

Illustration by artist Julia Jabur for the text "How to recover biodiversity and generate inclusion in the ruins of the Anthropocene" by Rafael L. G. Raimundo, published on the Ciência Fundamental blog in October 2023.

2023 Annual Report



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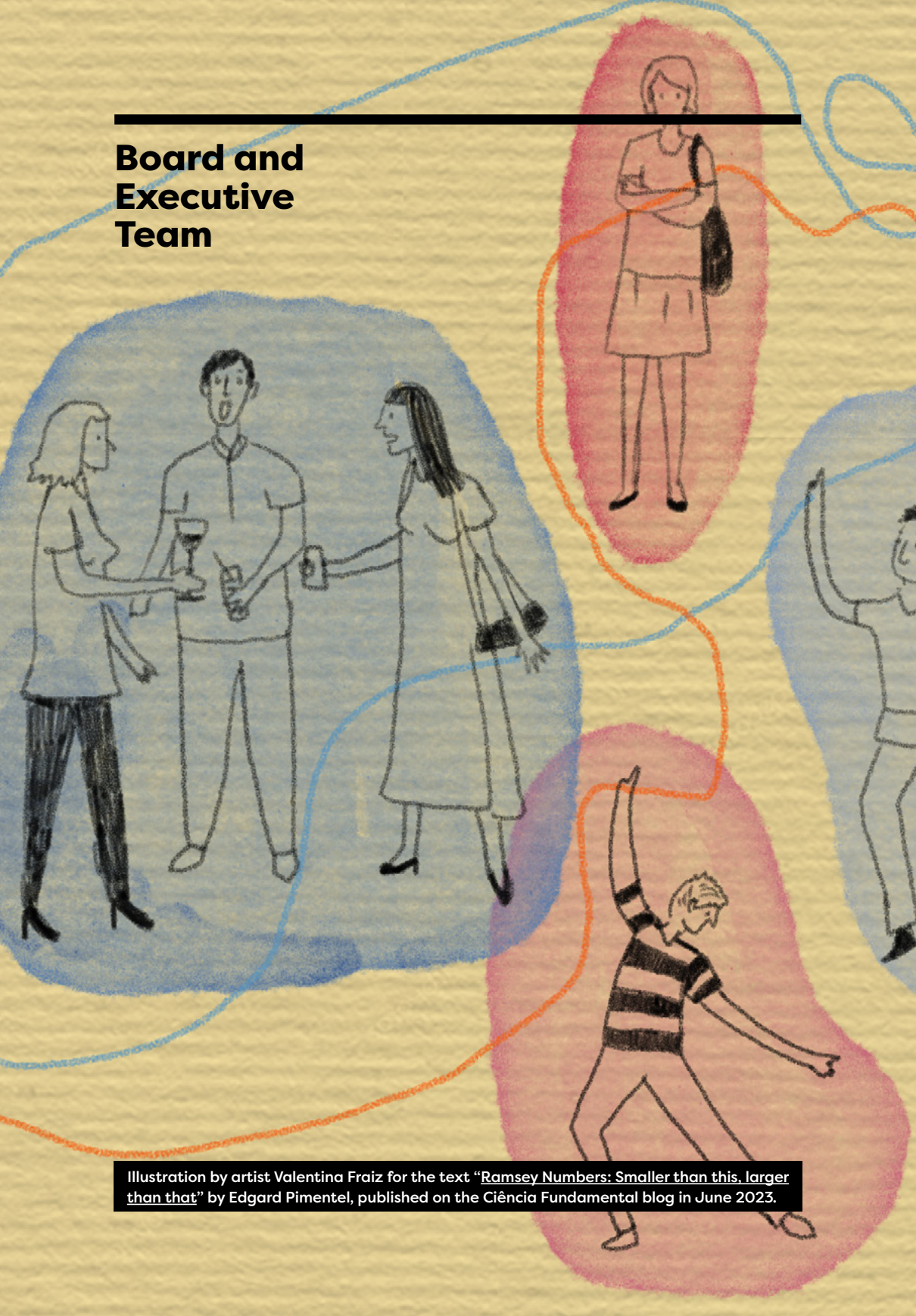


Illustration by artist Valentina Fraiz for the text “Ramsey Numbers: Smaller than this, larger than that” by Edgard Pimentel, published on the Ciência Fundamental blog in June 2023.

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Foreword

Illustration by artist Clarice Wenzel for the text “A Scientific Expedition to Uncover the Ocean’s Memory” by Vinícius Ribau Mendes, published on the *Ciência Fundamental* blog in August 2023.

ESTABLISHED IN 2017, the Serrapilheira Institute is a private, non-profit organization dedicated to advancing science in Brazil. Its mission is to champion scientific knowledge, enhance its visibility, and foster a scientifically literate society that values evidence-based decision-making.

The Institute has three main programs: Science, Training in Quantitative Ecology, and Journalism & Media. Its core values focus on promoting diversity in science, removing bureaucratic barriers, effectively communicating science to the general public, advocating for open and reproducible science, and maintaining transparency in all endeavors.

The **Science Program** provides financial support for research by early-career scientists whose proposals address fundamental questions in the natural sciences, computer science, and mathematics. Projects are expected to be ambitious in scope, and investigators are encouraged to take risks in their scientific pursuits. In addition, the program supports training and networking events for grantee scientists and promotes opportunities for cross-disciplinary collaboration.

The **Training Program in Quantitative Ecology** provides comprehensive theoretical and empirical training to emerging researchers from diverse backgrounds. This program enables them to formulate and address critical questions in various subfields of ecology. The ultimate goal is to establish tropical ecology as a strategic priority

for Brazil, leveraging its potential leadership in mitigating the climate crisis and addressing biome degradation. In doing so, the program aims to transform the country into a global center for climate and biodiversity science.

The **Journalism & Media Program** (formerly the Science Outreach Program) supports journalism projects and digital platforms that approach science with curiosity, critical thinking, and investigative rigor. It supports stories that provide reliable information about scientific issues, combat misinformation, and promote a deeper understanding of the field. This includes traditional media such as newspapers, television, and radio, as well as on-line platforms and entertainment channels. Recently, the program has expanded its scope to support projects that gather essential data on Brazil's science landscape, from inclusivity to funding policies, to inform decision-makers and promote positive change.

Since its inception, the Serrapilheira Institute has financially supported over **300** science and science communication **projects**, with investments exceeding **R\$90 million**. The funds originate from an endowment established in 2016 through a philanthropic family donation of R\$350 million. The endowment has since grown to approximately **R\$600 million**, providing the Institute with an annual operating budget of around R\$20 million.

While the Serrapilheira Institute has its own resources to ensure its independence and financial sustainability,

it also collaborates with a network of public and private partners. These partnerships contribute to the Institute's support for science and communication through various means, including joint funding calls, institutional support, donations, and other collaborative efforts.

Around R\$ 600 million
ENDOWMENT FUND

Around R\$ 20 million
ANNUAL BUDGET

+ R\$ 90 million invested
+ 300 projects supported
SINCE 2018

For Science
With a Social
Impact

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Illustration by artist Julia Jabur for the text "[What Is Hidden Hunger and How Biofortification Can Help](#)" by Felipe Ricachenevsky, published on the *Ciência Fundamental* blog in September 2023.

For Science With a Social Impact



IN 2024, the Serrapilheira Institute has identified three strategic priorities that will guide its activities and initiatives, seeking to expand its impact on society and the scientific community. These priorities reflect the Institute's ongoing commitment to promoting excellence through diversity and strengthening the field of Brazilian ecology.

The first priority is to foster a more inclusive scientific landscape. We believe that achieving scientific excellence requires diversity. We are committed to implementing and supporting initiatives that encourage the participation of traditionally underrepresented groups in science, including women, Black people and Indigenous peoples. Embracing diverse perspectives and a plurality of viewpoints is essential to driving scientific progress and innovation.

The second priority focuses on promoting tropical ecology and its integration into various sectors of society, especially public authorities. Recognizing the critical importance of tropical ecosystems to global biodiversity, climate, and human well-being, the Institute aims to expand research in this area and forge stronger links between scientists, policymakers, local communities, Indigenous peoples, public managers, and other stakeholders. By effectively integrating scientific knowledge into public policy and conservation strategies, the Institute seeks to promote the sustainable management of natural resources.

The third priority is a strong commitment to bridging the gap between science and journalism, making the world of

science more accessible to diverse audiences. The media play a vital role in disseminating scientific knowledge and promoting an informed society. Supporting initiatives that facilitate dialogue between scientists and journalists is therefore essential to strengthening the link between science and society.

By consolidating these three strategic pillars, Serrapilheira reaffirms its commitment to promoting high-quality, diverse and socially relevant science. We strive not only to advance scientific knowledge, but also to contribute to a more equitable, sustainable and innovative society, where science plays an increasingly central role in decision-making and social development.



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Hugo Aguilaniu
EXECUTIVE DIRECTOR,
SERRAPILHEIRA INSTITUTE

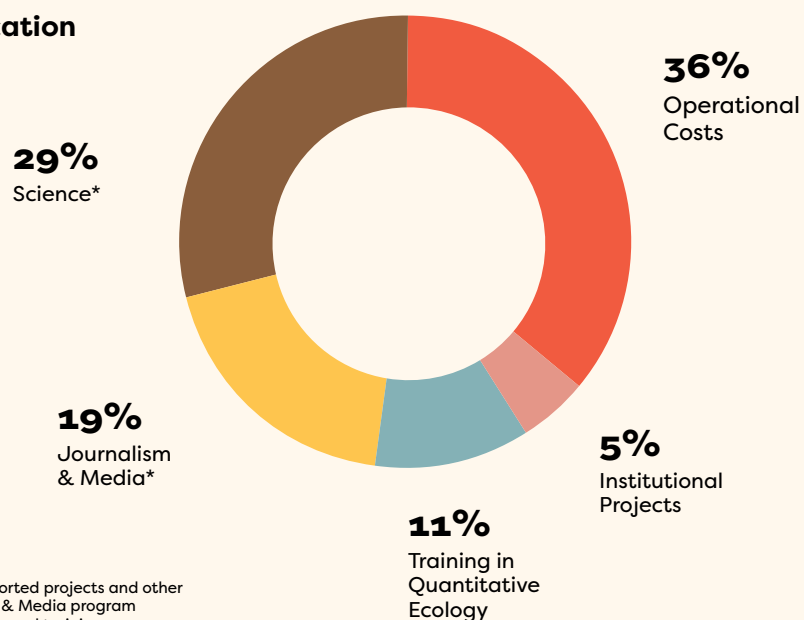
Illustration by artist Julia Jabur for the text "[For a Less Turbulent World](#)" by Murilo Bomfim, published on the *Ciência Fundamental* blog in February 2023.

Executive Summary: Serrapilheira by the numbers



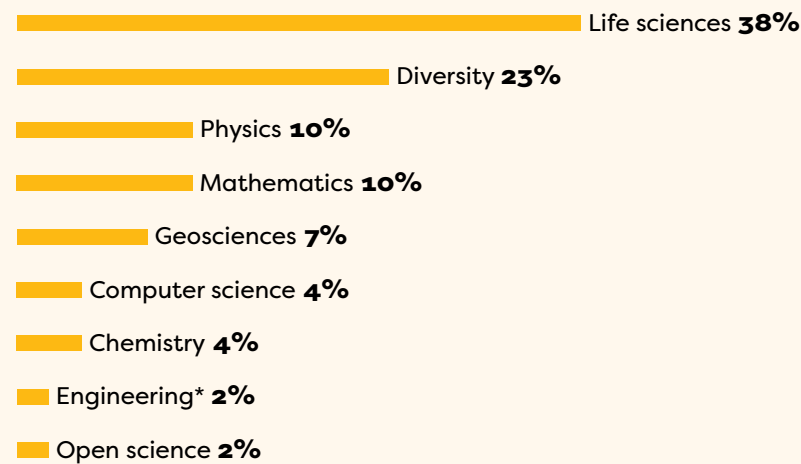
Total Budget Allocated in 2023: **R\$ 17.418 million**

Budget Allocation Breakdown:



*Includes funds for supported projects and other Science and Journalism & Media program expenses, such as events and training.

Funding Allocated by Scientific Field Since 2018



* As of 2019, Serrapilheira no longer funds projects focused solely on engineering.

Funding Allocated to Projects Since 2018:

Science:

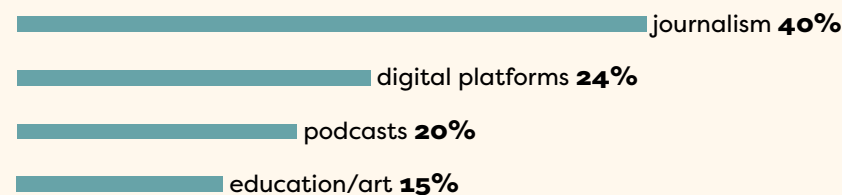
R\$ 73.546.766,53** | 211 projects supported*

Journalism & Media:

R\$ 17.033.740,95 | 96 projects supported*

* In addition to renewals and occasional event support, grants, awards, and other initiatives.
 ** In the Science program, long-term projects consume funds gradually over time. Therefore, annual expenditures may differ from the total obligated amount shown here. This figure represents the total amount of funds committed to these projects, not the amount spent.

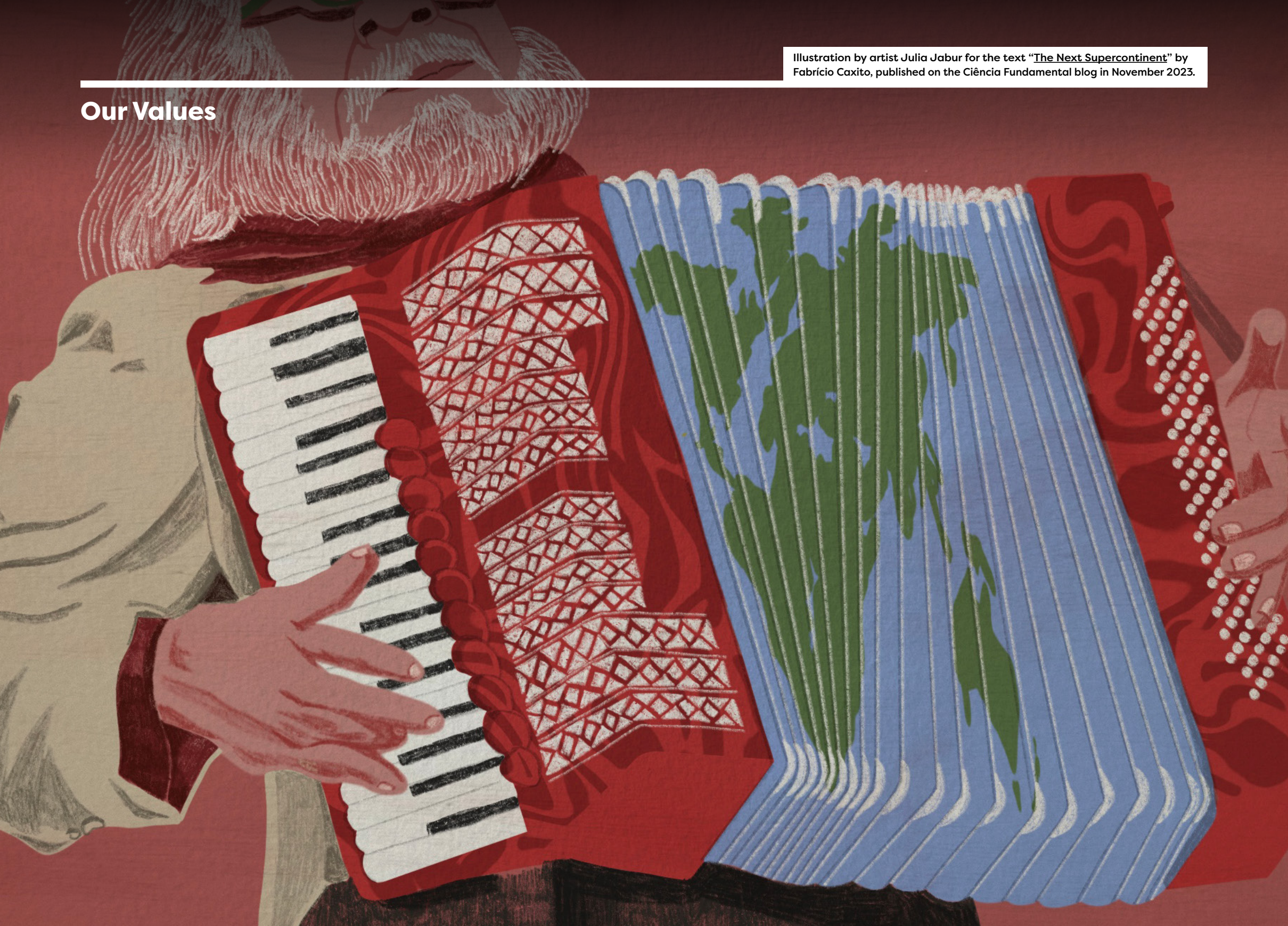
Funding Allocated to Science Outreach/ Journalism & Media Projects Since 2018



* Totals may not add up to 100% due to rounding.

Illustration by artist Julia Jabur for the text "[The Next Supercontinent](#)" by Fabrício Caxito, published on the [Ciência Fundamental](#) blog in November 2023.

Our Values



We believe that scientific excellence is achieved through:

- **diversity in science**
- **open and reproducible science**
- **science communication in public debate**
- **reducing bureaucracy in science**
- **transparency**

Learn more about our commitment to each of our values.

Diversity in Science

At Serrapilheira, we believe that scientific breakthroughs come from embracing uncertainty and risk, and this is possible when there is freedom of ideas and a plurality of points of view. A more diverse community of early-career researchers who bring unique perspectives is critical to fostering this environment. That's why we've been committed to promoting ethnic, racial, and gender diversity in Brazilian science since day one. We have made progress in the past year, both through project outcomes and new initiatives:

The Serrapilheira-Faperj Joint call to support Black and Indigenous ecology postdocs

In 2023, we partnered with the Carlos Chagas Filho Foundation for Research Support in the State of Rio de Janeiro (Faperj) to launch our first call exclusively for Black and Indigenous scientists. This call, which focused on ecology, was also our first to specifically target postdoctoral researchers who have not yet secured tenure-track positions. We received 129 applications, interviewed 28 candidates, and ultimately selected 12 outstanding researchers to receive support.

We aim to accelerate inclusion in science by expanding funding opportunities specifically targeted at underrepre-



The selected candidates of the Exclusive Call for Black and Indigenous Scientists, together with representatives of Serrapilheira, Faperj and Professor Hélio Santos, during the 7th Serrapilheira Retreats, in Pipa, Rio Grande do Norte, in October 2023.
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sented groups. In doing so, we aim to empower exceptional scientists who have been historically marginalized and ensure that society benefits from the valuable knowledge and perspectives they bring.

We seek to support innovative research projects in ecology led by Black or Indigenous postdoctoral fellows who aspire to secure tenure-track academic or research positions in the near term.

Another objective of the call was to promote collaboration and exchange of ideas among researchers. To achieve this, candidates were required to propose collaborative projects with research groups based in the State of Rio de Janeiro other than those where they received their training or with which they had previously collaborated. This requirement encouraged partnerships between researchers from different institutions, cities, states, or even countries.

We expected to encounter skepticism and resistance throughout the process, and indeed we heard numerous arguments against the initiative. Some claimed that existing undergraduate diversity quotas were sufficient and that we would just have to wait for these students to work their way through the system. Others questioned whether any Black or Indigenous graduate students in ecology were doing high-quality research.

But these people exist – and they are many. They are immersed in vital research, studying everything from forest growth in restoration areas to integrating Indigenous knowledge into soil studies to identifying new species of Amazonian fungi. Meet the 12 extraordinary scientists selected for this fellowship:

BEDE EZEWUDO

Nigerian, he joined a research group at the State University of Rio de Janeiro (UERJ), where his project focuses on understanding the factors that influence the circulation of microplastics in the Guandu River. This includes studying the water flow, the size of the microplastics, and the feeding habits of the organisms living in these waters.



CELINA CÂNDIDA FERREIRA RODRIGUES

Originally from Minas Gerais, she is now part of a research group at the UERJ. Her project investigates how climate change affects the CO2 uptake capacity of Brazilian biomes, including the Blue Amazon, the Southwest Atlantic, and the Southern or Antarctic Ocean.



