generated a lot of interest and discussion amongst the International participants.

Copies of the presentations given at this and other workshops and conferences can be found at:

[www.pesticidebiomonitoring.org/PublicationsConferences.aspx](http://www.pesticidebiomonitoring.org/PublicationsConferences.aspx) .

### **Updates on project progress**

We will continue to provide updates on the timescales for the dissemination of the project results and other news through our newsletters and project website:

[www.pesticidebiomonitoring.org](http://www.pesticidebiomonitoring.org)

