Report on the outcomes of a Virtual Mobility[[1]](#footnote-1)

Action number: CA18221

Grantee name: Blagovesta Dimitrova

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| **Virtual Mobility Details**  Title: Updated review of reptilian toxicological information  Start and end date: 04/12/2023 to 08/01/2024 |
| **Description of the work carried out during the VM**  This Virtual Mobility Grant aimed to continue the work that was done by two previous STSMs on the overview of existing information about the effects of pesticides on reptile species by using the already established database to create a meta-analysis.  During the course of work and following several online meetings with the two participants that were guiding me through the process, Dr Anamarija Zagar and Dr Manuel Ortiz, we established that the database was still missing key information that is necessary for the creation of the planned meta-analysis. This information was regarding the specific outcomes and results of the papers included in the database. In order to complete it and make it more comprehensive and informative, we decided to reduce some of the columns. Those were the pesticide category, subtype of ecotoxicological test, compliance with a specific guideline, origin of species, broad group of species and others. We then decided to add information on the number of individuals used in the control and exposure group, the control and exposed values, the units of response, the measure of variability, and whether the exposed group values were statistically significantly different from the control. In order to achieve that, I spent the time of the VMG going through every paper and adding the information. In the cases when the results were presented as figures, I used the software ImageJ to extract the exact values, with the help of Dr Ortiz.  My work on the database is still not complete, there are more papers whose values need to be added, but so far as I was going through the process, I have added new papers and removed those that could provide no specific information on the values that we need in order to create the meta-analysis. Before I started, the database had 119 papers and 3348 data points. Currently, there are 120 papers and 3485 data points, and as I complete the work, I am expecting the database to grow even more. |
| **Description of the VM main achievements and planned follow-up activities** |
| This VMG was aimed at creating a meta-analysis based on the database that is already established, and the work that was performed is getting us one step closer to this final result. I believe that before the PERIAMAR Action is over, we will have the database complete and will have produced a useful and informative meta-analysis that will provide an essential baseline that will help us to pin point our knowledge gaps on the effects of pesticides on reptile species, it will allow us to determine the relevance of the data that is available for European species, and it will help us develop strategies to implement the Three Rs in ecology.  In order to complete the work, we will continue to work together with Dr Zagar and Dr Ortiz, and future collaborations with their teams are to be expected.  The following PERIAMAR objectives were targeted:  RCO 2, whose aim is to continuously update and analyse the available information potentially useful to fill the gaps relative to the characterisation of pesticide exposure and effects on amphibians and reptiles. The objectives of WG3 is also addressed, in particular O.3: Identify chances of minimising the use of *in vivo* amphibian and reptile models to build the pesticide ERA scheme through replacement methods (Task 3.4).  In terms of the Capacity Building Objectives (CBO), this VMG allowed for the exchange of information between groups and institutions, creating networks that will result in producing capable scientists that can predict and address challenges regarding the impact of pesticide use on amphibians, thus addressing CBO 1. CBO 2 was also taken up, as this VMG has allowed me to develop my skills with an entirely new method of analysis, which has provided me with the competences necessary to conduct future research initiatives focused on environmental risk assessment of pesticides for reptiles. |

1. This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant. [↑](#footnote-ref-1)