DANIELA BOANARES DE SOUZA

Also from Minas Gerais, she is part of a research group at UERJ. Her project aims to understand how nutrient availability and the presence of water influence the remarkable biodiversity found in the Rupestrian grasslands.



EMANUELLE BRITO

Originally from Paraíba, she is working with a research group at UERJ. Her project focuses on collecting data on the abundance and diversity of pollinators and their interactions with plants and habitats, with the goal of developing effective conservation strategies.



FABIO BRITO-SANTOS

Based in Rio de Janeiro, he collaborates with a research group at the Federal Rural University of Rio de Janeiro (UFRRJ). His project focuses on investigating the links between human activities in the Amazon, the resulting decline in biodiversity, and the increase in pathogenic fungi, with an emphasis on the potential public health implications.



FÁTIMA ARCANJO

She is from Paraná and collaborates with a research group at UFRRJ. Her project focuses on studying the growth of forests in restoration areas, especially their capacity to absorb carbon, in order to assess the effectiveness of this strategy for mitigating climate change.



JOÃO PAULO FELIZARDO

Based in Rio de Janeiro, he is collaborating with a research group at the Fluminense Federal University (UFF). His project aims to investigate how eutrophication, the excessive enrichment of water with minerals and nutrients, impacts the foundation of food webs within marine ecosystems.



JULIANA LEAL

Also from Rio, she is part of a research group at UERJ. Her project focuses on investigating the primary sources of organic matter that fuel aquatic food webs in rivers across different Brazilian biomes. She aims to understand



how these sources influence the structure of food webs and their resilience to biodiversity threats.

KELTONY DE AQUINO FERREIRA

Originally from Espírito Santo, he now works with a research group at UFF. His project focuses on investigating the impact of coastal erosion and urban development on the ecological patterns and processes of sandy beaches, with particular emphasis on the Rio de Janeiro coastline.



RODOLFO LEANDRO NASCIMENTO SILVA

Originally from Alagoas, he is now part of a research group at UFF. His project focuses on the study of marine communities using innovative methods to assess biodiversity using data from different sources.



THAMYRES SABRINA GONÇALVES

Originally from Minas Gerais, she is working with a research group from the National Museum and the Federal University of Rio de Janeiro (UFRJ). Her project uses charcoal analysis as a tool to understand past dynamics of expansion and contraction in the forests and grasslands of the Serra do Espinhaço.



VICTOR JUNIOR LIMA FELIX

A member of the Potiguara people of Paraíba, he collaborates with a research group at the Observatory of Sustainable and Healthy Territories of Bocaina (OTSS)/ Fiocruz. His project aims to integrate Indigenous knowledge about soil in order to refine and improve formal soil classification systems.



The Serrapilheira-Faperj Joint call to support Black and Indigenous ecology postdocs | numbers

129 Applicants

12 Fellows Selected

Monthly Stipend: **R\$8,000**

Research Funding: Up to **R\$700,000** from Faperj

Plus **R\$100,000** from Serrapilheira

Requirement: Fellows must allocate a portion of funds for training individuals from underrepresented groups in science

Duration:

3 years, with the possibility of a **2 years** extension

Cutting-edge Science Goes Beyond White People

That is the headline of an article by Cristina Caldas, Science Director, published in *Folha de S. Paulo*. The article discusses the results of Serrapilheira's groundbreaking initiative to support Black and Indigenous scientists. [Read it here.](#)

A ciência de ponta vai muito além das pessoas brancas

Sim, cientistas negros e indígenas de excelência existem, e são muitos

Cristina Caldas

Bióloga e doutora em imunologia pela USP. É diretora de Ciência do Instituto Serrapilheira

Quando a candidata começou a falar, escrevi a palavra “carvão” no topo da página. É essa a minha estratégia para me concentrar na pessoa durante uma entrevista: anoto o tema central do projeto e presto atenção no modo como o pretendente fala, sua expressão, seus gestos. Só na semana passada, ouvi 28 cientistas que buscam financiamento para suas pesquisas. Era a fase final de uma concorrência chamada de apoio à ciência, promovida pelo Instituto Serrapilheira em conjunto com a Faperj.

A pessoa que chega a essa etapa da seleção já provou, no papel, o potencial de seu projeto. Ao explicar o objetivo da pesquisa, a doutora Thamyres Sabrina Gonçalves avançava mais um passo de um caminho trilhado até ali com brilho.

Em sua pesquisa, ela vai investigar se microcarvões das turfeiras da Serra do Espinhaço —entre Minas Gerais e Bahia— podem ser usados para reconstituir a dinâmica da paisagem até milhares de anos atrás.

Turfeiras são solos extremamente orgânicos, antigos e estáveis. Além de um depósito confiável de datação, são consideradas um dos principais estocadores de carbono da Terra. Se produzido intencionalmente, o fogo assinala presença humana. Pela datação, o carvão objeto da pesquisa de Gonçalves pode indicar uma ocupação mais antiga do que a admitida hoje nas Américas.

Como diretora do Serrapilheira —um instituto privado, sem fins lucrativos, que promove a ciência no Brasil—, era a sétima vez que eu selecionava candidatos em busca de apoio financeiro. Excelência é o que buscamos, e é o que os candidatos oferecem. O inédito dessa edição foi que

ela era destinada exclusivamente a ecólogos negros e indígenas, um perfil distante da figura tradicional do cientista branco, masculino, vindo dos grandes centros.

Thamyres Sabrina Gonçalves, que pesquisa o microcarvão, é negra e indígena. Tem um doutorado e dois mestrados. Bastaram 30 minutos de conversa para descobrir que, para além do saber acadêmico, ela é detentora de um tipo de conhecimento advindo de uma orgulhosa origem e bagagem de vida, capaz de promover as esperadas rupturas da ciência.

Durante a entrevista, meus colegas avaliadores e eu tivemos a mesma percepção: estávamos diante de um daqueles pesquisadores que tornam a ciência mais rica e provocativa. Exatamente o que buscamos. Com Gonçalves, descobrimos outros candidatos de perfil parecido.

Ao criarmos uma chamada de

[...]

No processo da chamada, foram muitas as ressalvas. Um candidato negro ou indígena, com doutorado em ecologia, que pratique uma ciência de excelência? Para alguns, era o mesmo que procurar um marciano

apoio exclusivamente voltada para ecólogos negros e indígenas, nosso objetivo era estender a esse grupo de cientistas as condições necessárias para desenvolver seus projetos e aumentar as chances de serem formalmente integrados à academia como professores universitários e pesquisadores. Sem esquecer da contrapartida: são justamente esses que podem, acreditamos, produzir um grande impacto na evolução da ciência.

Esse é o nosso sonho, mas também o plano para enfrentar, com urgência, a exclusão histórica, escandalosa, de negros e indígenas na academia brasileira.

Ao longo do processo de concepção e lançamento da chamada, foram frequentes as ressalvas quanto aos cientistas a que ela se destinava. Um candidato negro ou indígena, com doutorado em ecologia, que pratique uma ciência de excelência? Para alguns, era o mesmo que procurar um marciano.

Ao todo, recebemos 129 propostas, entrevistamos 28 candidatos e selecionamos 12 excelentes cientistas negros e indígenas. Sim, essas pessoas existem —e são muitas.

O valor da diversidade na ciência é a nossa crença. A visão mais ampla da ecologia virá de quem a compreende em uma vivência íntima, dela inseparável. Para nós, uma boa prática em ciência não hierarquiza os pesquisadores. Ao contrário, aproxima, faz dialogar, abre-se curiosa a todas as formas de conhecimento.

Desde que comecei a trabalhar no Serrapilheira, descobrindo e apoiando cientistas, assumi que só a excelência importa. Os lugares não são reservados.

The training of scientists is expensive and time-consuming, often requiring an impeccable academic record. This narrow path to success limits diversity. Science suffers as a result, with positions filled by those who went to the right school, live in the right neighborhood, move in the right circles, missing out on valuable perspectives and innovative solutions.

Second Joint call to support Black and Indigenous ecology postdocs

In November, we launched our second call exclusively for Black and Indigenous scientists working in ecology, now in partnership with more research foundations. In addition to Faperj, the Foundation for the Support of the Development of Education, Science and Technology in the State of Mato Grosso do Sul (Fundect) and the Amazon Foundation for the Support of Studies and Research (Fapespa) are participating.

The program received 57 pre-proposals and 12 scientists will be selected to join research groups in Rio de Janeiro, Mato Grosso do Sul or Pará. The final results will be announced by the end of June 2024.

Dialogues Between Academic and Indigenous Ecologies

Following the first call for Black and Indigenous scholars, we recognized the importance of re-evaluating our selection process to ensure inclusivity. Criticism from these communities highlighted the exclusionary nature of the English proficiency requirement, leading us to remove it and publicly acknowledge our oversight.

This experience reinforced the understanding that while diversity in science often focuses on race and gender, the distinct complexities of Indigenous inclusion require a more nuanced and mature approach.

In another article in *Folha de S. Paulo*, Cristina Caldas, director of Science, addressed the struggle of Indigenous. Her insights stem from her participation in the National Meeting of Indigenous Students (ENEI) in the Potiguara Indigenous Territory of Paraíba.

“Beyond creating spaces for valuing Indigenous knowledge, we need to “reforest the minds of Brazilian society.” Only then can Indigenous Peoples be recognized as knowledge creators and leaders.”

CRISTINA CALDAS IN AN ARTICLE IN FOLHA DE S.PAULO ABOUT HER PARTICIPATION IN THE NATIONAL MEETING OF INDIGENOUS STUDENTS

Indígenas na academia

Cristina Caldas

Bióloga e doutora em imunologia pela Universidade de São Paulo, é diretora de Ciência do Instituto Serrapilheira

Após atravessar canaviais e um sem-fim de usinas de álcool e açúcar, cheguei a Rio Tinto, território potiguar na Paraíba. Encontrei estudantes acampados, vendedores de artesanato e uma mansão que pertencia à família Lundgren. No chão de terra batida, banheiros químicos e um palco para abrigar o 10º Encontro Nacional dos Estudantes Indígenas (Enei).

Particpei do evento em busca de resposta para uma pergunta que me inquieta: por que temos tão poucos professores indígenas nas universidades?

A resposta é óbvia: vivemos num país com um projeto claro de exclusão histórica de negros e indígenas dos espaços formais de produção de conhecimento. “Não sei por que isso te surpreende. Vivemos num país racista”, me disse a filósofa Sueli Carneiro há pouco tempo.

E como esse racismo se expressa quando tratamos das “barreiras formais científicas e ideológicas para pesquisadores indígenas no âmbito acadêmico”? Era esse o título de um dos painéis do evento.

“Luta” foi a palavra mais citada. Luta para entrar na universidade. Luta para permanecer na universidade. Luta para ter suas ideias acolhidas.

Sobram entraves: ausência de bolsas e recursos para pro-

jetos, ouvidos moucos para suas ideias, obstáculos para desenvolver as pesquisas propostas por eles, vistos como objeto de pesquisa, não como pesquisadores. Pasmem: os indígenas conquistaram o direito a bolsas de permanência nas universidades há apenas dez anos!

Ouvi frases que, repetidas em sequência, escancaram as feridas: “Os professores não querem nos orientar pois não reconhecem que trazemos novos saberes”; “Parte do corpo docente nos enxerga como coitadinhos”; “A universidade é uma máquina de colonizar: entra índio e sai branco”; “Não queremos mais branco escrevendo sobre a gente, nem ser meros coletores de sementes e ter o nome apenas nos agradecimentos dos artigos científicos”.

Infiltrar as universidades, “ainda que isso represente um sacrifício pessoal”, é o que deve ser feito. “Quem chega abre espaço para outros.” As universidades devem se tornar receptivas para o conhecimento indígena oral, coletivo, produzido em conexão direta com a natureza.

No Enei, levantou-se a possibilidade de indígenas coordenarem e co-orientarem projetos de pesquisa em universidades. Além de criar espaços de valorização do saber indígena, é preciso “reflorestar a mente da sociedade”, para que eles sejam vistos como protagonistas na geração de conhecimento.

Nos próximos dias, os organizadores do Enei lançarão um documento com reflexões e recomendações: uma oportunidade de ouro para que o poder público, a academia e a sociedade entendam melhor como indigenizar as universidades. Vamos ficar de olho.



Throughout the selection process, we actively sought input from Indigenous scientists to understand their needs and how we could contribute to their success.

Through conversations with Indigenous candidates and reviewers involved in the call, we initiated the creation of a **network of dialogues between academic and Indigenous ecologies** in 2024 to address the challenges of knowledge production in the field.

Helio Santos at the 7th Serrapilheira Retreats



Helio Santos, professor and doctor of Business Administration, Chairman of the Board of Directors of Oxfam Brazil and one of the pioneers of the discussion on affirmative action in Brazil, during the Serrapilheira Retreats in Tibau do Sul/RN.

© Elisa Elsie

“How does science interact with the most unequal country in the world?” was the question posed by Helio Santos at the Serrapilheira Retreats, which brought together key figures in science, journalism and the media in Pipa, Rio Grande do Norte, in October. The professor introduced the concept of moral sustainability, emphasizing the need to make opportunities accessible to all.

“ There can be no true diversity without equality. Equality is the basis for real progress. Diversity is not a handout or a lesser option; it’s a necessity. Ignoring diverse talents hurts everyone. Those who limit themselves to familiar ideas condemn themselves to intellectual poverty and isolation.”

PROFESSOR HELIO SANTOS AT THE 7TH SERRAPILHEIRA ENCOUNTERS

We envision a science that reflects diversity inherent in the “Brazil of flesh and blood” advocated by Helio Santos: a science that does not perpetuate hierarchies among researchers or discriminate against talent based on skin color, origin, or background.

Mukengi Project | Mancala Institute

In the first half of the year, the Mancala Institute initiated the second edition of Mukengi, a training program that empowers Black and Indigenous researchers to address issues of hunger and food insecurity. Thirty participants were selected to engage in online theoretical classes and hands-on research on these critical issues. In addition, media training was provided by the Bori Agency, a grantee of the Journalism & Media Program.

Grant: R\$ 33,000

2023 Supplement: R\$ 20,000

Pluralizar Program | UFSCar

The Pluralizar Program of the Federal University of São Carlos (UFSCar) enables students admitted to higher education through affirmative action initiatives to participate in research projects in various fields. Scholarships for undergraduate and graduate level research are awarded to students from underrepresented backgrounds in scientific fields that lack diversity.

Grant: R\$ 1,085,901.92 (over five years)



Rosani Matoso

DIRECTOR OF THE
MANCALA INSTITUTE



A project supported by the Pluralizar Program was presented to the Serrapilheira Science Team in August 2023

The Observatory of Affirmative Action in Graduate Studies (OBAAP)

Founded in 2022 and coordinated by political scientist Anna Carolina Venturini, a researcher at Afro-Cebrap (Center for Research and Training in Race, Gender, and Racial Justice of the Brazilian Center for Analysis and Planning), OBAAP is dedicated to collecting and analyzing data on affirmative action in Brazilian public universities. Some of the results of this research are available [here](#).

The Observatory found that 54.3% of the 2,817 graduate programs surveyed already use some form of affirmative action in admissions. This movement has gained momentum with the inclusion of affirmative action in postgraduate programs in Law 12.711/2012 (the Quota Law). In response, OBAAP launched the [Basic Guide to Affirmative Action in Graduate Studies](#), which provides guidance on implementation, including modalities, beneficiaries, selection criteria, and retention policies for drafting calls and resolutions.

2022 Serrapilheira Grant: R\$ 229,785.00

2021 Serrapilheira Grant: R\$ 16,161.00

2021 Ibirapitanga Grant: R\$ 16,161.00



Anna Venturini

OBAAP COORDINATOR

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Divulgação

Diversity in Brazilian Science

The project used a variety of research methods to examine the social profile of researchers in the physical sciences (biology, geosciences, physics, and chemistry), computer science, and mathematics. A key finding was the “scissors effect,” which indicates that the increasing number of women PhDs has not been matched by an increase in the number of female faculty members. In addition, the study uncovered a troubling lack of diversity, revealing that Black and Indigenous people make up only 7.4% of graduate professors in STEM fields.

This initiative is led by Luiz Augusto Campos, Professor of Sociology and Political Science at the Institute of Social and Political Studies (IESP) of the State University of Rio de Janeiro (UERJ). He also coordinates the Group of Multidisciplinary Studies on Affirmative Action (GEMAA) at UERJ.

2021 Grant: R\$ 265,960.00

Serrapilheira’s Actions To Promote Diversity

Institutionally, Serrapilheira actively promotes diversity through various initiatives.

- Best Practices Guide for Diversity in Science: In 2019, we published a comprehensive guide that consolidates our diversity policy and provides practical guidance on how to build more inclusive research teams.
- Support for Mothers: In our public calls for scientists, we extend the deadline for completing a PhD by up to two years for candidates who are mothers.
- Maternity Grant: We offer a maternity grant of R\$10,000 to grantees who become pregnant or have children during their grant period, which will be



Luiz Augusto Campos

COORDINATOR OF THE
DIVERSITY IN BRAZILIAN
SCIENCE PROJECT

used at the discretion of the researcher mother. Nine fellows have already received this support.

- Parenting Support: We cover the costs for breast-feeding children (up to two years old) and their companions to participate in institute events.
- Diversity bonus: Researchers with grants of up to R\$700,000 can access additional funding to integrate and train individuals from underrepresented groups in their teams. See the box below for some data on grantees’ use of the Diversity Bonus.
- Flexible Contract: We have made contract terms more flexible to accommodate the length of maternity leave for both the grantee and the researcher mothers in the grantee’s group. We also encourage the continuation of grant payments during maternity leave and, where possible, the provision of a maternity allowance. This payment should come from the project’s already approved funds.

Curious about Serrapilheira’s commitment to diversity in science? Explore our initiatives and progress in the article “Diversity in Science: 6 years of Serrapilheira Institute practices,” written by our scientific team: **Cristina Caldas, Kleber Neves, and Michel Chagas.**

Use of Diversity Bonus (2019–2023):

46

Grantees who have used the bonus

R\$ 14,160 million

Total amount allocated

R\$ 5,085 million

Total funds spent

199

Number of people hired or trained

Breakdown by Career Stage:

92 Undergraduate research

37 Master’s degree

30 Doctorate

22 Post-doctorate

6 Research assistant

5 Technician

7 Prefer not to inform

Gender:

129 Women

68 Men

1 Non-binary

1 Prefer not to inform

Race/Ethnicity:

62 White

3 Indigenous

124 Brown/Black

2 Asian

1 Other

7 Prefer not to inform

How the funds were used:

- Scholarships (in Brazil and abroad);
- English language courses;
- Transport allowance;
- Participation in scientific events;
- Purchase of laptops.

Here are some stories from Diversity Bonus recipients:

Janaina Rodrigues de Paula, after earning her Ph.D. in geology in 2007, aspired to an academic career but opted for the financial security of working in the mining industry. With the opportunity for a bonus in Serrapilheira fellow Fabrício Caxito’s research group at UFMG, she returned to academia and completed a Ph.D. with a sandwich fellowship at the University of Alberta in Canada.



Caio Vinícius Cardoso Mendes considered dropping out of his biological sciences program at USP to help his family. While working in the lab of Serrapilheira fellow Paulo Teixeira, he received a monthly stipend, a laptop, and funding for international conference registration, a passport, visas, and English proficiency testing. His outstanding research led to presentations at prestigious scientific events, including the International Society for Molecular Plant-Microbe Interactions (IS-MPMI), a major conference in his field. He also received an honorable mention at the USP International Symposium on Scientific and Technological Initiation (SIICUSP) for presenting one of the best papers at the event. In addition, he completed an internship at Colorado State University in the USA and received invitations from various institutions abroad to continue his postgraduate studies.



Tatiane da Silva Nascimento, mentored by Serrapilheira fellow Guilherme Zepon in UFSCar's Materials Engineering Department, she used the bonus from her research grant to fund her travel to France as she was accepted into a dual degree program between UFSCar and the Université de Grenoble Alpes (UGA), where she is pursuing a dual master's degree.



Open and Reproducible Science

We believe science is an evolving practice that should be accessible to all. Transparent, accessible, and reproducible data facilitate collaboration in research and knowledge sharing, enabling the reuse of research results, data, and methods.

