

POSTDOCTORAL FELLOWSHIP RELATED TO BIOTA SYNTHESIS (NUCLEUS OF ANALYSIS AND SYNTHESIS OF NATURE-BASED SOLUTIONS)

FELLOWSHIP #6 - ECOSYSTEM SERVICES MODELING AND HUMAN WELL-BEING IN URBAN LANDSCAPES

Job Description:

Fields of knowledge: Ecosystem Services, Urban Ecology, Human health

FAPESP process: 2020/06694-8

Project title: BIOTA SYNTHESIS – Nucleus of Analysis and Synthesis of Nature-Based Solutions

Principal investigator: Jean Paul Metzger

Postdoctoral project title: Ecosystem services modeling and human well-being in urban landscapes

Supervisor for this position: Jean Paul Metzger

Unit/Institution: Institute for Advanced Studies, University of São Paulo, São Paulo.

Working area: Ecosystem services and human health

Number of scholarships: 1

Duration: The position is offered for 24 months, starting on May/2022.

Grant: BRL 7,373.10 (monthly) plus a research contingency fund equivalent to 10% of value of the scholarship (to purchase items directly related to research activity)

Deadline for submissions: March 14th, 2022, at 10 am, Brasilia Time (BRT), UTC -3

Publishing date: April, 2022

Selection process: The selection process will happen in two phases: *curriculum vitae* evaluation and interview. Only the 3-5 candidates presenting the best evaluated CVs will be interviewed (remotely).

Local: IEA-USP: Institute of Advanced Studies of the University of São Paulo, Rua Praça do Relógio, 109, ground floor, Cidade Universitária, Zip Code 05508-050, São Paulo, SP.

Link for submission: <https://forms.gle/yVECcrK4eyq3Y5h16>

E-mail for contact: biotasintese@usp.br

General Postdoctoral fellowships ‘profile:

The Biota-Synthesis initiative seeks eight highly qualified postdoctoral fellows to be part of a “Nucleus of Analysis and Synthesis of Nature-based Solutions”. This Nucleus will be funded by the São Paulo Research Foundation, FAPESP, for a 5-year period (2022-2026) and brings together researchers from 5 Universities, 7 Research Institutes of the State of São Paulo and 4 Non-Governmental Organizations, as well as technicians and decision makers from the State [Secretariats of Infrastructure and Environment](#), Public Health, and Agriculture. The Nucleus will be based at the [Institute for Advanced Studies](#) of the University of São Paulo, city of São Paulo (SP), Brazil.

The goal of the Nucleus is to support the state of São Paulo in the development of socio-environmental public policies related to agricultural sustainability, ecological restoration, zoonosis control, and disease prevention in urban areas, considering essentially nature-based solutions.

The Nucleus will work following a “synthesis science” approach, with heterogeneous and collaborative working groups, which will meet periodically in an immersive way for brainstorming discussions. These meetings will be intercalated with the analysis and modeling of existing databases, where the active participation of postdoctoral fellows is expected. See [here](#) for further details.

The desired profile for these postgraduates is of professionals with great ability to work collaboratively in teams, with high capacity for listening and dialogue with researchers and social actors with different backgrounds and professional experiences, in addition to the modeling and analysis capabilities that will be detailed for each profile. The post-doctoral position is open to Brazilian and foreign researchers who have a PhD degree, however fluency in Portuguese is desired to facilitate the discussion and dialogue with the different actors involved in the project. Each postdoctoral fellow will have a specific research project and supervisor, but it is expected that this group of fellows will work together, in close collaboration with the coordination team of the Biota-Synthesis Nucleus.

FAPESP postdoctoral fellowships are competitive (R\$ 7,373.10, approximately US\$ 1,340.00) and granted for 24 months, with the possibility of extension for two additional years. The fellowship includes a research contingency fund, equivalent to 10% of its annual value which should be spent on items directly related to the research activity.

Application procedure:

Applications must be submitted until March 14, 2022, 10 am, Brasilia Time (BRT), UTC -3, through the following link: <https://forms.gle/yVECcrK4eyq3Y5h16>. If you have any further questions, please contact us at biotasintese@usp.br. A same applicant can apply for more than one scholarship at the same time.

- Curriculum Vitae following [FAPESP format](#), including Lattes (for Brazilian candidates), ORCID and Publon links, as well as citation indicators (e.g. number of publications and citations, H index); please indicate experience in teamwork and with the development of public policy, if applicable;
- Research statement specifying why the candidate is suitable for the fellowship position;
- Three reference persons who can be consulted if the candidate is selected for an interview.

If you don't receive any subscription confirmation by March 20th, please contact us again.

For each of the 8 fellowships, 3-5 candidates will be selected for an interview (to be done virtually). The initial selection will consider the adequacy of the candidate to the fellowship profile, as well as the candidate's professional experience and publication records.

The interviews are expected to take place at the end of March/beginning of April, and the fellowship will begin in May, after validation of the selective process by FAPESP, according to the [Institution's norms](#). All postdoctoral fellows will be formally linked to the [postdoctoral program of the University of São Paulo](#).

Summary of Fellowship #6 project (Ecosystem service modeling and human health):

Studies have highlighted the association between green areas and human health quality and well-being in urban areas. These investigations have, on one hand, found a negative association between the presence of green areas in urban areas and mortality, cardiovascular diseases, and violence; and, on the other hand, a positive association with attention, mood state, and physical activity.

The goals of this post-doctoral project are to study the association between urban green areas, ecosystem services provision and human health/quality of life, with emphasis on chronic non-communicable diseases (CNCDs) and mental health, and to map priority areas for implementing Nature-Based Solutions (NBS).

We will use secondary mortality and morbidity databases already available in DATASUS and longitudinal health studies, socioeconomic and population data from IBGE and SEADE as well as data of green areas cover and quality in urban regions of the state made available by the state secretariats.

The analyses will include spatial-explicit modeling of ecosystem services provision (mostly, cultural and regulating services) and counterfactual analyses of NBS or green infrastructure interventions already implemented. This will allow to better understand the current effects of green areas on human health throughout the state and in the São Paulo Metropolitan Region in particular, as well as to raise hypotheses for analytical case-control studies. The project will also develop spatial-temporal predictive models of the occurrence of CNCDs and psychological disorders for different cities, in order to map the areas that are most at risk and should be prioritized for NBS implementation.

The results will provide inputs for the development of policies for surveillance, monitoring, and risk reduction of CNCDs and mental illnesses.

Requirements for the position:

- PhD in areas related to ecology, landscape ecology, ecosystem services, environment analysis, biodiversity conservation/restoration or human/public health, obtained no longer than 7 years before the grant acceptance date;
- Excellent skills and experience with quantitative data analysis, statistics and modeling;
- Experience with spatial data analysis;
- Experience with programming language and softwares (R or Python, or other)
- Ability to work collaboratively in group, including non-academic stakeholders;
- Excellent oral and written communication skills;
- Good knowledge of Portuguese and English.