

Position Available FAIR Data Steward and Developer

Project Description: As part of the European Joint Project on Rare Diseases (H2020 #825575), we will apply the FAIR Data Principles to Rare disease data resources across Europe. FAIR – Findable, Accessible, Interoperable, and Reusable – is an approach to data publishing that is aimed to improve the discovery and reuse of data automatically by machines. Our role will be to participate in the “FAIRification” of these resources – transforming them from traditional databases and flat-file records into formats that comply with contemporary Semantic Web and Linked Data formats, and enhance their FAIRness through richer metadata annotations. The candidate will act as a liaison between the EJP Core FAIR development team, and the individual participating registries and research networks, to steward them towards increased FAIRness of their data resources.

Period: until end of 2022, 25 hours/week (part time) **Start date:** June 1, 2021

Salary (Bruto Annual): EUR 23.400 / year

Requisites: Bachelor of science and specific training with an emphasis on Linked Data and Semantic Web technologies. Excellent coding skills Python or Ruby, and hands-on experience with semantic data formats and data transformations. Strong proficiency in English is required, as all project partners are English-speaking.

Tasks: Under the supervision of the employer, and with guidance and direction from other project co-leads, the candidate will participate in:

- * Liaising between the EJP co-leads, rare disease data providers, and the providers of rare disease registry software, to establish a coordinated plan for FAIR data transformation.
- * Designing/extending and filling metadata and data models, including quality-control of imported data.
- * Creation of new open source software and scripts, and/or modification/enhancement of existing open source software to more efficiently achieve these data transformations
- * Curation of (meta)data models, alignment with existing models, and design and testing of database queries for cross-resource harmonization.
- * Creation and testing of APIs, including those created by other project participants.
- * Alignment of standards, including field-mapping, model-mapping, and ontological concept-mapping.
- * Creation of new ontological concepts, when identified by project leads.
- * Creation of new software, scripts, and/or Web pages to upload these transformed data into project-specified data stores
- * Creation of query tools and/or Web pages to support discovery/query of the transformed data.
- * Documentation and support for the synthesis of training materials supporting these standards, models, ontologies, and software tools.
- * Synthesis of new, and extension of existing, Metrics for evaluation of the compliance of these tools and standards with the FAIR principles.

Deadline for application: May 31, 10:00AM, 2021.

INTERESTED CANDIDATES PLEASE CONTACT: Dr. Mark Wilkinson – mark.wilkinson@upm.es

For further information about the group: <http://www.cbgp.upm.es/index.php/en/scientific-information/csbgp/biological-informatics>

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Related publications from our laboratory:

1. Wilkinson, M. D., Sansone, S.-A., Schultes, E., Doorn, P., da Silva Santos, L. O. B., & Dumontier, M. (2017). A design framework and exemplar metrics for FAIRness. *BioRxiv*. <https://doi.org/10.1101/225490>
2. Wilkinson, M. D., Verborgh, R., Bonino da Silva Santos, L. O., Clark, T., Swertz, M. A., Kelpin, F. D. L., ... Dumontier, M. (2017). Interoperability and FAIRness through a novel combination of Web technologies. *PeerJ Computer Science*, 3, e110. <https://doi.org/10.7717/peerj-cs.110>
3. Mons, B., Neylon, C., Velterop, J., Dumontier, M., da Silva Santos, L. O. B., & Wilkinson, M. D. (2017). Cloudy, increasingly FAIR; revisiting the FAIR Data guiding principles for the European Open Science Cloud. *Information Services & Use*, 37(1), 49–56. <https://doi.org/10.3233/ISU-170824>
4. Wilkinson, M. D., Dumontier, M., Aalbersberg, Ij. J., Appleton, G., Axton, M., Baak, A., ... Mons, B. (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3, 160018. <https://doi.org/10.1038/sdata.2016.18>