Since our inception, we have supported the global movement to defend open, reproducible and universally accessible science for the advancement of research and the reliability of its results. Our 2019 [Best Practices Guide in Open and Reproducible Science](#) outlines this commitment. However, we see open and reproducible science as an umbrella of practices and values that go beyond universal access; it also involves questioning the current publish-or-perish approach to evaluate scientists, which often prioritizes the *quantity* and *location* of their publications over the quality of their work. Science Director Cristina Caldas addressed this issue in an article in *Folha de S.Paulo*: "[Fewer Articles, More Knowledge.](#)"

In 2023, we advanced our open science practices, and in 2024, we want to refine and strengthen our approach.

We Are Signatories of DORA

The San Francisco Declaration on Research Assessment (DORA) recognizes the need to improve the processes

for assessing the outcomes of academic research. This document was formulated in 2012 at the annual meeting of the American Society for Cell Biology in San Francisco, USA.

DORA has become a global movement involving stakeholders across academic disciplines – including funders, publishers, professional societies, institutions and researchers.

Signatories commit to evaluating research on its own merits, not on the basis of journal metrics such as impact factor, when making decisions about hiring, promotion, or funding.

In particular, funding agencies are required to consider the value and impact of all outputs (including datasets and software) as well as publications when evaluating scientists. They must also consider other measures, such as the scientist's role in public policy.

Serrapilheira demonstrates this commitment by asking grant applicants to identify and justify their most relevant articles and explain why they consider them outstanding.

Metascience 2023

Metascience, or "science about science," was the focus of a global event we attended in Washington, D.C., hosted by the Center for Open Science. The meeting aimed to foster knowledge sharing and community building to improve scientific practices and outcomes.

Cristina Caldas (Science Director) and Kleber Neves (Science Manager) represented Serrapilheira at the event, where they were impressed by the transdisciplinary group of scientists dedicated to rethinking and promoting open and diverse science.



Preprint Club Experiment

To promote a culture of open science and collaborative review in public preprint repositories in the Serrapilheira community, we experimented with a group of nine grantees. We proposed replacing up to four sessions of their traditional journal clubs—regular meetings typically dedicated to discussing scientific articles in their fields—with preprint clubs.

Instead of journal articles, the groups selected preprints (studies published before peer review) relevant to their field. After discussion, each group posted feedback on the preprint, positive or negative, on an appropriate platform.

In exchange for their participation, Serrapilheira offered R\$150 vouchers per meeting for refreshments. This experiment aimed to gauge scientists’ interest in preprint clubs and promote a culture of open science and collective review.

Most participants reported that they enjoyed the experience: 85.7% of them said they intended to do more *preprint clubs* and continue posting public comments on scientific papers in their fields.



“I was thrilled to see the students actively engaged and critically analyzing the papers, identifying areas for improvement, and making constructive suggestions. It was a perfect opportunity to explain the peer review process and the importance of discussing open science.”

VANESSA STAGGEMEIER, UFRN, WAS ONE OF THE PARTICIPANTS IN THE PREPRINT CLUBS.

Open, Reproducible Science projects in our portfolio:

Brazilian Reproducibility Initiative

The Brazilian Reproducibility Initiative, launched in 2018, is a pioneering multicenter project that systematically replicates experiments from Brazilian biomedical science published over the last two decades. This period represents a significant growth in Brazilian scientific output, making Brazil the first country to have such a comprehensive assessment.

The network involves nearly 60 collaborating laboratories and is expected to complete its work in the first

half of 2024. In June 2023, the initiative launched the Brazilian Reproducibility Network, dedicated to promoting transparency and reliability in the country's scientific community. This network will receive support from Serrapilheira starting in January 2024.

2018 Grant: R\$ 161,000.00

2019 Grant: R\$ 1,000,000.00

2022 Supplement: R\$ 52,631.58

No-Budget Science Hack Week

The intensive workshop is designed to develop meta-scientific research projects using publicly available data, following a no-budget philosophy: a laptop in hand and an idea in mind. Projects and/or tools will address critical issues in modern science, such as data accessibility, reliability, reproducibility, publication systems, resource allocation, and researcher training.

The 5th edition, held virtually from July to December, included discussions on graduate studies, scientific training, the impact of technology on scientific careers, academic or otherwise, working conditions and mental health. The event was attended by 22 participants from seven Brazilian states and the Netherlands contributed their perspectives.

Serrapilheira's financial support was instrumental in both launching new initiatives and sustaining existing projects.

2019 Grant: R\$ 9,000.00

2021 Grant: R\$ 24,210.53

2022 Grant: R\$ 26,315.79

2023 Grant: R\$ 27,500.00

Communicating Science

Building a scientifically informed society means integrating science into public discourse to drive evidence-based decisions on everything from vaccine uptake to combating climate change.

We invest in science communication to promote science as a tool for democratic progress and critical thinking, highlighting its relevance to public concerns such as politics, economics, and health, underscoring the role of science in guiding policy and decision-making.

Learn more about our science communication initiatives on our [Journalism & Media Program site](#) and on the [Fundamental Science blog](#).

Reducing bureaucracy in science

Brazilian scientists often encounter bureaucratic obstacles that hinder their research progress. The difficulty in securing and utilizing funds to purchase equipment, import materials, or hire personnel often compels researchers to compromise their projects, abandon their hypotheses, and shy away from risk and innovation. Reducing these bureaucratic barriers is, therefore, crucial for advancing scientific research.

Serrapilheira, in partnership with the Arthur Bernardes Foundation—an intermediary for numerous grants—has prioritized reducing bureaucracy by offering flexible funding. This approach allows grantees to allocate funds as needed, whether for purchasing equipment, hiring post-docs, attending conferences, or renovating lab space.

Transparency

Transparency is fundamental to all of our grantmaking and activities. You can easily access information about all the [Science](#) and [Journalism & Media](#) projects we support, including funding amounts, in the “Who We Support” section of our website.

Our [Transparency](#) section provides additional details about funding, costs and the work we do in such publications as our annual reports, financial statements, bylaws, code of ethics, and a whistleblowing channel.

Illustration by artist Clarice Wenzel for the text "The Sex of the Brain" by Rossana Soletti, published on the Ciência Fundamental blog in January 2024.

Science Program



32 New Scientists

In June, we announced the selection of 32 new scientists through the 6th Public Call to support early-stage scientists, with total funding of R\$ 22 million. This number exceeded our initial expectations and was fueled by our growing partnership with the National Council of State Research Foundations (Confap) and the publicly funded research agencies (FAPs). This collaboration effectively increased the support available.

Serrapilheira's contribution of R\$9.1 million includes R\$3.2 million dedicated to the Diversity Bonus, aimed at training and including people from under-represented groups in scientific research; the contribution from the FAPs was around R\$13 million.

Meet the 32 new grantees:

Life Sciences

AMANDA CUNHA

Federal University of Viçosa (MG)

What role do interactions between hydroids and their living substrates play in shaping the diversity patterns observed among these colonial marine invertebrates?

The project looks at how hydroids, a life stage of small jellyfish-like animals, interact with other marine organisms and algae. This project aims to shed light on the factors that shape the biodiversity of marine invertebrates.



ARTUR SANTOS-MIRANDA

Federal University of Minas Gerais (MG)

Does the CaMKII pathway regulate cardiomyocyte dysfunction and T. cruzi parasite load in Chagas cardiomyopathy?

This project aims to investigate the role of the CaMKII-dependent signaling pathway in the biology of *Trypanosoma*



cruzi (the parasite that causes Chagas disease) and in the function of cardiomyocytes, the contractile cells of the heart muscle.

CIBELE ROCHA RESENDE

Federal University of Minas Gerais (MG)

Are resident macrophages activated by cardiac stress?

This study aims to understand how macrophages are integrated into the microenvironment of the heart and their impact on cardiac function.



CLEITON ELLER

Federal University of Ceará (CE)

Can evolutionary principles be used to predict plant mortality during drought and explain the coexistence of plants in dry environments?

To understand how plant communities persist in arid environments, we will study the survival strategies of plants exposed to water scarcity.



DANIEL ARDISSON-ARAÚJO

University of Brasilia, Federal District

Can we control populations of agricultural insect pests by manipulating their gut microbiota through oral exposure to bacteria-killing viruses?

This research group is exploring using bacteria-killing viruses (phages) to manipulate the gut microbiota of agricultural insect pests, potentially reducing their survival and increasing their susceptibility to insecticides.



EDILEUSA GERHARDT

Federal University of Paraná (PR)

How do PII proteins integrate and regulate microbial metabolism and how does this affect nitrogen fixation in Azospirillum brasilense?



This research will investigate how PII proteins integrate and regulate microbial metabolism, focusing on their impact on nitrogen fixation in the plant-associated bacterium *Azospirillum brasilense*.

GABRIELA CYBIS

Federal University of Rio Grande do Sul (RS)

Can we optimize the use of genetic sequences to identify new, fast-spreading virus variants before they appear in the data?

This project aims to determine whether machine learning techniques can be used to analyze genetic sequences and anticipate the emergence of new viral strains with pandemic potential.



GUILHERME OST DE AGUIAR

Federal University of Rio de Janeiro (RJ)

How can we infer interactions between neurons from recordings of their simultaneous activity?

This project aims to reconstruct the network of interactions between neurons by developing mathematical models using an interdisciplinary approach to infer the interactions from data on the aggregate electrical activity of a set of neurons.



JEFERSON VIZENTIN-BUGONI

Federal University of Pelotas (RS)

Can seed dispersal strategies among tropical plants mitigate their extinction risk under climate change?

This project will investigate how differences in seed dispersal among tropical plants can affect their risk of extinction, considering the impacts of climate change.



MARCELO CAMPOS

Federal University of Mato Grosso (MT)

Why are plants resistant to most insects?

This research aims to explain why herbivorous insects can only feed on certain plants, while most plants are resistant to most insects.



MARILIA SONEGO

Federal University of Itajubá (MG)

How can cracks in the fruit of the Brazil nut work as tenacification mechanisms that result in an extraordinary protective capsule?

This study will use microtomography and 3D printing to examine the intricate network of cracks and voids in the Brazil nut fruit to understand how these features enhance its structural integrity and resistance to damage.



MICHEL NASLAVSKY

University of São Paulo (SP)

How do genomic ancestry and miscegenation modulate the effects of the APOE gene on white matter, myelination, and cognitive decline?

This research aims to understand how the recent ancestry of the gene encoding apolipoprotein E—a protein involved in Alzheimer's disease—affects brain connectivity and cognitive decline.



PEDRO MEIRELLES

Federal University of Bahia (BA)

What is the role of microbial dark matter in ecosystem stability?

By analyzing publicly available genome sequencing data, this project aims to understand how microbial dark matter—the unclassified fraction of microbiomes—influences the stability of ecosystems.



RAFAEL L. G. RAIMUNDO

Federal University of Paraíba (PB)

Can we mitigate the tragedy of the commons by synchronizing ecological and socio-economic networks?

This work aims to test the hypothesis that natural resource degradation is inversely correlated with the adaptive capacity of socio-ecological systems. In addition, it seeks to provide recommendations for adaptive governance strategies to promote sustainability.



Computer Science

EDUARDO PENA

Federal Technological University of Paraná (PR)

How can we discover relevant metadata for data management and analysis?

This work will explore ways to mine metadata—descriptive data about data sets—that support various aspects of data management and analysis.



DALTON MARTINI COLOMBO

Federal University of Minas Gerais (MG)

Can we revolutionize electronic circuits by moving from analog and digital signals to time-based signals?

This research explores the potential for a new class of hardware that uses the timing of electrical pulses to encode and process data for greater efficiency and performance.



MARIZA FERRO

Fluminense Federal University (RJ)

Can sustainable artificial intelligence help predict extreme rainfall events and prevent disasters in urban areas?

This interdisciplinary project uses sustainable artificial intelligence and ecological data to develop statistical models for predicting extreme rainfall events and mitigating their impact on urban areas.



Physics

DYANA DUARTE

Federal University of Santa Maria (RS)

Do exotic phases exist in the phase diagram of quantum chromodynamics?

This study aims to explore the implications of recent gravitational wave data for quantum chromodynamics, the theory that describes the behavior of subatomic particles such as protons and neutrons.



FERNANDO IEMINI DE REZENDE AGUIAR

Fluminense Federal University (RJ)

What are the fundamental limits to our ability to measure time according to the laws of quantum thermodynamics and many-body theory?

This research seeks to identify the physical laws that limit our accuracy in measuring the passage of time.



THIAGO GUERREIRO

Pontifical Catholic University (RJ)

Can we detect the quantum nature of gravity?

This project aims to detect the quantum nature of gravitational fields using quantum optomechanics, which studies the interactions between light and the motion of mechanical objects.



Geosciences

CARLOS D'APOLITO

Federal University of Acre (AC) Did

Did savannas and dry forests expand in southwestern Amazonia during the last glacial period?

This research project seeks to answer this question by analyzing the fossil record of the region's vegetation and megafauna.



CESAR ROCHA**University of São Paulo (SP)*****Does small-scale turbulence in the abyssal zone play a role in driving climate variability?***

A combination of mathematical modeling and *in situ* data will be used to determine whether turbulent mixing in the deep ocean affects ocean currents and, consequently, global climate.

**KARLOS GUILHERME DIEMER KOCHHANN****University of Vale do Rio dos Sinos (RS)*****Were Amazonian wetlands carbon sources or sinks during previous stages of global warming?***

This research aims to understand the carbon dynamics of Amazonian wetlands during the Miocene period of global warming, about 14 million years ago.

**MICHAEL AMORE CECCHINI****University of São Paulo (SP)*****Does cloud aggregation increase rainfall efficiency in the Amazon?***

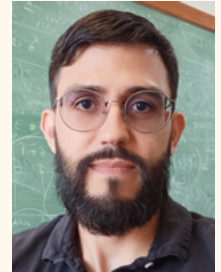
Do a few large clouds produce more rain than many small clouds under similar atmospheric conditions? To answer this question, this project will investigate the effects of cloud aggregation on rainfall patterns in the Amazon.

**SUSANNE MACIEL****University of Brasilia (DF)*****How does the physical composition of ambient seismic noise affect environmental noise-based imaging and monitoring methods?***

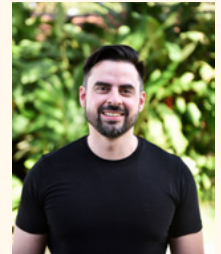
This study examines how the characteristics of seismic noise—natural vibrations generated by the ocean, wind, and human activity—affect modern monitoring techniques used to measure geological and seismic soil properties.

**Mathematics****FELIPE GONÇALVES****National Institute for Pure and Applied Mathematics (RJ)*****What is the most efficient arrangement of spheres in a multidimensional space?***

This research aims to determine the optimal configuration of spheres in a multidimensional space to maximize spatial coverage.

**FRANCISCO VANDERSON MOREIRA DE LIMA****Federal University of Rio Grande do Sul (RS)*****Can geometric inequalities in spacetime be used to detect black holes?***

This interdisciplinary project combines physics and mathematics to explore methods for detecting black holes by studying geometric variations in spacetime.

**MAURICIO JOSE POLETTI MERLO****Federal University of Ceará (CE)*****How typical is chaos?***

This study explores the prevalence of chaotic systems within the broader category of dynamical systems.

**RAMON MOREIRA NUNES****Federal University of Ceará (CE)*****How do we estimate L-functions?***

Guided by the Langlands program and building on recent results, this research will search for non-trivial estimates of L-functions, a critical area in number theory.



RENATA ROJAS GUERRA

Federal University of Santa Maria (RS)

Dynamic models for doubly constrained random variables: How to Predict Sustainable Development Indicators Measured in Rates and Proportions?

Using data from the National Electricity System Operator on hydroelectric power, this project will investigate statistical techniques for predicting sustainable development indicators measured in rates and proportions.



Chemistry

JULIANA BRITO

São Paulo State University (SP)

Is it possible to continue living on a planet without clean energy generation and environmental awareness?

The goal is to explore the generation of clean energy through chemical reactions using industrial waste.



TAICIA FILL

State University of Campinas (SP)

What are the molecular mechanisms underlying the symbiotic relationship between fungi and plants?

This project will investigate the symbiotic relationships between fungi and plants by studying the molecules involved in the plant defense system.



12 Ecologists

We also welcomed 12 ecology postdocs selected through our first-ever call exclusively for Black and Indigenous scientists in partnership with Faperj. Read more about the call and meet the researchers on [page 26](#).

Discretionary Support

CINTIA GOMES DE FREITAS

Federal University of Rio de Janeiro (UFRJ)

Did pre-Columbian human populations shape the genetic diversity of palms in tropical regions?

This research will address this question by analyzing palm DNA and exploring the role of human-plant interactions in creating and maintaining plant diversity.



DELIANE PENHA

Federal University of Western Pará (Ufopa)

Can we predict which tropical trees will be most vulnerable to global change?

This research focuses on the most abundant species in the Tapajós region of Amazonia, analyzing their chemical defenses against pathogens and structural traits related to water use.



LEANDRO MARACAHIPES

Amazon Environmental Research Institute (IPAM)

Assessing the Vulnerability of Brazilian Savannas to Drought-Fire Interactions: Implications for carbon storage, ecosystem functioning, and restoration success

This project aims to map biodiversity and quantify the vulnerability of savanna ecosystems to increased frequency and intensity of disturbances and their impacts on carbon storage and ecosystem functioning.



Welcoming New Scientists in 2024

Applications for our 7th Public Call to support early-stage scientists and the 2nd Joint call to support Black and Indigenous ecology postdocs closed in January 2024. This year's postdoctoral call was launched in partnership with the Foundation for the Support of

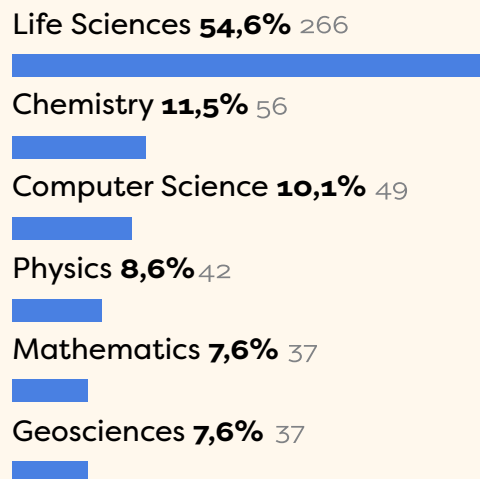
the Development of Education, Science, and Technology of the State of Mato Grosso do Sul (Fundect), the Amazon Foundation for the Support of Studies and Research (Fapespa) and Faperj.

With up to 42 new scientists to be selected, we're excited about the future of research. Check out the statistics on the candidate pool below, including the number of applicants, scientific fields, gender, and ethnic/racial profiles.

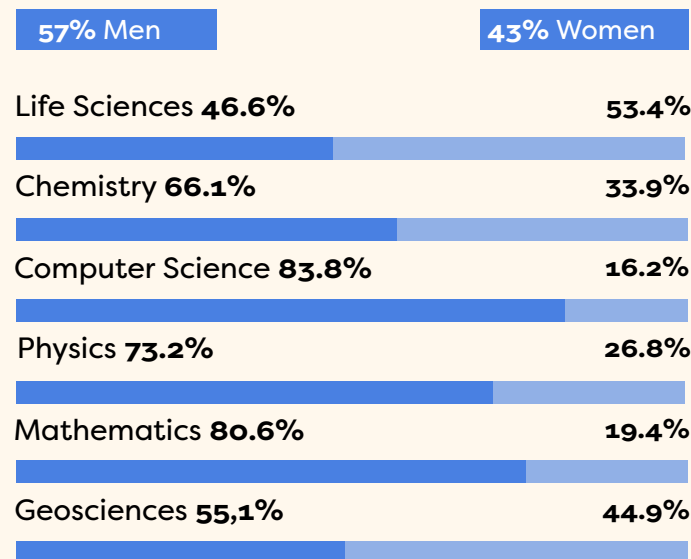
7th Public Call for Support for Science

487 Pre-proposals received

Distribution of Pre-Proposals by Field- (em % e números absolutos)

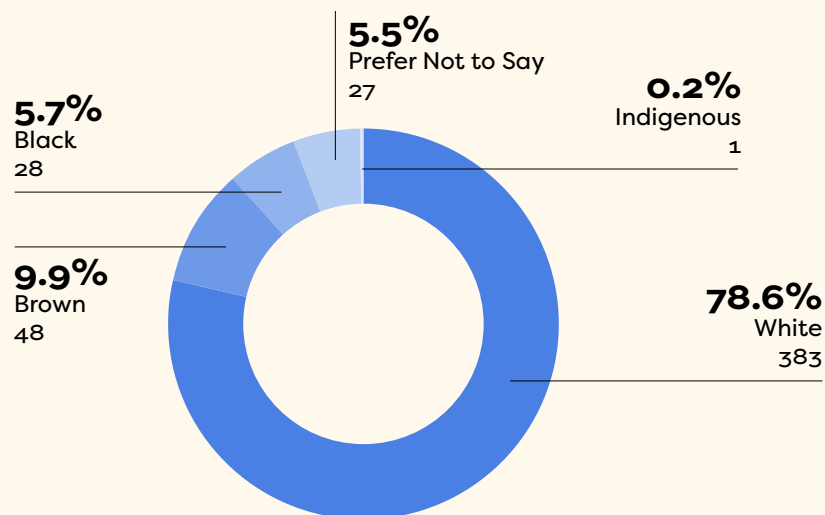


Gender and Field Distribution of Applicants (%)



* The percentages do not account for individuals who did not specify their gender (0.4% of the total).

