European Vegetation Archive

Data Request Form

To obtain data from the European Vegetation Archive (EVA), including the ReSurveyEurope Database, please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data that meet your needs are available. If they are, please fill in the form below and submit it to Ilona or another member of the EVA Coordinating Board (or ReSurveyEurope Board if you ask for data from the ReSurveyEurope Database).

- Applicant's name:

Aida Ferreiro Marie-Laure Aix

- Applicant's institutional address:

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- Project title:

Understanding the causes of renal cancers

- Are you asking for core EVA data (non-repeated vegetation surveys) or for ReSurveyEurope data (repeated vegetation surveys)?

Core EVA data

- Brief description of the aims and methods of the study:

- Study objectives: Renal cancer incidence rates are known to vary widely across European regions (Li et al., 2015), and understanding the underlying factors contributing to these disparities is crucial for cancer prevention. The aim of our project is to investigate the mechanisms in which exposure to aristolochic acid, found in plants of the Aristolochia genus, can lead to renal cancer development. After sequencing clear cell renal cell carcinomas in different countries, we identified specific geographical patterns of mutations (also called SBS22) probably driven by aristolochic acid (Senkin et al., 2024). Expanding our understanding of Aristolochia plants' spatial distribution could help us elucidate the distribution patterns of this specific mutational signature. - Methods: We are planning to perform the analysis in at least 3 different steps: 1- Georeference the absences and presences of Aristolochia. 2- Use a stratified resampling approach and calculate Aristolochia's specialization using co-occurrence data. 3- Compare this to the SBS22 distribution.

Li, P., Znaor, A., Holcatova, I., Fabianova, E., Mates, D., Wozniak, M. B., Ferlay, J., & Scelo, G. (2015). Regional geographic variations in kidney cancer incidence rates in European countries. *Eur Urol*, *67*(6), 1134-1141. https://doi.org/10.1016/j.eururo.2014.11.001

Senkin, S., Moody, S., Diaz-Gay, M., Abedi-Ardekani, B., Cattiaux, T., Ferreiro-Iglesias, A., Wang, J., Fitzgerald, S., Kazachkova, M., Vangara, R., Le, A. P., Bergstrom, E. N., Khandekar, A., Otlu, B., Cheema, S., Latimer, C., Thomas, E., Atkins, J. R., Smith-Byrne, K., . . . Brennan, P. (2024). Geographic variation of mutagenic exposures in kidney cancer genomes. *Nature*. https://doi.org/10.1038/s41586-024-07368-2

- Will someone else be involved in data editing or analysis in addition to the applicant?

  Other members of the Genomic Epidemiology Branch at IARC could be involved

- Estimated time of delivery of results (e.g., manuscript submission):

  2025 - 2026

- Geographic area needed (e.g., countries or range of geographic coordinates):

  1. In a first step, we will focus on 3 countries: Czech Republic, Romania and Serbia.
  2. In a second step, we are interested in all European countries and neighboring areas.

- Do you need plots to be georeferenced? If so, what is the minimum accuracy of plot location (in metres or kilometres) needed for your project?

  For our project, geolocation is important but even data with a lower accuracy would be of interest for us, as long as the uncertainty is mentioned.

- Vegetation types needed (syntaxa):

  Aristolochia genus and co-occurrence species (relevés' composition) for the stratification.

- Other data selection criteria:

  We are interested in Aristolochia presence but also in absence data.

- Envisaged publications:

  Scientific papers in international journals

- Data deposition. Some journals require data used for the analysis to be stored in a public repository to ensure the repeatability of the analysis. According to EVA Rules, you are not allowed to store the original vegetation-plot data obtained from EVA. However, if you plan to publish in such a journal, you may deposit a reduced EVA-derived dataset that (1) would make it possible to repeat the analysis published in the paper and (2) does not contain any information not used in the analysis. For example, such a dataset can contain only a subset of species (e.g., only angiosperms or only neophytes), or replace species names with codes, or replace species cover values with presences/absences, or remove all the header data, or replace the exact plot coordinates by coarse grid-cell coordinates etc. If you plan to deposit reduced information from vegetation plots, please describe here what might be deposited. If the project developed so that you needed to deposit more information than specified here, you would need to ask specific permission from the Custodians of the EVA databases used in your analysis before the dataset is deposited.