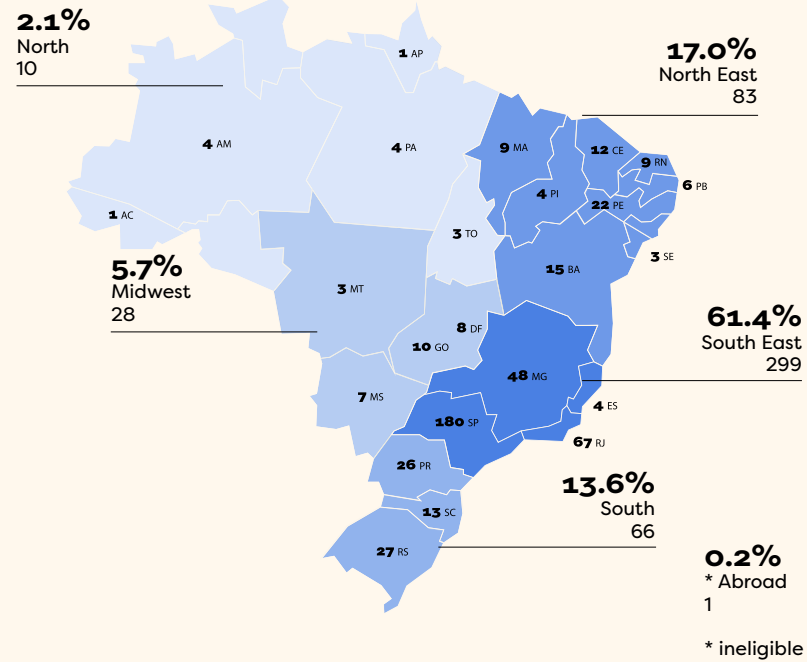
Racial and Ethnic Demographics of Applicants (Absolute Numbers and %)



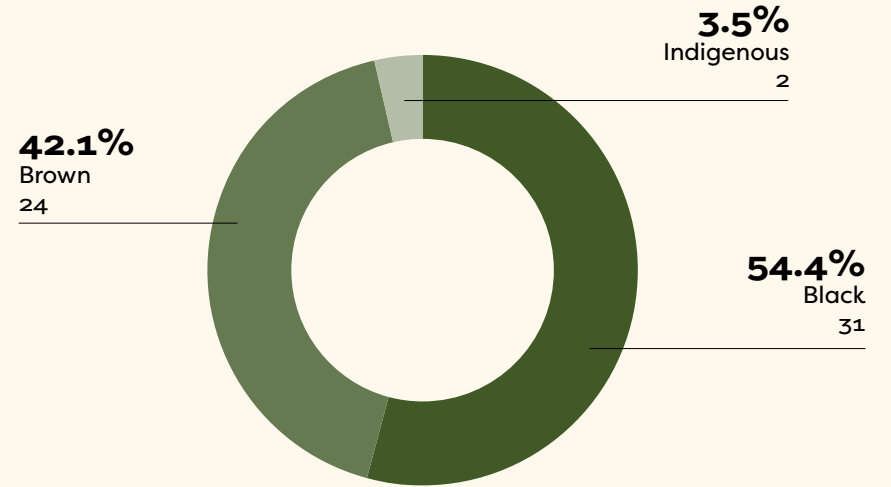
* Totals may not add up to 100% due to rounding.

7th Public Call for Support for Science

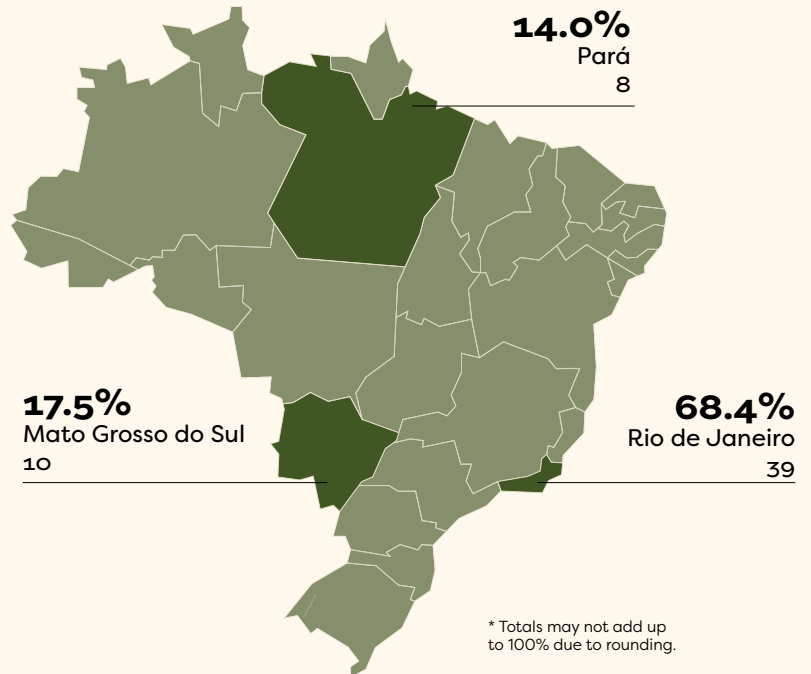
Distribution of Pre-Proposals by Region and State (Absolute Numbers and %)



Racial and Ethnic Demographics of Applicants (Absolute Numbers and %)



Geographic Distribution of Pre-Proposals by Research Group or FAP Location | (Absolute Numbers and %)



Public Call for Black and Indigenous Postdoctoral Fellows in Ecology

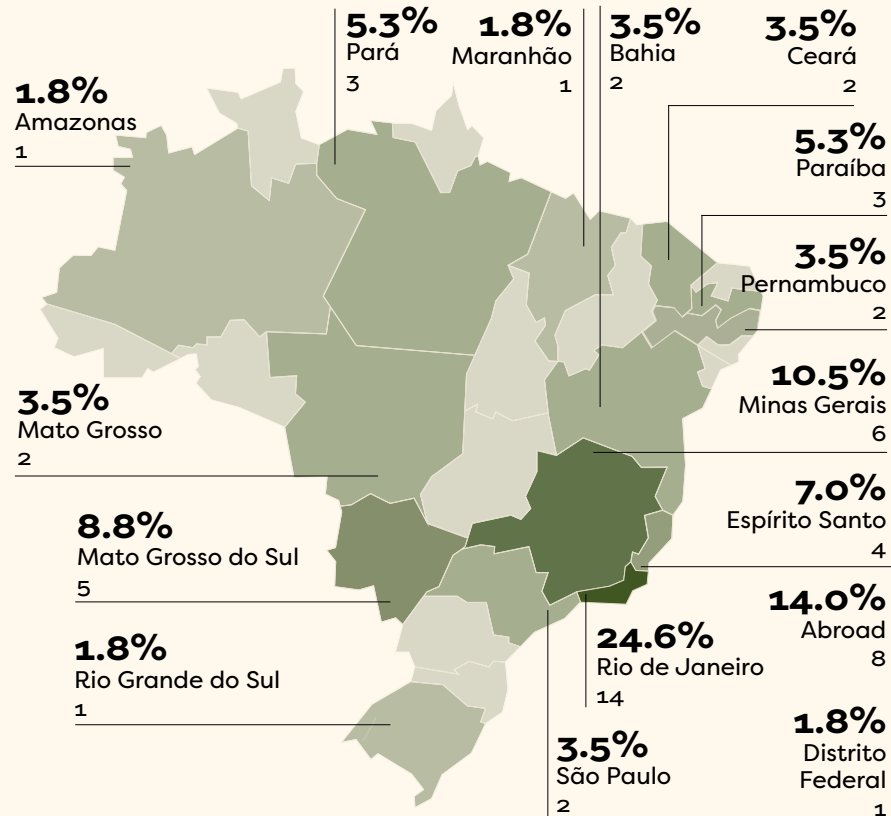
57 Pre-proposals received

Gender Distribution of Applicants (%)

Women **63.2%**

Men **36.8%**

Distribution of Applicants by Undergraduate Degree Location | (Absolute Numbers and %)



What Does It Really Mean to Fund Science?

Funding science isn't just about big grants and expensive equipment. It's also about the everyday things that keep labs running and discoveries happening: fresh paint, reliable air conditioning, hiring talented postdocs, or specialized tools. Let's explore the diverse needs of science and why flexible funding is critical:

A New Utility Pole in Piracicaba, SP

Biologist **Paulo Teixeira**, a professor at Esalq/USP, studies why plants are immune to most pathogens. With funding from Fapesp, he purchased a custom-designed plant growth chamber that provides ideal conditions for his experiments.

Although Esalq/USP built a shed to house the equipment, the original plans did not include a hookup to the electrical grid. This oversight meant there was no power, even though the facility was otherwise ready.

Teixeira used R\$32,000 of Serrapilheira's funds to install an electrical connection. The necessary utility pole was in place within a few weeks and the equipment was up and running.



Baby at an International Scientific Event

A Serrapilheira grant allowed **Barbara Amaral**, a physicist at USP specializing in quantum cryptography to balance her career and motherhood when she was invited to attend an event at the Royal Society in London. Although eager to go, she was breastfeeding her daughter, Luíza. The grant covered her husband's travel expenses, allowing her to attend. "I was able to confidently present my research and even breastfed at the world's oldest scientific society in the world," she said.



Protection From Snakes

Vanessa Staggemeier, a UFRN biologist, used her Serrapilheira grant to address a critical field research safety issue: snake bites. The protective gear she purchased provided essential protection for her team as they studied the biodiversity of the Atlantic Rainforest, as evidenced by their encounter with a venomous snake (pictured).



Brain Fridge

When the borrowed refrigerator housing Latin America's largest collection of cetacean brains unexpectedly broke down, physicist **Bruno Mota**, a UFRJ professor who researches neuroscience, had to act quickly. Serrapilheira's funding secured a replacement, ensuring the preservation of this invaluable research resource collected all over Brazil by his doctoral student Kamila Souza. The story, dubbed as the "brain fridge" incident, made headlines in [Piauí magazine](#) and the [Ciência Fundamental / Folha de S.Paulo](#) blog. In 2023, the network of researchers Souza put together received further funding from Serrapilheira and became the **Brazilian Neurodiversity Network**.



A Serrapilheira Network Project: Interdisciplinary Collaboration Bridging Archaeology, Ecology and Geosciences

In 2023, the five interdisciplinary projects selected in the first internal call for proposals for "Serrapilheira Networks", based on partnerships between grant recipients, began. This initiative was a new development, initially announced in 2022: a call for proposals focused on funding collaborations between scientists already supported by the

Institute. The aim is to enhance the traditional scientific call by promoting multidisciplinary collaboration by facilitating the exchange of individuals, especially those in training, between research groups.

One of the selected projects, "Exploring the Impact of Anthropogenic and Climatic Influences on the Evolution of Amazonian Landscapes," is at the intersection of ecology, archaeology, and earth sciences. Project leaders Danilo Neves (UFMG), Gabriela Prestes-Carneiro (UFOPA) and Vinicius Ribau Mendes (Unifesp) organized the "First Seminar on Methods and Techniques of Paleoenvironmental Studies Applied to Archaeology and Environmental Conservation Studies" at UFOPA in Santarém in August.

The seminar brought together students and researchers using environmental analysis tools to study landscape changes over time. The agenda included mini-courses for undergraduate students from different disciplines at UFOPA and workshops for high school students who are beneficiaries of the Jabba Project (Open Windows to the Biodiversity of the Lower Amazon, led by Prestes-Carneiro) and live in the floodplain communities of Santarém.



Vinicius Mendes participated in the fieldwork with Gabriela Prestes-Carneiro's group between November and December. They excavated the Munguba site on the right bank of the Amazon, in the municipality of Porto de Moz, PA, to collect botanical remains, bones, mollusks, and soil samples.

Mendes has studied the climate evolution of the past 20,000 years and is contributing to the project by helping to uncover the *sambaquis*, or shell mounds, that are the focus of Prestes-Carneiro's research. The researchers will process all the samples collected, and their collaboration is expected to lead to more accurate dating of the Amazonian *sambaquis*.



Grantees Gabriela Prestes-Carneiro and Vinicius Ribau Mendes, along with members of the Jabba Project, during field research in Pará

© Barbara Pereira Vale

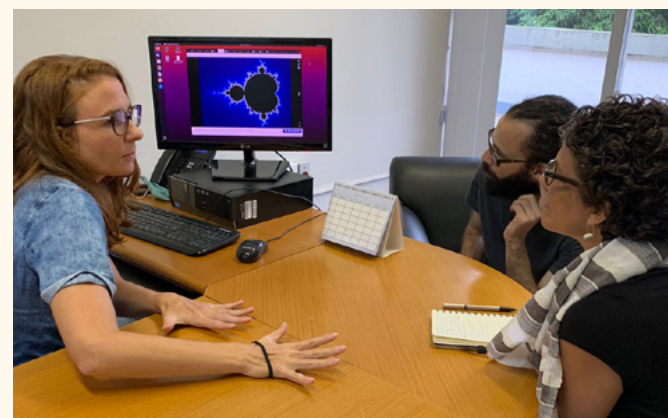
A new Serrapilheira Network call for proposals was opened in 2023. This time the initiative aims to fund collaborative projects between people in the Science and the Journalism & Media programs. Learn more on [page 109](#).

On the Road with Science: Serrapilheira's 2023 Site Visits

As in previous years, in 2023, the Science team traveled throughout Brazil to keep abreast of the grantee's progress on their funded projects, talk to the grantees, understand the main obstacles to their research, and visit program partners. The topics in 2023 were diverse: neuroscience, mathematics, computing, diversity, and open science.



The Science team with neuroscientist Mychael Lourenço, from UFRJ



Mathematician Luna Lomonaco explaining her research on the Mandelbrot set, at IMPA

SCIENCE PROGRAM



Grantee Olavo Amaral presents the work of the Brazilian Reproducibility Initiative at UFRJ



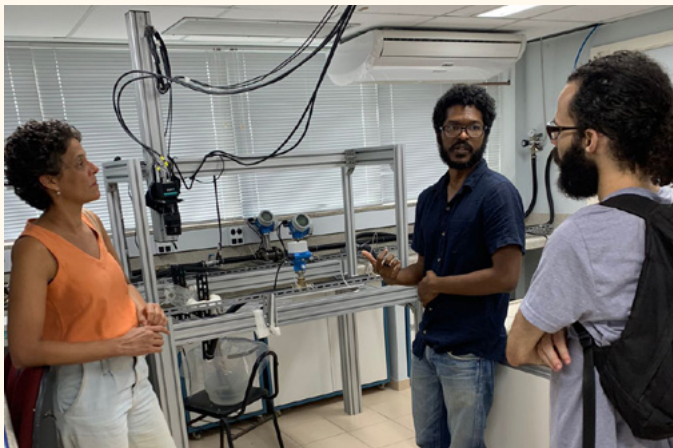
The Science team and members of ecologist Raul Costa Pereira's laboratory at Unicamp



The Science Team visits the laboratory of UFRJ chemist Daniel Grassechi



Science team with the first fellows from UFSCAR's Pluralizar project



Chemical engineer Fábio Santos gives a behind-the-scenes look at his research on quantum computational dynamics at UFRJ

In São Paulo, Cristina Caldas, Michel Chagas, and Kleber Neves from the Science team also visited Geledés – Black Women’s Institute. They spoke with the founders, Sueli Carneiro and Suelaine Carneiro, about diversity actions in science.



IJC and Serrapilheira Announce Grant Recipients for Rare Disease Research

In June, the Instituto Jô Clemente (IJC) and Serrapilheira announced the three recipients of research grants focused on new diagnostics for rare genetic diseases. Each project will receive up to R\$ 300,000 over two years.

The two institutions collaborated on the call for proposals and the selection process, with funding provided entirely by the IJC.

Learn more about the selected projects:

EMANUEL CARRILHO
University of São Paulo

Project: “Direct Newborn Screening for Aminoacidopathies Using Integration of Paper Microfluidic Device and Paper Spray Mass Spectrometry.”

Development of a paper platform method for direct, rapid, low-cost newborn screening analysis.

IDA SCHWARTZ

Universidade Federal do Rio Grande do Sul

Project: “Development and Validation of a Novel Newborn Screening Method for Homocystinuria Screening in Dried Blood Spot Samples.”

A viable approach to homocystinuria screening with low false negative rates.

ROBERTO GIUGLIANI

Universidade Federal do Rio Grande do Sul

Project: “Expansion of Newborn Screening in Brazil: Validation of a Newborn Screening Strategy for Mucopolysaccharidoses Using Glycosaminoglycan-derived Biomarkers.”

Evaluation of the method for determining biomarkers in dried blood for application in the expansion of Brazil’s National Newborn Screening Program.

Illustration by artist Clarice Wenzel for the text "The Anthropocene Takes a Step Forward" by Meghie Rodrigues, published on the Ciência Fundamental blog in July 2023.

Journalism & Media Program



In 2023, we rebranded our Science Outreach program to reflect better our focus on supporting Journalism & Media initiatives that spark curiosity and critical thinking about science. We aim to improve the quality and rigor of scientific discourse in the public sphere. Explore our key activities this year:

Camp Serrapilheira 2023: Podcasts

Camp Serrapilheira, a key component of our Journalism & Media program that includes a public call and an event is back. As with the last event, held in 2020, this edition focused on podcasts.

Nine projects were selected to receive R\$50,000 in funding to produce a season and training from Laboratório 37, the creators of the *37 Graus* podcast, one of the 14 projects supported by Serrapilheira in 2018 and one of the six selected by the Google Podcasts creator program.

The call sought not only “science podcasts” but also engaging projects where science plays a significant role, highlighting the areas of science supported by Serrapilheira: life sciences, geosciences, physics, chemistry, computer science, or mathematics.

The new podcasts are slated to launch in June 2024. Learn more about the selected projects:

PODCAST: THE REINVENTION OF NATURE

(A REINVENÇÃO DA NATUREZA)

Organization: NCF Produções (SP)

In vitro fertilization, artificial insemination, gamete freezing, donation, and commercialization, this documentary narrative podcast explores how laboratory technologies have revolutionized human reproduction.



Nathália Cariatti, from *A reinvenção da natureza* podcast
© Diego Padilha

PODCAST: CAATINGUEIRA

Organization: Centro Cultural do Cariri – Instituto Mirante (CE)

Narrated by Cariri Cearense native and journalist Pâmela Queiroz, this podcast explores the rich tradition of folk medicine and the healing plants of the caatinga. It delves into the intersection of science, ancestral knowledge, and the power of nature in healing.



Pâmela Queiroz, host, *Caatingueira* podcast.
© Elisa Elsie

PODCAST: SIGN OF LIFE (SINAL DE VIDA)

Organization: Alô, Ciência? (SP)

Follow two biologists as they search for elusive species critical to the conservation of biodiversity. This podcast weaves together their personal experiences and the intricate tapestry of fieldwork, giving listeners a unique perspective on the places where it takes place and what happens there.



Gabi Longo and Lucas Andrade, hosts, *Sinal de Vida* podcast
© Diego Padilha

PODCAST: MERIDIANS (MERIDIANOS)

Organization: Lua de Maré Produções (BA)

This speculative fiction podcast conjures up dystopian futures shaped by climate disasters affecting the inhabitants and traditional cultures of the Northeast of Brazil. Through short stories, it explores the impact on local communities sparking a larger debate about building just and sustainable societies.



Marcelo Lima and Lara Carvalho, hosts, *Meridianos* podcast
© Diego Padilha

PODCAST: PLANETARIUM (PLANETÁRIO)

Organization: Todo Canto Produtora (SP)

Focusing on astronomy and cross-referencing historical data with scientific discoveries, this fictional podcast seeks to spread scientific knowledge to children through the story of Mizu, a young Black girl who discovers the wonders of the universe with Black women leading the narrative.



Stela Nesrine and Amon Alves, *Planetário* podcast
© Diego Padilha

PODCAST: IN DEEP WATER (O MAR NÃO ESTÁ PARA PEIXE)

Organization: Jornal da USP (SP)

In the style of literary journalism, this podcast unravels the alarming consequences of human actions on marine ecosystems, the foundation of most life on Earth. It paints a vivid picture of our deteriorating oceans and underscores the urgent need for change to ensure our planet's—and our own—survival.



Guilherme Fiorentini and Herton Escobar, producers, *O Mar não está para peixe* podcast
© Diego Padilha

PODCAST: THE PATHS OF NIÉDE GUIDON

(OS CAMINHOS DE NIÉDE GUIDON)

Organization: B9 Conteúdo e Mídia LTDA (SP)

This narrative podcast explores the remarkable life and work of archaeologist Niéde Guidon, who turned 90 in 2023, known for her groundbreaking discoveries in the Serra da Capivara that challenged established theories about the prehistoric occupation of the Americas.



Kelly Spinelli and Alexandre Potaschkeff, producers, *Os Caminhos de Niéde Guidon* podcast
© Diego Padilha

PODCAST: TORPOR

Organization: Apneia Conteúdo (PE)

This podcast explores the opioid threat in Brazil and asks crucial questions: Are we prepared for a potential epidemic? Do we have adequate health and public safety protocols in place? Is our regulatory system strong enough to prevent it? And is harm reduction on the authorities' radar?



Leonardo Aquino, host, *Torpor* podcast
© Diego Padilha

PODCAST: THE AXÉ OF PLANTS (AXÉ DAS PLANTAS)

Organization: Federal University of Bahia (BA)

This podcast, hosted by Black physicians and cultural health experts, explores the scientific and cultural significance of plants used in various African religions, including Umbanda, Jarê, Ifá, and Candomblé, across their different nations—Ketu, Jeje, Bantu/Angola, and Caboclo.



Márcia Lima and Vagner Rocha, producers, *Axé das plantas* podcast
© Diego Padilha

The distance training program equipped participants with the skills to refine their proposals, improve technical and editorial aspects, and develop comprehensive distribution, marketing and financial plans.

The program culminated in a three-day in-person workshop in Rio de Janeiro, where participants were mentored by industry experts Natália Silva (Rádio Novelo) and Theo Ruprecht (Ciência Suja). The workshop focused on project presentations, feedback sessions, and discussions on distribution strategies and diversity in podcasting.



Representatives of the nine selected projects participated in a training session led by Laboratório 37, held at Lab Oi Futuro in Rio de Janeiro.
© Diego Padilha

Conflict of Interest in Science

We partnered with the Ibirapitanga Institute to address conflicts of interest in food and health, focusing on science and public policy.

A workshop with 16 organizations explored strategies for addressing these conflicts, understanding the role of scientific information in mobilizing public interest, and identifying areas for collaboration.

We also co-funded three investigative journalism projects on agribusiness lobbying, ultra-processed foods, and scientific/environmental denialism.

Agência Pública

This project investigates the impact of online platforms on Brazilian democracy, focusing on the production and amplification of scientific denial. The goal is to inform public policy on scientific, environmental, and political disinformation.

The agency has also published [reports on tobacco industry lobbying for the legalization of e-cigarettes or vapes](#).

Serrapilheira Grant: R\$200,000

Ibirapitanga Grant: R\$200,000

Fiquem Sabendo

The “Lobby on Food” project closely monitors and investigates the activities of lobbyists within regulatory agencies and government departments. These activities influence the federal government’s decisions to approve or modify practices, substances, and other interventions that lack scientific support. For example, [one of the project’s reports found that federal executive agencies hosted food lobbyists five times more often than non-profit sector representatives during meetings on tax reform](#).

Serrapilheira Grant: R\$ 100,000

Ibirapitanga Grant: R\$ 100,000

Repórter Brasil

The agency investigates conflicts of interest in the agri-food industry, scientific research and public policy. Their coverage includes [in-depth reporting](#) on the rollback of agrochemical regulations, focusing on the “PL do Veneno” (Poison Bill) controversy and resulting calls for its veto.

Serrapilheira Grant: R\$250,000

Ibirapitanga Grant: R\$250,000



Natália Viana
PROJECT COORDINATOR
© Personal file



Maria Vitória Ramos
DIRECTOR, FIQUEM SABENDO PROJECT
© Elisa Elsie



Ana Aranha
EDITOR, REPÓRTER BRASIL
© Elisa Elsie

Other Support: The Intercept Brasil

Through a series of investigative reports, the publication explored the incorporation of scientific data into Brazil’s legislative process and how corporate investments potentially influence lobbying efforts that affect health, safety, and education policies. The first article highlighted how [agribusiness-backed lawmakers are stalling legislation to regulate ultra-processed foods](#). A subsequent exposé examined the activities of [doctors and hospital owners who pushed for the end of quarantine measures, ostensibly to profit from the demand for ICUs amid the COVID-19 crisis](#).

Grant: R\$ 200,000



Andrew Fishman e Flávio VM Costa
THE INTERCEPT BRAZIL
© Personal file

Countering Scientific Misinformation

Disarming Disinformation

Professors who deny climate change, agribusiness, and false cures: in the first half of the year, a spotlight was put on those who finance scientific disinformation in Brazil through reporting thanks to a partnership that began in 2022 between the Disarming Disinformation program of the International Center for Journalists (ICFJ) and the Serrapilheira Institute.

The project aimed to support collaborative reporting—conducted by Brazilian journalists, communicators, and researchers—to investigate who finances disinformation in science. The public call selected five journalists, who in April 2023 took part in an Investigathon in Austin, USA.



Journalists Filipe Vilicic, Fabiana Cambricoli, Jaqueline Sordi, Nadia Pontes and Giovana Girardi with Serrapilheira Journalism & Media Director Natasha Felizi

Four of the five collaborative investigation proposals were selected and awarded \$10,000 each to conduct their research and publish their findings. Read more about these projects:



© Elisa Elsie

DW Brasil

RECIPIENT: NÁDIA PONTES

How deniers influence the environmental debate in Brazil

Veja Magazine

RECIPIENT: JAQUELINE SORDI

Companies profit from selling fake natural cures on the internet



© Elisa Elsie



© Elisa Elsie

O Estado de S.Paulo

RECIPIENT: FABIANA CAMBRICOLI

Association of doctors condemned for pro-chloroquine propaganda now bets on anti-vaccine discourse

Agência Pública

RECIPIENT: GIOVANA GIRARDI

Agribusiness and the far right drive the fake news machine on global warming



© Agência Pública/Reprodução

Serrapilheira at the Abraji Congress and Gabo Festival

The 18th Congress of the Brazilian Association of Investigative Journalism (Abraji), held in São Paulo in late June and early July, provided a platform for us to continue to address the critical issue of disinformation. We organized two panels to discuss the challenges and strategies for combating this growing threat to informed public discourse.

The first panel featured the Serrapilheira-supported podcast “Ciência Suja,” where creators Theo Ruprecht and Chloé Pinheiro, moderated by Raika Moisés, delved into the complexities of producing a narrative investigative podcast focused on scientific fraud. With four seasons under their belt, they’ve tackled topics ranging from the anti-vaccine movement to eugenics and even exposed a doctor offering “vaccine reversal.” This demonstrates the impact of Serrapilheira’s support in fostering groundbreaking investigative journalism.



Theo Ruprecht, Chloé Pinheiro, and Raika Moisés

The second panel, “Disarming Disinformation,” featured Nadia Pontes of DW Brasil, who gave a behind-the-scenes account of the investigation that revealed who the climate deniers are in Brazil. Her report revealed how influential figures, often associated with prestigious institutions, with the support of certain business sectors, spread misinformation that contradicts the scientific consensus.

During the same period, the Gabo Festival, held in Bogotá, Colombia, also featured a panel on “Disarming Disinformation” in partnership with ICFJ and Serrapilheira. Journalists Jaqueline Sordi and Fabiana Cambricoli participated in the session. They presented their work in a session entitled “How to Investigate Who Finances Disinformation.”



Nadia Pontes, left, at the Abraji Congress

Cry, Negationist.

As health and fitness content grows in popularity on social media, so does the spread of misinformation and disinformation. Influencers and content creators significantly influence their audiences, shaping beliefs and behaviors. It’s critical to combat the spread of misleading health information and promote evidence-based advice in these online spaces.

To combat misinformation in the health and fitness space, the Serrapilheira Institute and the Chora, Morozov! initiative offered a free course called “Chora, negacionista” (Cry, Negationist.). This training empowered 20 influencers from diverse backgrounds to produce reliable, science-based content that resonates with their audiences. Participants also benefited from networking opportunities, expert guidance, and financial support to amplify the content they created during the training.

Allocation: R\$ 277,053.60



3i Journalism Festival

The 3i Journalism Festival, organized by the Digital Journalism Association (Ajour) in May, included a workshop led by science communicator Atila Iamarino and supported by Serrapilheira. The workshop, titled “From the Newsroom to the Timeline: Strategies for Dynamic Journalism,” aimed to explore collaboration methods between journalists and content creators.

At the festival, which celebrates independent and innovative journalism, Atila Iamarino gave an overview of current social media use and news consumption trends. He highlighted, for example, that Generation Z prefers to consume news on TikTok and pays less attention to Google and other traditional information platforms.



Atila Iamarino at the 3i Festival
© Any Duarte

Serrapilheira Passport at RedPop Congress

The 18th RedPOP Congress, held in July at the Fiocruz Museum of Life in Rio de Janeiro, was supported by Serrapilheira through the “Serrapilheira Passport” initiative, offering partial and full scholarships to participants from Brazil, Latin America and the Caribbean. With the theme “Diverse Voices: Dialogue Between Knowledge and Inclusion in the Popularization of Science,” the event aimed to

highlight the importance of diverse cultures, perspectives, and contexts that enrich the field of science popularization and dissemination. As one of Latin America’s largest science popularization events, this congress marked its 223rd edition on Brazilian soil.

Grant: R\$ 150,000



Participants in the RedPop Congress at the Fiocruz Museum of Life
© Publicity

Remarkable New World

In November, Companhia das Letras published *Admirável Novo Mundo* (Remarkable New World) by Bernardo Esteves, a science reporter for *piauí* magazine. Supported by Serrapilheira, the book weaves together Indigenous knowledge, archaeology, physics, genetics, and linguistics to tell the story of America’s first peoples and challenge the assumptions of scientific truth.

This book, the product of extensive research at Brazilian archaeological sites, actively works to decolonize the narrative of human history in the Americas. It sheds light on overlooked perspectives often marginalized by



scientific imperialism, limited funding for local research, or the Western bias toward written history over Indigenous oral traditions.

Grant: R\$ 30,000

“Denatured” collection

Published by Bazar do Tempo and coordinated by Alyne Costa and Fernando Silva e Silva, this collection highlights the crucial contributions of women in the construction of scientific knowledge. By showcasing the work of international researchers and theorists from various scientific disciplines, the collection aims to educate Brazilian audiences about women’s significant impact in advancing the field of science.

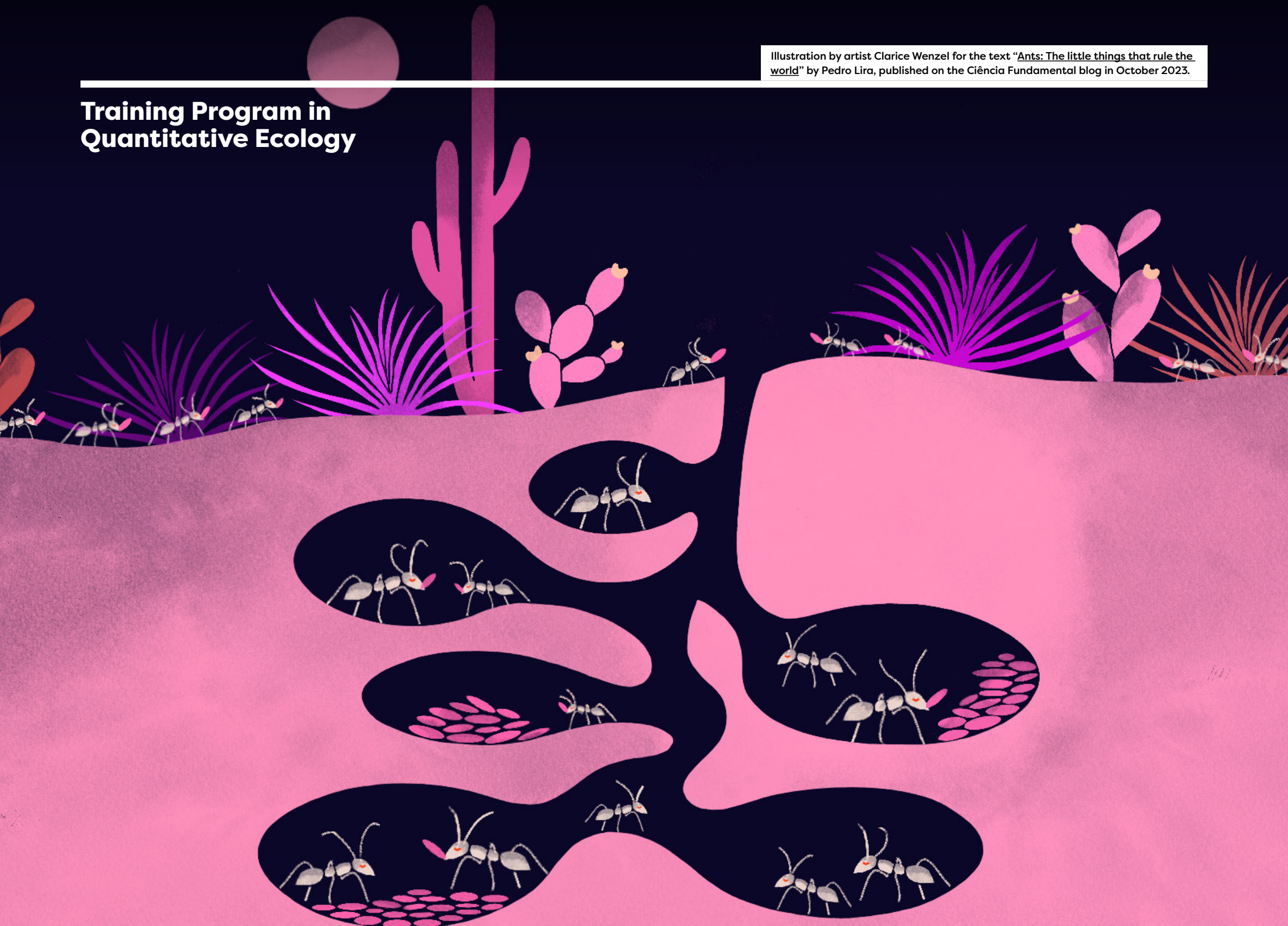
In 2023, two notable titles were published. Isabelle Stengers’s *Another Science is Possible* warns of the dangers of aligning scientific endeavors with systems of domination and extraction that threaten all life on Earth. Vinciane Despret’s *Autobiography of an Octopus* blends philosophy, science, and science fiction (inspired by Ursula K. Le Guin’s therolinguistics) to explore the communication and poetics of animals as diverse as spiders, wombats, and octopuses.

Grant: R\$ 55,000



Illustration by artist Clarice Wenzel for the text "Ants: The little things that rule the world" by Pedro Lira, published on the *Ciência Fundamental* blog in October 2023.

Training Program in Quantitative Ecology



In 2023, the Training Program in Quantitative Ecology, our program providing early-career students from all backgrounds with opportunities to deepen their understanding of the diverse subfields within ecology, took another step forward.

We held the inaugural field course, which took place in two different biomes: the Atlantic Forest – the chosen location was the Itinguçu State Park, in Peruíbe/SP – and the Amazon – in the Km 41 Area of Relevant Ecological Interest, in a region close to Manaus (AM). The first was coordinated by Glauco Machado (USP) and the second by Paulo Enrique Peixoto (UFMG).



Students, teachers, and monitors of the program at the Km 41 camp in the Amazon



Ecologist Laura Leal, one of the instructors of the field course



Students combine empirical and theoretical data in several projects in the two biomes



In the Atlantic Forest, two projects focused on marine life



Student Thiago Mourão and monitor Stefânia Ventura collecting samples in the Atlantic Forest

In the program’s third edition, the field course followed a theoretical module held in January and February at the South American Institute for Fundamental Research (ICTP-SAIFR). During this phase, 30 emerging scientists were introduced to essential mathematical modeling and computer simulation tools used in ecological research. The ICTP-SAIFR, a partner in previous editions of the program, is located at the Institute of Theoretical Physics of UNESP in São Paulo.



Class 2023 of the Training Program in Quantitative Ecology at ICTP-SAIFR
© Leo Eloy

In the second phase, which took place in July, 16 of the 30 students applied their modeling skills to real-world scenarios. They embarked on field projects to describe ecological phenomena, some of which involved designing experiments to collect data. Group projects ranged from analyzing the movement of sea biscuits on the beach to studying the organization of “ant gardens” in the Amazon rainforest. This hands-on experience allowed students to collect data, observe natural patterns, and develop and test ecological models.