We might have to display informations related to EVA (location, collection date, geographical uncertainty) on maps. If the journal requires a reduced EVA-derived dataset to be deposited, we would ask you the permission to do it.

- Plant trait data from the TRY consortium. If you plan to combine your analysis of vegetation-plot data with plant trait data, you can also request a dataset of 18 gap-filled traits for a large number of plant taxa prepared by the TRY consortium. These traits include Leaf area, Specific leaf area, Leaf fresh mass, Leaf dry matter content, Leaf C, Leaf N, Leaf P, Leaf N per area, Leaf N:P ratio, Leaf delta15N, Seed mass, Seed length, Seed number per reproductive unit, Dispersal unit length, Plant height, Stem specific density, Stem conduit density, and Conduit element length. This dataset can be provided to you by the EVA manager together with the vegetation-plot data. If you use this dataset, you must inform about your project the TRY data contributors who might be potentially interested and invite them as potential co-authors, assuming they will make an intellectual contribution to your paper. The list of the TRY data contributors will be sent to you together with the gap-filled trait dataset.

  Yes

- Specification of the co-authorship arrangements in publications based on the requested data. Note that the EVA Rules recommend that co-authorship is offered to a representative of each database providing data that are particularly important for the project (e.g., a relatively large proportion of the final dataset used in the analyses or data from unique vegetation types or under-represented geographic areas). This database representative should be an expert in the topic of the project (not necessarily the custodian or deputy custodian), and this person should contribute to the project more than just by providing the existing data, e.g. by intellectual contribution to the concept of the paper, preparation of new data, or helping with data analysis, interpretation of the results or writing parts of the paper (see the IAVS Code of Professional Ethics: http://iavs.org/Governance/Code-of-Professional-Ethics.aspx). The project leader should enable active participation by regularly informing potential co-authors about the progress of the project from its early stage. The project leader should also make final co-authorship arrangements based on the real input of the individual contributors.

  We agree to provide co-authorship if there is intellectual contribution

- Eligibility of the applicant to receive EVA or ReSurveyEurope data. Specify to which EVA or ReSurveyEurope database the applicant has contributed; if the applicant is not the custodian or deputy custodian of an EVA or ReSurveyEurope database, give a name of a custodian or deputy custodian who supports this data request.

  Kiril Vassilev, custodian of Balkan Vegetation Database (EU-00-013), Balkan Dry Grassland Database (EU-00-019) and database BG_PonorMts and deputy custodian of Romanian Grassland Database (EU-RO-008) and support this data request.

- I agree with the terms of EVA Data Property and Governance Rules as approved on 26 May 2012 (http://euroveg.org/download/eva-rules.pdf).
- If I ask for ReSurveyEurope data, I agree with the terms of ReSurveyEurope Data Property and Governance Rules as approved on 6 April 2022 (http://euroveg.org/download/resurveyeurope-rules.pdf).
- In any result obtained based on EVA core data (non-repeated vegetation surveys), I will cite the EVA report article (Chytrý et al. 2016; https://doi.org/10.1111/avsc.12191). In any result obtained based on the ReSurveyEurope data (repeated vegetation surveys), I will cite the ReSurveyEurope report article as soon as it is published. In addition, I will

cite individual source databases used in my project (if possible, in the list of References; if not possible, at least as a list of databases in the electronic supplementary material).

- If I ask for the plant trait data from TRY, I agree to invite to my project the TRY data contributors following the list received from the EVA database manager.

Lyon, 22nd of May, 2024

Aida Ferreiro

Marie-Laure Aix