Figures for the Field Course – Training Program in Quantitative Ecology

- 3** weeks
- 2** biomes: the Atlantic Forest and the Amazon
- 16** students from 9 states
- 8** instructors in each biome
- 3** coordinators
- 4** tutors per biome

Budget Breakdown:

R\$404,000

logistics

R\$163,000

remuneration for coordinators, instructors, and tutors

R\$37,000

travel and life insurance, emergency responders, forest monitors, and support cars

R\$28,000

work and personal-use materials

Total: R\$R\$632,000

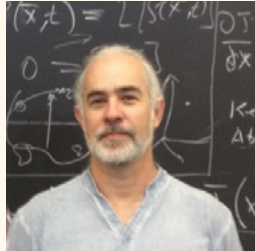
The Instructors

Scientists affiliated with renowned research centers worldwide, the instructors of the Training Program in Quantitative Ecology are leading experts in their respective subfields of ecology. Meet the instructors of the third edition:

Theoretical module:



ROBERTO A. KRAENKEL
Institute of Theoretical
Physics, UNESP, Brazil



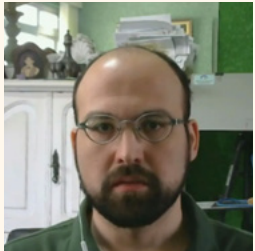
PAULO INÁCIO K. L. PRADO
University of São Paulo, Brazil



DIOGO MELO
Princeton University, USA



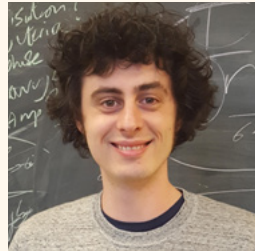
PAULA LEMOS-COSTA
University of Chicago, USA



RENATO M. COUTINHO
Federal University of ABC, Brazil



JOSHUA WEITZ
Georgia Institute of Technology,
USA



STEPHEN BECKETT
Georgia Institute of Technology,
USA



ANDREA SÁNCHEZ-TAPIA
Federal University of ABC, Brazil



JACOPO MARCHI
Georgia Institute of Technology,
USA



PRIYANGA AMARASEKARE
University of California,
Los Angeles, USA



KAREN C. ABBOTT Case
Western Reserve University, USA



VITOR VASCONCELOS
University of Amsterdam,
Netherlands

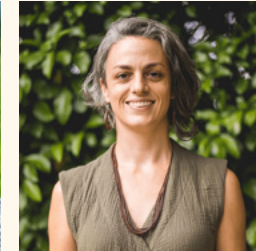


LISA C. MCMANUS
University of Hawai'i, Mānoa, USA

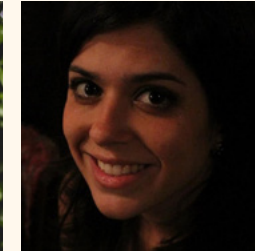
Field course:



GUSTAVO REQUENA SANTOS
Sacred Heart University,
United States



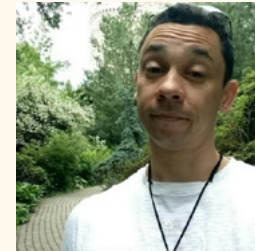
CATARINA JAKOVAC
Federal University of Santa
Catarina, Brazil



KATE MAIA
University of São Paulo, Brazil



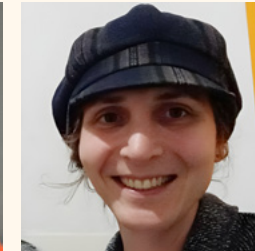
RENATO C. MACEDO-REGO
Federal University of Viçosa,
Brazil



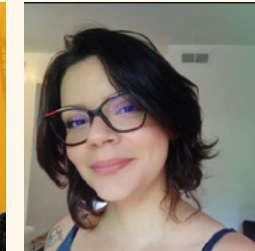
**PAULO ENRIQUE
CARDOSO PEIXOTO**
Federal University of Minas
Gerais, Brazil



**ALEXANDRE VARASCHIN
PALAORO**
Clemson University,
United States



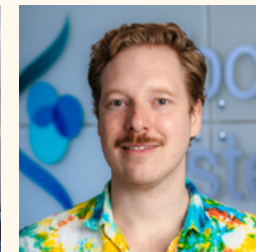
GUI DAVID ARAUJO
Swansea University,
United Kingdom



LAURA LEAL
Federal University of São Paulo,
Brazil



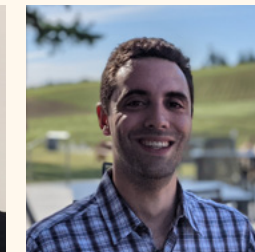
MARCOS COSTA VIEIRA
University of Chicago,
United States



FERNANDO ROSSINE
Harvard Medical School,
United States



RAFAEL RIOS MOURA
Minas Gerais State University,
Brazil



LUCAS MEDEIROS
University of California,
Santa Cruz, United States



**ERIKA MARQUES
DE SANTANA**
University of São Paulo, Brazil



DANIELE KASPER
Federal University of Minas
Gerais, Brazil



PAULO DE MARCO
Federal University of Goiás,
Brazil

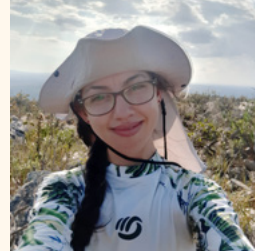
Tutors:



CARLOS RODRIGUES FILHO
National Institute for
Amazonian Research, Brazil



SILAS POLONI
Institute of Theoretical Physics,
UNESP, Brazil



STEFÂNIA VENTURA
Federal University of
Minas Gerais, Brazil



THALES MOREIRA DE LIMA
State University of Campinas,
Brazil

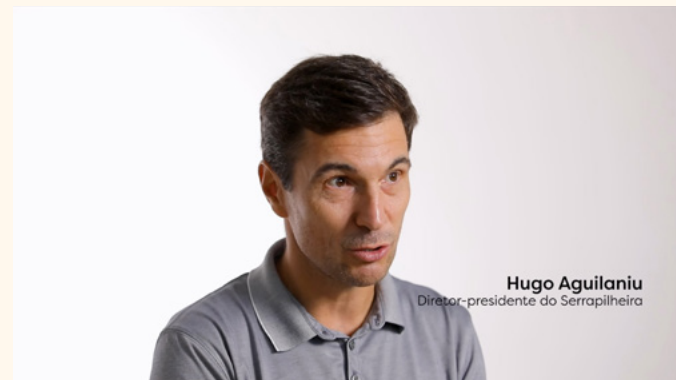
Why We Created an Ecology Course

We have developed a course in ecology to establish tropical ecology as a strategic focus for Brazil. This will capitalize on the country's potential as a leader in addressing the climate crisis and biome degradation, and position Brazil as a global hub for climate and biodiversity scientists. Understanding and conserving Brazil's tropical ecosystems is critical to the country's development, and promoting transdisciplinarity within Brazilian science is essential to achieving this goal.

Our Training Program in Quantitative Ecology empowers students from diverse backgrounds to tackle critical ecological questions, fosters innovative thinking, and prepares them for successful careers as ecological researchers through acceptance into top Ph.D. programs.

The scientific coordinator of the program is Flávia Marquitti, professor at Unicamp, and the general coordinator is Camila Teicher (Serrapilheira).

Watch the Training Program in Quantitative Ecology [presentation video](#) to learn more about the program.

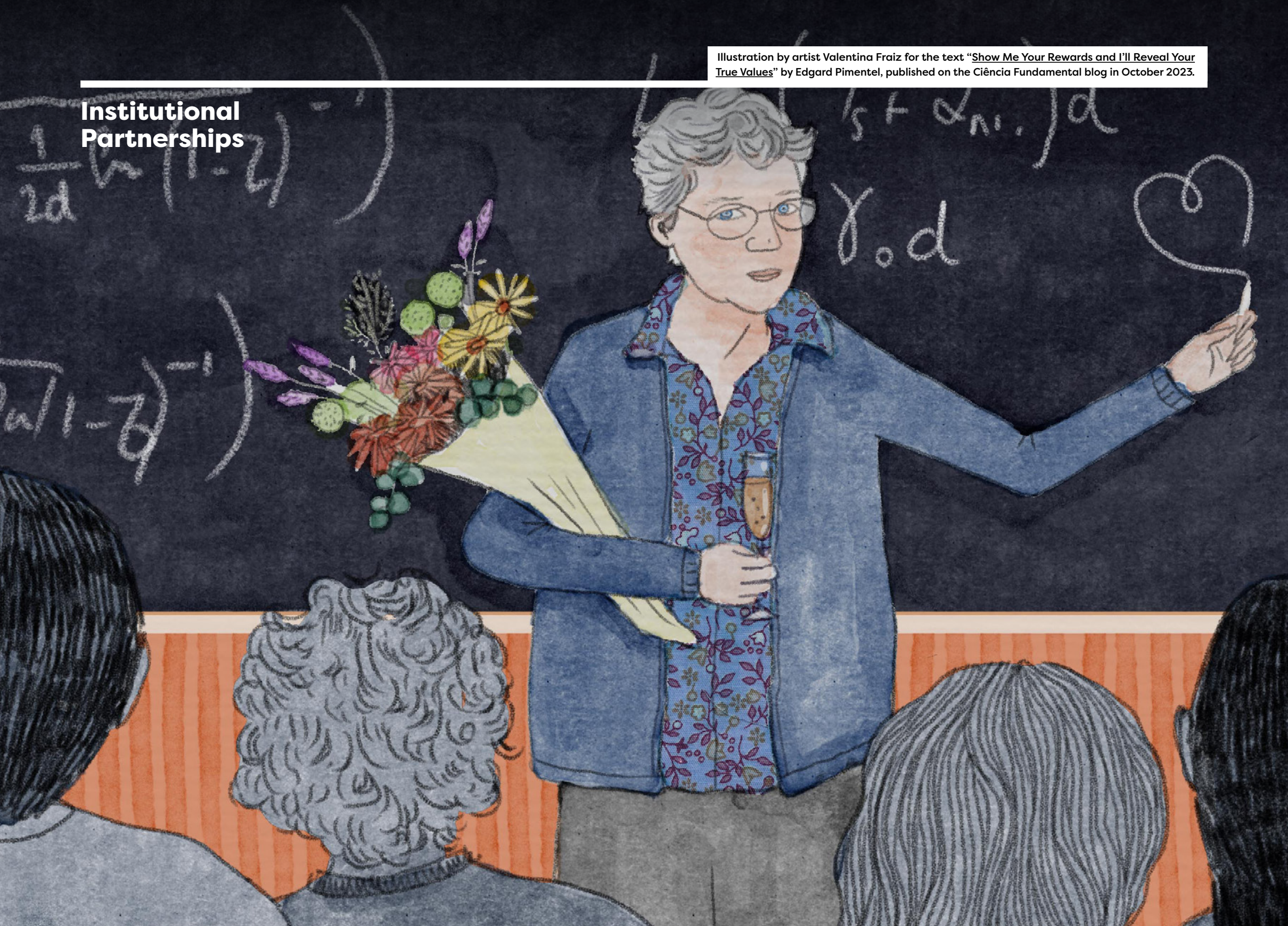


Hugo Aguilaniu
Diretor-presidente do Serrapilheira



Illustration by artist Valentina Fraiz for the text “[Show Me Your Rewards and I’ll Reveal Your True Values](#)” by Edgard Pimentel, published on the [Ciência Fundamental](#) blog in October 2023.

Institutional Partnerships



Fundamental Science – What do early-career scientists in Brazil think?

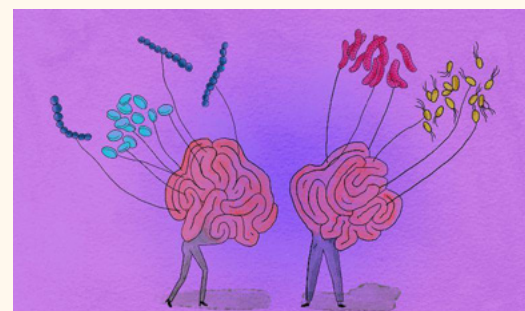
In 2023, *Ciência Fundamental*, Serrapilheira’s science blog hosted at *Folha de S.Paulo*, extended its reach beyond the digital realm and into the halls of UFRJ’s School of Communication. We organized a workshop with journalism students that focused on effective science communication, uncovering unique stories, identifying credible sources, and writing stories with scientific accuracy. We also delved into science’s inner workings and explored its complexities. As a practical exercise, students worked in pairs to pitch story ideas for the blog. The most promising proposal was selected for further development, culminating in production, editing, peer review, and eventual publication in 2024.



The blog features primarily early-career scientists who write in an engaging and accessible style about fundamental but often overlooked aspects of their research areas. They also address broader science-related issues, such as diversity and the scientific process itself. Each article is accompanied by original illustrations and occasionally graces the pages of the print edition of *Folha de S.Paulo*.

After four years, the blog has become a platform for amplifying the voices of young scientists in Brazil. With full support from Serrapilheira’s communications team throughout the process, from setting guidelines to final editing, these scientists are honing their writing skills for a mature, educated audience without specialized knowledge. By the end of 2023, we published more than 220 articles.

Most Popular Articles of 2023:



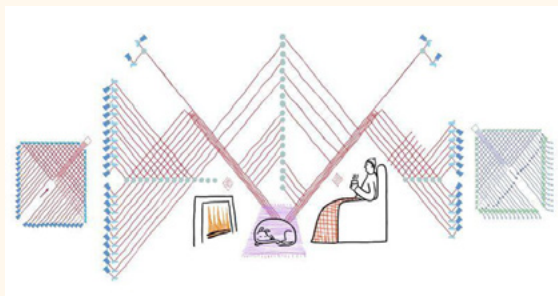
Quem vive no seu intestino pode estar mandando no seu cérebro (*Your Gut May Be Controlling Your Brain*)

New research suggests that gut bacteria may hold surprising sway over our behavior.



O cromossomo Y está sumindo (*The Vanishing Y Chromosome*)

What is the fate of human sexual determination if it disappears?



O inverno quântico está a caminho (Quantum Winter Is On Its Way)

We've reached computers and other quantum technologies. What's next?

Serrapilheira in the media

In 2023, the Serrapilheira Institute was mentioned in over **2,600** press reports across newspapers, websites, TV and radio throughout Brazil. Our **calls for proposals to support science** received significant attention, particularly due to the increased funding in our regular call, made possible through a partnership with FAPs (find out more on [page 49](#)). Additionally, our unprecedented call for proposals **exclusively for Black and Indigenous scientists** (see [page 21](#)) generated significant interest.

Serrapilheira's spokespeople provided commentary on factual matters in science, such as the announcement of the new government's appointment of **ministers for Science, Technology and Innovation and Health**, **scholarship adjustments**, the **CNPq budget** and **university rankings**.

Our Science Director, Cristina Caldas, has emerged as a prominent voice in the diversity agenda, notably through a series of articles published in *Folha de S.Paulo*.

See **"The Struggle of Indigenous People for a Place in Academia"** and **"Cutting-edge Science Goes Beyond White People."**

Also in *Folha*, Caldas addressed issues related to evaluating scientists. Check out **"Fewer Articles, More Knowledge"** and **"Does the University Know How to Recognize the Skills of Its Professors?"**.

Camp Serrapilheira's return and launch of a new call for podcasts had captured major interest in **specialized media**. Additionally, Journalism & Media fellow [Atila Iamarino](#) was interviewed as a disinformation expert while [participating in the 3i Journalism Festival](#).

Other highlights included the Quantitative Ecology Training **field course** and Serrapilheira's partnership with the Ministry of Racial Equality in the **"Atlanticas" Program**.

Hugo Aguilaniu, Executive Director, contributed an article **"Science is born of intuition and grows in uncertainty, and that makes it human"** to *Revista Brasileira*, published by the Brazilian Academy of Letters. In the text, he explores the importance of bridging the gap between science and society, emphasizing that scientists are not isolated figures but rather integral members of society who can address its most pressing challenges.

Out supported projects also made headlines. Notable examples include a **study by grantee Pedro Val** on the Amazon that made the cover of the prestigious *Science* magazine; **surveys conducted by GEMAA/ UERJ** on diversity in science; the **launch of the Lagom Data study "Evidências em Debate,"** focusing on the COVID Congressional Inquiry Commission; the **launch of the Mukengi Project** by the Mancala Institute; and the **Aquazônia project** by Ambiental Mídia.



Social networks

Starting in 2019, we began investing in more strategic content for social media, leveraging our supported projects to share thought-provoking scientific topics. Since then, we have grown by 1,160% on Instagram (our main network, where we have almost 76,000 followers) and 483% on Twitter (now called X). Our presence extends to LinkedIn, Facebook, and TikTok.

75.6 thousand followers

INSTAGRAM

35 thousand followers

TWITTER

2 million views

TIKTOK

12 thousand followers

LINKEDIN

*April 2024 figures

We launched on TikTok in 2023 and quickly found success with over 30 videos on diverse science topics presented in a simple, dynamic, and engaging format. Featuring collaborations with our **grantees**, these videos have garnered nearly 2 million views, 47,000 likes, and an impressive average engagement rate of 80%.

Our social media platforms also feature special editorials like the #SerrapilheiraIndica series. We share content recommendations for books, series, podcasts, and reports with our followers. Check out the most popular suggestions from 2023 below.



7th Serrapilheira Retreats

In October, we hosted the seventh edition of the Serrapilheira Retreats, which brought together our Science and Journalism & Media fellows in Tibau do Sul, RN. During the event, participants presented their projects and discussed communication, diversity in science, democracy, and other issues.

The program featured an inspiring presentation by Professor Helio Santos, who emphasized the importance of diversity in science as a catalyst for national development. Learn more at [page 32](#).



Collaborations Between Scientists and Journalists

A key objective of the Serrapilheira Meetings is to promote the exchange of ideas and the creation of new multidisciplinary collaborations among the researchers and communicators supported by the institute. We announced a new call for proposals entitled “Serrapilheira Networks” to further this goal of funding collaborations between science, journalism, and media professionals. The first call for proposals, launched last year, only focused on promoting collaborations between scientists from different fields.

One of the requirements was that the partnerships show real synergies between science and journalism. For example, a reporting proposal that consulted a scientist only as a source or a research project that envisioned the journalist only as a disseminator of findings was not considered.

From the 26 proposals submitted, we funded 11 projects with up to R\$30,000 each. The selected projects were announced in February 2024:

The Big Five and the Platforming of the Climate Emergency

Fellows: Mariza Ferro (Science), Thiago Domenici (Journalism & Media)

Logbook: Scientific narratives in the decade of the ocean

Fellows: Rodolfo Nascimento (Science), Nathália Cariatti (Journalism & Media), Lucas Andrade (Journalism & Media)

Fungi in the Territory: Bringing scientific knowledge back to Amazonian communities

Fellows: Fabio Brito-Santos (Science), Juliana Mori (Journalism & Media)

Journey into the Mysteries of Biodiversity of Rupestrian Grasslands (*Campos Rupestris*)

Fellows: Daniela Boaneres (Science), Lara Carvalho (Journalism & Media), Pamela Queiroz (Journalism & Media)

In the Clouds

Fellows: Kelly Cristina Spinelli (Journalism & Media), Micael Cecchini (Science)

The Sea That Lives in Me: Interconnected ecosystems to strengthen ocean culture in Brazil

Fellows: Amanda Cunha (Science), César Rocha (Science), Guilherme Longo (Science), Thiago Medaglia (Journalism & Media)

The Fish You Eat Is Not the Fish You Want to Eat

Fellows: O Joio e o Trigo (Journalism & Media), João Paulo Felizardo (Science)

Planting a Potiguara Living School: Intercultural dialogues combining ecology and the revival of the original language

Fellows: Rafael Raimundo (Science), Victor Junior Lima Felix (Science), Selvagem (Journalism & Media)

Who Pollutes Our Waters?

Fellows: Ana Aranha (Journalism & Media), Juliana F. de Brito (Science), Renata Rojas Guerra (Science)

Unveiling the Invisible Paleontology of the Amazon

Fellows: Nádia Pontes (Journalism & Media), Carlos D’Apolito (Science)

Rio 60º, Climate Resilience and Extreme Events in the Wonderful City

Fellows: Mariza Ferro (Science), Thiago Medaglia (Journalism & Media)

Event Participation

As in-person events resumed in Brazil and around the world after the pandemic, the leadership team actively participated in congresses, symposia, and other important gatherings in the fields of science, science communication, journalism,

and philanthropy. They engaged as both participants and contributors, sharing their expertise through presentations and debates. Some notable events include

Annual Meeting of the Brazilian Society for the Advancement of Science (SBPC)

At the 75th Annual Meeting of the SBPC, Brazil’s most important scientific event and one of the largest in Latin America, Serrapilheira organized two panels—one on science and the other on science communication—and participated in two others. The 2023 edition, with the theme “Science and Democracy for a Fair and Developed Brazil,” was held in July at the Federal University of Paraná (UFPR) in Curitiba (PR).

Science Manager Kleber Neves moderated the panel “How to support risky research,” while Journalism & Media Manager Raika Moisés chaired the panel “How three science communication projects defend science by looking at its problems.”

Executive Director Hugo Aguilaniu contributed to the panel “Debates for the 5th CNCTI: Science outreach and the popularization of science.” Communications Senior Manager Clarice Cudischevitch participated in the panel “Scientific communication as a vector of dialogue and formation of researcher networks.”



The Serrapilheira team at the 75th Annual Meeting of the SBPC

World Conference on Science Journalism (WCSJ)

Serrapilheira’s Executive Director, Hugo Aguilaniu, and Journalism & Media Program Manager, Raika Moisés, attended the World Conference on Science Journalism (WCSJ), which took place in Medellín, Colombia, in March.

One of the highlights was a presentation by Brigitte Baptiste, an ecologist and the first trans rector of a university in Colombia, who questioned the effectiveness of actions to mitigate climate change and the role of countries in the Global North in this fight.

Fellow Theo Ruprecht of the podcast *Ciência Suja* was also one of the speakers. He participated in the panel “A Fine Line: How to cover science critically when science is already under attack?”

Annual Meeting of the American Association for the Advancement of Science (AAAS)

In March, Communications Senior Manager Clarice Cudishevitch attended the annual meeting of the American Association for the Advancement of Science (AAAS), the world’s largest multidisciplinary scientific society, in Washington, D.C. She focused primarily on sessions related to science advocacy, an area in which the AAAS is a leader, to understand how this practice is organized in the United States. She also reported on several discussions and studies presented at the event for Folha de S.Paulo’s *Ciência Fundamental* blog.



Communications Senior Manager Clarice Cudishevitch at the AAAS Annual Meeting in Washington DC, USA

GIFE Congress

Science Manager Michel Chagas and Communications Analyst Pedro Lira represented Serrapilheira at the 12th GIFE (Group of Institutes, Foundations, and Companies) Congress, with the theme “Challenging Structures of Inequality.” The event, held in April in São Paulo (SP), attracted around 1,700 participants, including numerous representatives of public authorities, to promote dialogue between philanthropy and these actors. The theme prompted reflection on how social investment, while beneficial, is not enough to address the root causes of inequality, which require actions that truly challenge these structures.



Science Manager Michel Chagas and Communications Analyst Pedro Lira with physicist and Unicamp Professor Marcelo Knobel

Seminar on “Ethnic, Racial and Gender Equity in the Sciences” – Fiocruz Bahia

In November, we participated in the seminar “Ethnic, Racial and Gender Equity in the Sciences,” held by Fiocruz Bahia in Salvador (BA). The Journalism & Media Program Manager, Raika Moisés, participated in a discussion on equity in science communication, emphasizing that excellence also includes diversity in ideas, projects, and researchers. She also addressed the program’s challeng-

es, such as the over-representation of the Southeast in project selection despite having a diverse review panel.

In a debate on equity in scientific research, Michel Chagas, Science Program Manager, highlighted Serrapilheira’s “Best Practices Guide for Diversity in Science.” The guide offers recommendations for scientists to create more diverse groups and outlines the institute’s own diversity policy. He also expressed hope that other funding agencies would adopt similar policies to promote the inclusion of underrepresented groups.

In a roundtable discussion with graduate students at Fiocruz Bahia on science communication and open science, Communications Senior Manager Clarice Cudishevitch and Science Manager Kleber Neves discussed how to communicate science “inwards and outwards effectively.” They introduced different audiences and formats for communication and presented inspiring examples of successful projects. On open science, they addressed issues within the publication system, including high costs and delays in peer review, while drawing on the experiences of graduate students.



Communications Senior Manager Clarice Cudishevitch and Science Manager Kleber Neves led a roundtable discussion on science communication and open science with graduate students from Fiocruz Bahia



Michel Chagas, Science Manager at Serrapilheira, on a panel about equity in scientific research.



Journalism & Media Program Manager Raika Moisés in a discussion on equity in science communication.

*

Learn more about the other events we attended in 2023: **National Meeting of Indigenous Students**, on [page 28](#); **Metascience**, on [page 40](#); **Abraji Congress**, on [page 84](#); **Gabo Festival**, on [page 84](#); and **3i Journalism Festival**, on [page 87](#).

CAPES Thesis Award

In 2023, we again supported the Capes Thesis Award – we had already participated in the 2019 and 2020 editions. We financed two of the three main honors awarded to the authors of the best doctoral theses, offering R\$20,000 to the winners of the Life Sciences and Exact, Technological, and Multidisciplinary Sciences Academies.

Sérgio Luiz Novi Junior, from the Graduate Program in Physics at the State University of Campinas (Unicamp), won the Grand Prize in Exact, Technological, and Multidisciplinary Sciences for his research on functional neuroplasticity of the brain. The winner in the Life Sciences category was Juliano Franco de Moraes, from the Graduate Program in Ecology at the University of São Paulo (USP). Moraes’s research examined the influence of socio-cultural aspects of Indigenous peoples in the Amazon on forest structure, diversity, and composition.



Science Director Cristina Caldas with representatives and winners of the CAPES Thesis Award

© Naiara Demarco (CGCOM/CAPES)

New Members Join the Scientific Advisory Board

The Scientific Advisory Board (SAB)—Serrapilheira’s scientific council—welcomed four esteemed new members in 2023:

- **Francilene Procópio Garcia**, from the Federal University of Campina Grande and the Brazilian Society for the Advancement of Science (SBPC), Garcia, previously a member of the Board of Trustees, now joins the SAB as a representative of **Computer Science**. She is the new president of the SAB, replacing Marcelo Viana (Impa);
- **Hanna Kokko**, from the Johannes Gutenberg University in Mainz, Germany, and **Line Gordon**, from the Stockholm Resilience Center, Sweden, representing the field of **Ecology**;
- **María Teresa Ronderos** of the Latin American Center for Investigative Journalism (CLIP, based in Costa Rica), representing **Journalism & Media**;
- **Ana Maria Fonseca de Almeida**, from the Equity, Diversity, and Inclusion Program (EDI) at Fapesp and Unicamp, representing **Diversity**.

In August, members of the SAB met in Rio de Janeiro for an update about the development of the Institute’s programs and to help plan future actions. Part of the group participated remotely.



SAB Members at their annual meeting in Rio de Janeiro

© Amanda Melo

New Frontiers in Ecology

Building on recent investments in ecology, Serrapilheira is exploring the feasibility of establishing a pilot center for research and public policy in tropical ecology. The goal is to elevate tropical ecology as a strategic priority in Brazil, a country with the world's richest biodiversity, and to capitalize on the country's potential to lead the global conversation on this critical issue.

In June 2023, the Institute convened approximately 30 ecologists from its network for a meeting in Pipa, RN, to begin the design process for the new Ecology Center. This project is currently under development.



Ecologists met
in Pipa, RN

Outlook for 2024

In 2024, we will continue to invest in bold and risky science produced by excellent early-career scientists, Journalism & Media projects that take a curious, provocative, and investigative look at science and in collaborations between these two areas of the Institute's work.

Increasingly, we will emphasize transdisciplinary scholarship that facilitates the exchange of ideas across diverse fields of knowledge, including Indigenous knowledge and other perspectives underrepresented in academia. In doing so, we seek to uncover sustainable solutions for our biomes and elevate biodiversity as a national priority.

We also strive to narrow the perceived gap between science and society by demonstrating that scientists are not isolated figures but integral members of society capable of addressing its most pressing challenges. We aim to promote science as an ally of democratic progress and critical thinking, contributing to a scientifically informed society.

Thank you for your partnership in 2023. We look forward to working with you in the year ahead.

Illustration by artist Valentina Fraiz for the text "[What Is Counting?](#)" by Edgard Pimentel, published on the [Ciência Fundamental](#) blog in August 2023.

Timeline 2023



JANUARY

- Fundamental Science blog turns 3
- The third edition of the Training Program in Quantitative Ecology

MARCH

- Serrapilheira turns 6
- Announcement of those selected to participate in the Investigation of the Disarming Disinformation Program in the USA
- Participation in the World Conference on Science Journalism (WCSJ) in Colombia
- Participation in the Annual Meeting of the American Association for the Advancement of Science (AAAS) in the USA

APRIL

- Launch of Camp Serrapilheira 2023: Podcasts
- Selected by the “Disarming Disinformation” program to participate in the USA Investigation
- Participation in the GIFE Congress in São Paulo, SP

MAY

- 1st Joint call to support Black and Indigenous ecology postdocs attracts 129 applications
- 3i Journalism Festival held in Rio de Janeiro, RJ

JUNE

- Announcement of the 32 selected in the 6th Public Call to support early-stage scientists
- Announcement of the three selected in the Public Call in partnership with IJC for research into rare diseases
- The Camp Serrapilheira 2023: Podcasts call attracts 630 proposals
- Participation in the Abraji Congress in São Paulo, SP
- Meeting of ecologists in Pipa, RN

JULY

- The first field course in the Training Program in Quantitative Ecology takes place in the Atlantic Forest and the Amazon
- RedPop Congress, at the Museum of Life, Fiocruz, in Rio de Janeiro, RJ
- Participation in the Annual Meeting of the SBPC in Curitiba, PR
- Participation in the Gabo Festival in Colombia

AUGUST

- Announcement of the nine podcasts selected for Camp Serrapilheira 2023
- Registration window opens for the 4th call for the Training Program in Quantitative Ecology
- Annual meeting of the Scientific Advisory Board in Rio de Janeiro

SEPTEMBER

- Announcement of the 12 selected in the 1st Joint call to support Black and Indigenous ecology postdocs
- 4th edition of the Training Program in Quantitative Ecology attracts 340 applications

OCTOBER

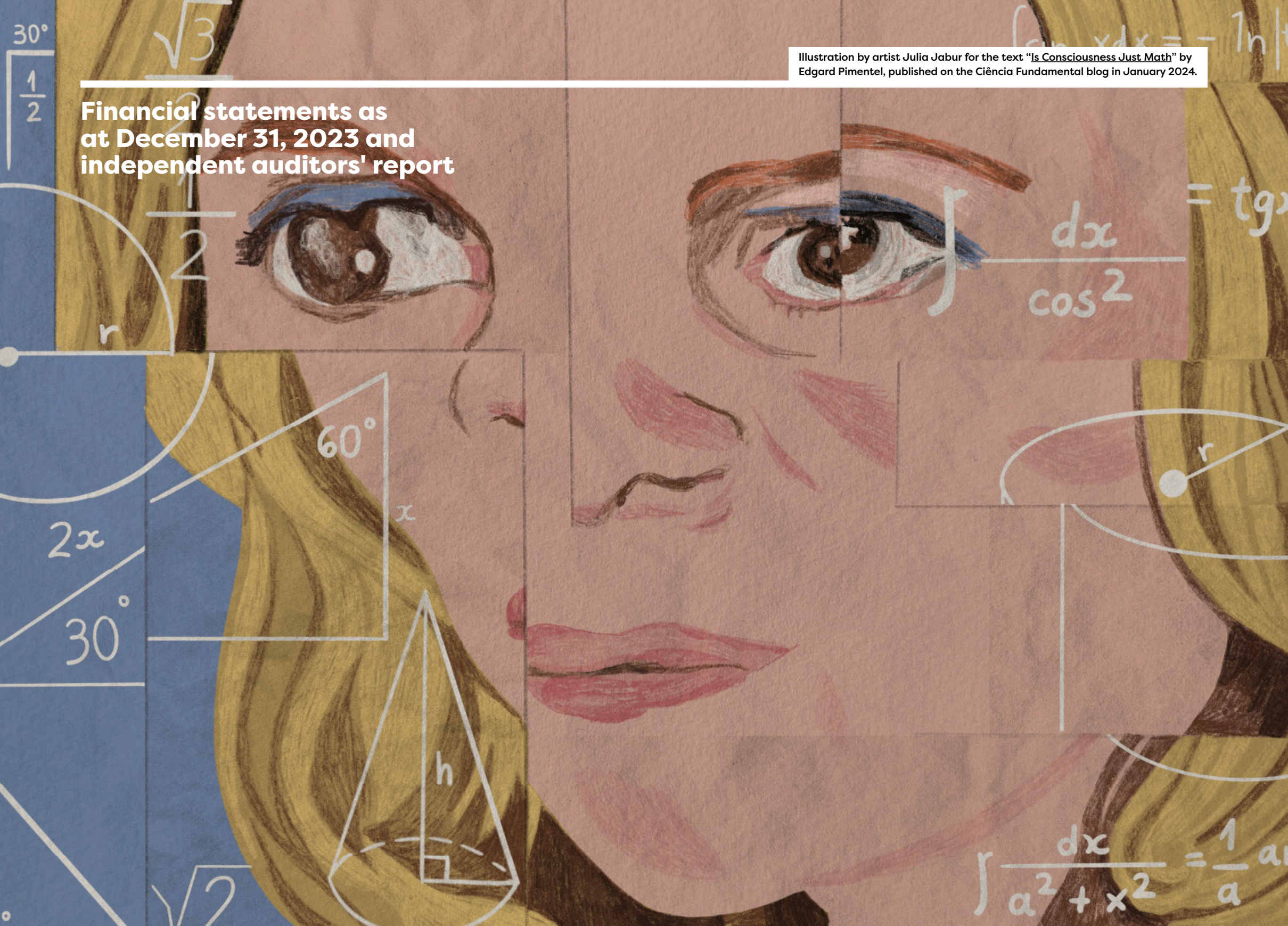
- 7th Serrapilheira Retreats, in Pipa/RN
- Workshop on Science Journalism at ECO, UFRJ

NOVEMBER

- Announcement of the 30 selected for the 4th edition of the Training Program in Quantitative Ecology
- Launch of the 7th Public Call for support early-stage scientists
- Launch of the 2nd Joint call 1/2023 to support Black and Indigenous ecology postdocs
- Launch of the book *Admirável Novo Mundo* (Remarkable New World) by Bernardo Esteves
- Participation in the Seminar “ Ethnic, Racial and Gender Equity in the Sciences” in Salvador, BA

Illustration by artist Julia Jabur for the text "Is Consciousness Just Math" by Edgard Pimentel, published on the Ciência Fundamental blog in January 2024.

**Financial statements as
at December 31, 2023 and
independent auditors' report**



$$\frac{1}{2}$$

$$\sqrt{3}$$

$$\int x dx = -\ln|x|$$

$$\int \frac{dx}{\cos^2} = \text{tg} x$$

$$60^\circ$$

$$x$$

$$2x$$

$$30^\circ$$

$$h$$

$$r$$

$$\int \frac{dx}{a^2 + x^2} = \frac{1}{a} \arctan \frac{x}{a}$$

$$\sqrt{2}$$

Independent auditors' report about the financial statements

**To the Executive Team and Members of the Board
INSTITUTO SERRAPILHEIRA**

Opinion

We have audited the financial statements of INSTITUTO SERRAPILHEIRA (the "Institute"), which comprise the balance sheet as at December 31, 2023, and the related statements of surplus and deficit, comprehensive income, of changes in net assets, and statement of cash flows for the year then ended, and notes to the financial statements, including significant accounting policies and other explanatory information.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of INSTITUTO SERRAPILHEIRA as at December 31, 2023, its financial performance and its cash flows for the year then ended, in accordance with the accounting practices adopted in Brazil for small and medium-sized entities.

Basis for opinion

We conducted our audit in accordance with Brazilian and International Standards on Auditing (ISAs). Our responsibilities under those standards are described in the section under the heading "Auditor's responsibilities for the audit of the financial statements." We are independent of the Institute in accordance with the ethical principles established in the Code of Professional Ethics and Professional Standards issued by the Brazilian Federal Accounting Council, and we have fulfilled our other ethical responsibilities in accordance with these standards. We believe that the audit evidence we obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of directors and those charged with the governance of the financial statements

The Institute's management is responsible for the preparation and proper presentation of these financial statements in accordance with accounting practices adopted in Brazil for small and medium-sized entities (Technical Pronouncement issued by the Accounting Pronouncement Committee (CPC) for Small and Medium-Sized Entities (SMEs) Revision (R1)), and for the internal controls that the directors deem necessary for preparing financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Institute's ability to continue as a going concern, disclosing, as applicable, matters related to the going concern and using the going concern basis of accounting unless the directors either intend to

liquidate the Institute or to cease operations, or have no realistic alternative but to do so.

Those charged with the Institute's governance are responsible for overseeing the Institute's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Brazilian and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of the audit conducted in accordance with Brazilian and international auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Institute's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify

our opinion. Our conclusions are based on the audit evidence obtained up to the date of our report. However, future events or conditions may cause the Institute to cease to continue as a going concern.

→ Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other things, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal controls that we identify during our work.

Ribeirão Preto (SP), March 26, 2024


ValorUp Auditores Independentes
CRC 2SP028585/O-0


André Luiz Corrêa
CONTADOR CRC 1SP198337/O-2

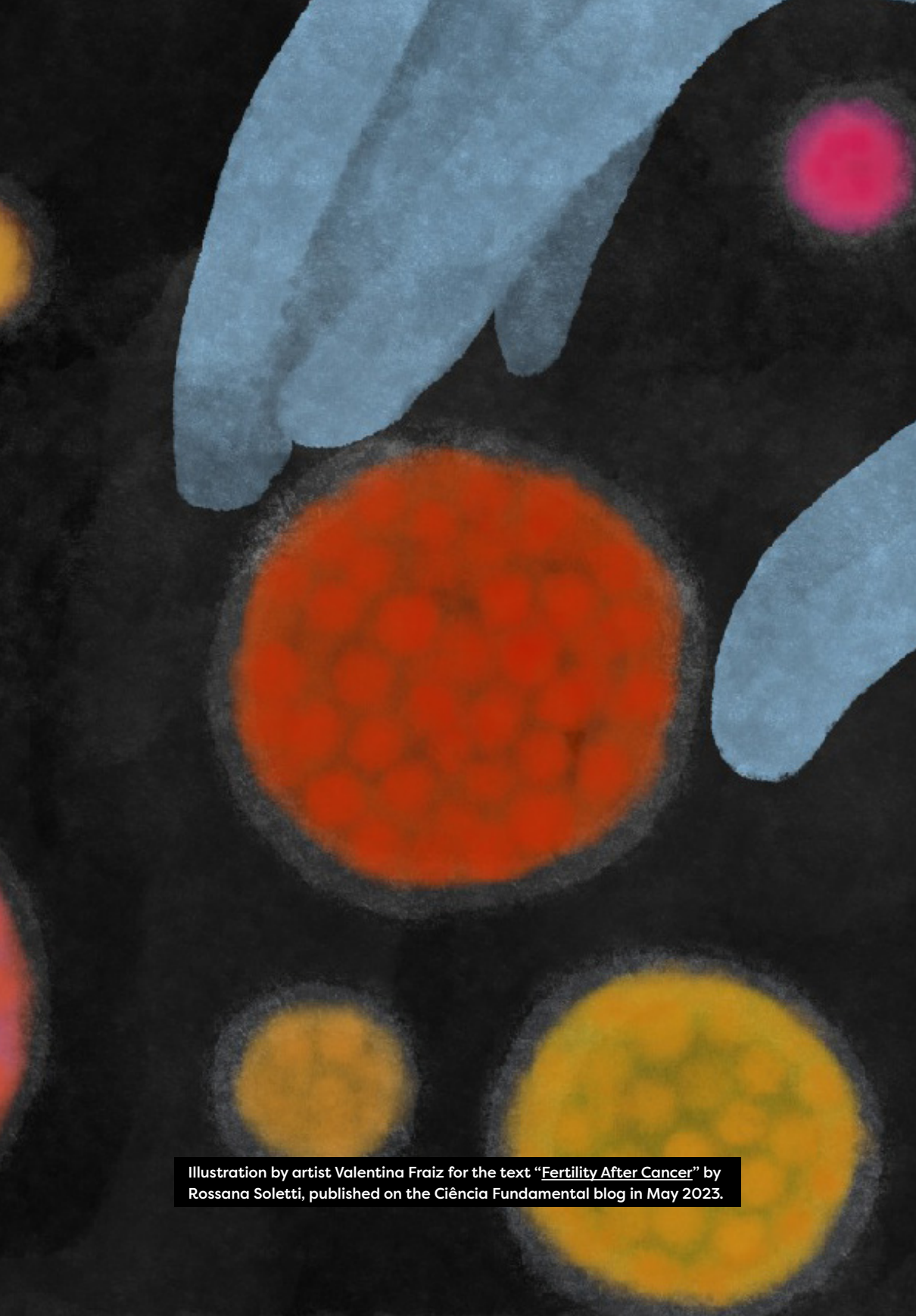


Illustration by artist Valentina Fraiz for the text "[Fertility After Cancer](#)" by Rossana Soletti, published on the [Ciência Fundamental](#) blog in May 2023.

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Balance Sheet as at December 31

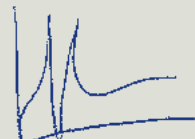
IN BRL THOUSAND | (A free translation of the original in Portuguese)

Assets	Note	2023	2022	Liabilities and equity	Note	2023	2022
Current assets				Current liabilities			
Cash and cash equivalents	5	23,667	12,374	Trade payables		20	1
Other assets		<u>28</u>	<u>15</u>	Employee benefits	9	305	302
				Tax payables	10	<u>17</u>	<u>13</u>
		<u>23,695</u>	<u>12,389</u>	Total liabilities		<u>342</u>	<u>316</u>
Non-current assets				Equity			
Long-term assets				11			
Security deposit		39	39	Net assets		554,328	538,927
Trading securities	6	<u>618,416</u>	<u>542,061</u>	Accumulated surplus (deficit)		<u>87,615</u>	<u>15,401</u>
		618,455	542,100	Total equity		<u>614,943</u>	<u>554,328</u>
Property, Plant and Equipment	7	135	148				
Intangible assets	8		8				
		<u>618,590</u>	<u>542,256</u>				
Total assets		<u>642,285</u>	<u>554,644</u>	Total liabilities and equity		<u>642,285</u>	<u>554,644</u>



Alexandre Torqueti Toloi

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CRC: 1SP 337.737/0-3



Hugo Georges Roger Aguilaniu

CPF: 236.157.848-47
DIRETOR PRESIDENTE

Statement of Surplus or Deficit Years ended at December 31

IN BRL THOUSAND

	Note	2023	2022
Donations Received		3,527	
Revenues from volunteer work	12	987	1,022
Revenues from services rendered	22		1
Gross Surplus		<u>4,514</u>	<u>1,023</u>
Operating Expenses			
Donations	13	(6,708)	(16,812)
General and administrative expenses	14	(6,691)	(5,303)
Personnel expenditure	15	(4,457)	3,850)
Depreciation and amortization	7 & 8	(46)	(63)
Tax expenditure	16	(36)	(23)
Expenses with volunteer work	22	(987)	(1,022)
Operating profit		<u>(14,411)</u>	<u>(26,050)</u>
Financial Revenues	17	102,031	41,454
Financial Expenses	17	(5)	(3)
Financial Income		<u>102,026</u>	<u>41,451</u>
Surplus for the year		<u>87,615</u>	<u>15,401</u>



Alexandre Torqueti Tolo

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DIRETOR PRESIDENTE

Statement of Surplus or Deficit Years ended at December 31

IN BRL THOUSAND

	2023	2022
Surplus for the year	87,615	15,401
Other components of comprehensive income		
Total comprehensive income for the year	<u>87,615</u>	<u>15,401</u>

Statement of Changes in net assets

IN BRL THOUSAND

	Equity			Total	
	Donations from founding members	Earnings from previous years	Acumulated surplus (deficit)		
Note					
As at December 31,					
2021		340,800	278,245	(80,118)	<u>538,927</u>
Transfer to Equity	11				
Surplus for the year			(80,118)	80,118	
				15,401	15,401
As at December 31,					
2022		340,800	198,127	15,401	554,328
Transfer to Equity	11				
Surplus for the year			15,401	(15,401)	87,615
				87,615	
As at December 31,					
2023		<u>340,800</u>	<u>213,528</u>	<u>87,615</u>	<u>641,943</u>

Statement of Cash Flows

Years ended at December 31

IN BRL THOUSAND

	Note	2023	2022
Cash flow from operating activities			
Surplus for the year		87,615	15,401
Adjustments to reconcile non-cash revenues and expenses:			
Depreciation and amortization	7 & 8	46	63
		87,661	15,464
Changes in assets and liabilities			
Other assets		(13)	2
Trade payables		19	
Employee benefits		2	67
Tax liabilities		4	(3)
Net cash provided by (used in) operating activities			
		87,673	15,530
Cash flow from investing activities			
Redemptions of trading securities	6	23,119	20,614
Gains from trading securities	6	(99,474)	(39,164)
Acquisition of property, plant and equipment	7	(25)	(3)
Net cash provided by investment activities			
		(76,380)	(18,553)
Increase (decrease) in cash and cash equivalents			
		11,293	(3,023)
Cash and cash equivalents at the beginning of the period			
	5	12,374	15,397
Cash and cash equivalents at the end of the period			
	5	23,667	12,374



Alexandre Torqueti Tolo

CPF: 223.425.308-03
CRC: 1SP 337.737/0-3



Hugo Georges Roger Aguilaniu

CPF: 236.157.848-47
DIRETOR PRESIDENTE

1 General information

1.1 Operational context

INSTITUTO SERRAPILHEIRA ("the Institute") is a private, non-profit organization founded on November 9, 2015, with no predetermined end date. Its headquarters are in Rio de Janeiro, Rio de Janeiro, Brazil.

The Institute's mission is to support scientific research and outreach in the exact and natural sciences, in any way it can. The Institute may engage in the following activities, provided that they are in line with the pursuit of the Institute's stated goals:

- (i) Developing, fostering, and funding programs, projects, and scientific research that is consistent with its stated purposes;
- (ii) Promoting and sponsoring studies, courses, lectures, symposia, and conferences;
- (iii) Entering into agreements, contracts, and partnerships with schools, associations, companies, agencies, entities, institutions, or any other public or private, national or international entity;
- (iv) Raising, managing, and donating resources (financial, technical, and material);
- (v) Developing and publishing materials by any means, including electronic and virtual channels, to guide, support, or oversee activities that promote, encourage, and advance science;
- (vi) Presenting awards and other incentives to individuals or organizations that have made significant contributions to the Institute's areas of activity, and
- (vii) Engaging in any other legal activities related to the purposes of the Institute.

As at December 31, 2023, the Institute has 3 founding members:

João Moreira Salles
Branca Maria Vianna Moreira Salles
Brasil Warrant Administração de Bens e Empresas S.A.

The Institute's endowment was established in March 2016 with an initial capital investment from the founding members. The endowment is entirely made up entirely of financial resources and will remain heavily invested in trading securities. The income from the financial investments is the Institute's primary source of funding to pursue its goals.

The issue of the Institute's financial statements was approved by the Board of Directors on March 26, 2024.

1.2 Administration

The Institute shall have the following governing bodies:

(a) General Assembly

The General Assembly, the governing body of the Institute, shall be composed of members in full possession of their statutory rights. The General Assembly normally meets once a year to:

- (i) Revise the annual management report;
- (ii) Approve the financial statements after they have been approved by the Board of Directors and the Fiscal Council (when established), and
- (iii) Elect and discharge the members of the Board of Trustees and the Fiscal Council.

(b) Board of Trustees

The Board of Trustees is composed of 3 and to 15 members, appointed by the General Assembly from a pool of members and non-members. They serve as a collegial body for a term of four years, after which they may stand for re-election. The Board of Trustees meets ordinarily every four months and extraordinarily at the discretion of the Chairperson. The Board of Trustees shall be responsible for:

- (i) Appointing the members of the Financial Advisory Board, the Scientific Advisory Board and the Executive Team, and assigning them their respective roles, responsibilities and remuneration, where applicable;
- (ii) Approving the provisions of the By-Laws, Rules of Procedure and the Code of Conduct of the Institute as proposed by the Executive Team;
- (iii) Establishing the Institute's strategy of action, reviewing and approving the annual sponsorship plan, including the related selection process, among other duties.

(c) Scientific Advisory Board

The Scientific Advisory Board consists of 3 and 15 members, appointed by the Board of Trustees from among a pool of members and non-members. They serve staggered three-year terms and are eligible for re-election. The members of the Scientific Advisory Board shall be responsible for:

- (i) Issuing opinions on the Institute's specific areas of activity, as well as on the guidelines for action in their respective areas
- (ii) Advising the Board of Trustees and the Executive Team on matters related to the Institute's goals and activities. This includes, but is not limited to, evaluating the Institute's annual sponsorship plan and the conduct of the related selection processes, among other duties.

(d) Executive Team

The Institute's Executive Team consists of an Executive Director and up to three Directors. The members of the Executive Team are appointed by the Board of Trustees for a term of three years and are eligible for re-election. The Institute's Executive Team is responsible for the executive management of the Institute's activities, as set forth in the Bylaws.

1.3 Taxes and benefits

The Institute is currently required to pay contributions to: (i) the Social Integration Program (PIS); and (ii) the National Social Security Institute (INSS) The PIS contribution is 1% of total payroll and the INSS contribution is based on payroll.

As a private non-profit organization, the Institute is exempt from paying Corporate Income Tax (IRPJ) and Social Security Contributions on Net Income (CSLL) on its ordinary activities. It is also exempt from paying the Social Security Financing Contribution (COFINS) and PIS on its income from its core activities.

The Institute is also required to withhold Income Tax (IRRF) on redemptions of financial investments.

2 Summary of the Significant Accounting Policies

The significant accounting policies used in the preparation of these financial statements are set out below. These policies have been applied consistently throughout the fiscal years, unless otherwise stated.

2.1 Basis of Preparation

The financial statements have been prepared and are being presented following the Technical Pronouncement issued by the Accounting Pronouncements Committee for Small and Medium Sized Companies (CPC PME (R1)), Revision 1. The financial statements have been prepared under the historical cost convention, except for certain financial instruments, which are stated at fair value.

The preparation of financial statements in conformity with CPC PME (R1) requires the use of certain critical accounting estimates and the exercise of sound judgment by the Institute's management in the process of applying accounting policies. The areas involving a higher degree of judgment or complexity and those whose assumptions and estimates are significant for the financial statements are disclosed in Note 3.

2.2 Presentation of Financial Statements

The Institute's financial statements have been prepared in accordance with the Brazilian accounting practices, as issued by the Accounting Pronouncements Committee (CPC), considering the Brazilian Accounting Standards for Small and Medium-Sized Companies and Non-Profit Entities (ITG 2002 (R1)).

The Institute's financial statements are presented in Brazilian reais (BRL), the currency of its primary economic environment and thus its functional and presentation currency.

2.3 Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, bank deposits, and other highly liquid short-term investments with original maturities of up to three months or less and an insignificant risk of changes in value. Escrow account balances, if any, are also included in cash and cash equivalents.

2.4 Financial Assets

2.4.1 Classification

The Institute classifies its financial assets into two measurement categories:

- Fair value (either through other comprehensive income or through profit or loss)
- Mensurados ao custo amortizado.

(a) Financial Assets at Fair Value Through Profit or Loss

Financial assets that do not meet the criteria for classification as either amortized cost or fair value through other comprehensive income (FVOCI) are measured at fair value through profit or loss (FVTPL). Fair value through profit or loss (FVTPL). Any gain or loss on an invest-

ment in a debt instrument that is subsequently designated as FVTPL is recognized in the income statement and presented, net of tax, in other gains/(losses) in the period in which it arises.

(b) Amortized Cost

Financial assets held to collect contractual cash flows, where those cash flows consist solely of principal and interest payments, are measured at amortized cost. Interest income on these financial assets is recognized in the income statement using the effective interest method. Any gain or loss on derecognition of these assets is recognized directly in the statement of surplus or deficit and included in other gains/(losses). Impairment losses are presented in a separate account in the statement of surplus or deficit.

2.4.2 Recognition, Derecognition and Measurement

Regular way purchases and sales of financial assets are recognized on the trade date, which is the date on which the Institute commits to purchase or sell the asset. Financial assets are derecognized when the Institute no longer has the right to receive cash flows from the asset, either because the asset has expired or because the Institute has transferred the asset to another party and has transferred substantially all the risks and rewards of ownership.

On initial recognition, a financial asset is measured at fair value, plus or minus transaction costs directly attributable to its acquisition. If the financial asset is not measured at fair value through profit or loss, then the transaction costs are added to the asset's carrying amount. However, if the financial asset is measured at fair value through profit or loss, the transaction costs are recorded as expenses on the statement of surplus or deficit.

2.4.3 Offsetting Financial Instruments

Financial assets and liabilities are offset, and the net amount is recognized in the balance sheet when the Institute has a legally enforceable right to offset the recognized amounts and intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously. The legal right to offset must not be contingent on future events and must apply in the normal course of business and the event of default, insolvency, or bankruptcy of the Institute or any counterparty.

2.4.4 Impairment of financial assets

The Institute assesses at each reporting date whether there is objective evidence that a financial asset or group of financial assets is impaired. Impairment losses are recognized only if there is objective evidence of impairment as a result of a loss event or events that occurred after the initial recognition of the asset and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets and a reliable estimate of the amount of the loss can be made.

The Institute uses three criteria to determine whether there is objective evidence of impairment loss: significant financial difficulty of the obligor, breach of contract, or default.

If the amount of an impairment loss decreases in a subsequent period and the decrease can be objectively related to an event that occurred after the impairment was recognized (such as an improvement in the debtor's credit rating), the Institute shall reverse the previously recognized impairment loss in the statement of surplus or deficit.

2.5 Derivative Financial Instruments

The Institute does not hold any derivative financial instruments.

2.6 Property, Plant and Equipment

Property, plant, and equipment are stated at historical cost, less depreciation and accumulated impairment losses. Historical cost includes all directly attributable costs necessary to get the asset ready for its intended use by management.

Depreciation is calculated using the straight-line method, which allocates the cost of an asset, less its residual value, over its useful life. The estimated useful lives are disclosed in Note 7.

The residual values, useful lives and depreciation methods of assets are reviewed and adjusted, if necessary, when there is an indication that they have changed significantly since the last balance sheet date.

Gains and losses on the disposal of property, plant, and equipment are determined by comparing the sales proceeds with the asset's carrying amount. These gains and losses are included in other income (expense), net in the consolidated statements of operations.

2.7 Intangible Assets

Software licenses are capitalized on the basis of the costs incurred to acquire and bring to use the software. These costs are then amortized over the estimated useful life of the software, which is generally between three and five years.

2.8 Impairment of Non-Financial Assets

Non-financial assets are reviewed for impairment whenever there is an indication that the carrying amount may not be recoverable. An impairment loss is the difference between an asset's carrying amount and its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units, CGUs). Non-financial assets that have been impaired are subsequently reviewed for possible reversal of the impairment at each reporting date.

2.9 Trade Payables

Trade payables are amounts due to suppliers for goods or services purchased from suppliers in the ordinary course of business. They are classified as current liabilities if they are due within one year. Otherwise, they are classified as non-current liabilities.

2.10 Other Current and Non-Current Liabilities

These amounts are stated at either known or estimated amounts and may include related costs and adjustments for inflation.

2.11 Revenue Recognition and Measurement

Financial Income

Interest income is recognized on a time proportion basis, taking into account the principal outstanding and the effective interest rate over the period to maturity. Interest income is recognized when it is determined such income will be paid to the Institute, taking into account any fair value adjustments.

2.12 Other Income and Expenses

All other income and expenses are also recognized on an accrual basis.

3 Critical Accounting Estimates and Assumptions

Accounting estimates and judgments are continually evaluated based on historical experience, expectations of future events, and other factors.

For the fiscal years 2023 and 2022, no events or assumptions were identified that could present a significant risk of causing adjustments to the Institute's financial statements.

4 Financial Instruments by category

Assets per balance sheet	Classification	2023	2022
Cash and cash equivalents – Cash and banks	(i)	22	28
Cash and cash equivalents – Financial investments	(i)	23,645	12,346
Trading securities – Investment Fund	(ii)	618,416	542,061
Other assets	(i)	28	15
Rental deposit	(i)	39	39
		642,150	554,489

Liabilities per the statement

of financial position	Classification	2023	2022
Trade payables	(iii)	20	1

Classification

- (i) Assets at amortized cost
- (ii) Assets at fair value through profit or loss
- (iii) Liabilities at amortized cost

5 Cash and Cash Equivalents

	2023	2022
Financial investments (i)	23,645	12,346
Cash and Banks	<u>22</u>	<u>28</u>
	<u>23,667</u>	<u>12,374</u>

- (i) Financial investments are represented by a bank deposit certificate and a fixed-income mutual fund. Both funds track the CDI rate (interbank deposit certificate). These funds invest in shares of other funds that invest at least 95% of their assets in securities or transactions linked to the CDI rate.

6 Trading Securities

The financial investment is represented by a share in the Amarante II Fundo de Investimento Multimercado Crédito Privado Investimento no Exterior ("the Fund"), an exclusive investment fund.

The Amarante II Fund is a closed-end fund established in July 2013 and began operations in March 2016. The Fund has a term of 20 years and invests in various financial assets, including equities, bonds, and other securities. As set out in its Regulations, the Fund's investment strategy is to diversify its investments across different asset classes and risk levels. Fund shares are redeemable in full only at maturity but may be partially redeemed once a year.

As of December 31, 2023 and 2022, the asset portfolio of the Amarante II Fund consisted mainly of inflation-linked government bonds ("NTN-B") and shares in mutual funds with maturities of more than 365 days from the balance sheet date.

Investments in the Fund are not guaranteed by the Administrator, any insurance mechanism or the Brazilian Credit Guarantee Fund (FGC). Notwithstanding the care taken by the Administrator in managing the Fund, its investment policy exposes the Fund's assets to

risk due to the characteristics of the securities that make up the Fund, which are subject to market fluctuations and the credit risks inherent in such investments. As a result, there is a possibility of losing the capital invested.

The movements in the Fund's cash and cash equivalents are as follows:

	2023	2022
Opening Balance	542,061	523,511
Income (loss) from securities and trading securities (Note 17) - (i)	99,474	39,164
Amortization of quotas	(11,969)	(11,831)
Amortization of income	(11,150)	(8,783)
Closing Balance	<u>618,416</u>	<u>542,061</u>

- (i) Financial income is recognized net of estimated withholding tax (IRRF). Although this tax is actually due upon redemption, it can be estimated on an accrual basis and recognized in the annual income statement for the year, as there is no chance of recovering the tax within the scope of the Institute's legal nature and activity.

7 Property, Plant and Equipment

(a) Change in Balances

	Computer equipment	Communi- cation & network equipment	Furniture & Fixtures	Leasehold improvement	Total
Balance at January 1, 2022	23	6	154		183
Acquisitions		3			3
Depreciation	<u>(11)</u>	<u>(1)</u>	<u>(26)</u>		<u>(38)</u>
Balance at January 1, 2022	<u>12</u>	<u>8</u>	<u>128</u>		<u>148</u>
Total cost	71	12	256	1.621	1.960
Accumulated depreciation	<u>(59)</u>	<u>(4)</u>	<u>(128)</u>	<u>(1.621)</u>	<u>(1.812)</u>
Valor residual	<u>12</u>	<u>8</u>	<u>128</u>		<u>148</u>
Acquisitions	25				25
Depreciation	<u>(11)</u>	<u>(1)</u>	<u>(26)</u>		<u>(38)</u>
Balance at January 1, 2023	<u>26</u>	<u>7</u>	<u>102</u>		<u>135</u>
Total cost	96	12	256	1.621	1.985
Accumulated depreciation	<u>(70)</u>	<u>(5)</u>	<u>(154)</u>	<u>(1.621)</u>	<u>(1.850)</u>
Net book value	<u>26</u>	<u>7</u>	<u>102</u>		<u>135</u>
Average annual depreciation rates - %	<u>20%</u>	<u>20%</u>	<u>10%</u>	<u>33%</u>	

8 Intangible Assets

(a) Change in Balances

	Softwares
Balances at January 1st, 2022	33
Amortization	<u>(25)</u>
Balances at January 1st, 2022	<u>8</u>
Total cost	177
Accumulated amortization	<u>(169)</u>
Net book value	<u>8</u>
Balances at January 1st, 2023	8
Amortization	<u>(8)</u>
Balances at January 1st, 2023	
Total cost	177
Accumulated amortization	<u>(177)</u>
Net book value	
Annual amortization rate - %	<u>20%</u>

9 Employee Benefits

	2023	2022
Provision for short-term employee benefits	154	175
Withholding Income Tax (IRRF) payable	66	58
Social Security (INSS) payable	65	55
Guarantee Fund for Length of Service (FGTS) payable	17	13
Social integration (PIS) payable	<u>3</u>	<u>1</u>
	<u>305</u>	<u>302</u>

10 Tax Payables

	2023	2022
Third-party withholding income tax (IRRF) payable	15	11
Contribution withholding payable	2	2
	<u>17</u>	<u>13</u>

11 Net Assets

Net assets consist of: (i) contributions received from founding members ("the endowment"), which are recorded directly in equity, and (ii) the income earned by the entity (surplus or deficit), through the transfer of the accumulated surplus (deficit) account. This transfer is made after the following year's financial statements are approved by the governing bodies.

12 Net Revenue

	2023	2022
Income from:		
Donations received -		
with specific allocation	<u>3,527</u>	

In 2023, the Foundation for the Promotion of Open Society ("FPOS") made a donation of R\$ 3,036,000, equivalent to US\$ 600,000, to support the Institute's research and education program on scientific disinformation.

The Institute also received a donation of R\$491,000.00 (US\$100,000.00) from the Climate and Land Use Alliance (CLUA) to support the production of a multimedia platform by Ambiental Media Ltda.

13 Donations and Sponsorships

A large part of the donations made by the Institute are given to the Arthur Bernardes Foundation – FUNARBE, among other transfers and donations, as shown below:

NOTES TO THE FINANCIAL STATEMENTS AS AT 31 DECEMBER 2023
In BRL thousand, unless otherwise stated

	2023	2022
Support for Scientific Research Projects – Funarbe	(4,158)	(9,471)
Ambiental Media Ltda.	(489)	(330)
Iamarino e Sato Serviços de Informação na Internet Ltda.	(300)	(300)
Nexo Jornal Ltda.	(290)	(291)
Friends of Saifr Institute	(200)	(2,100)
Voltdata Agenciamento de Notícias Ltda.	(163)	(115)
Friends of the Museum of Life Association FIOCR	(150)	
Megafauna Livraria Ltda.	(150)	
Empresa Folha da Manhã S.A.	(100)	(200)
Stay in the Know Association	(100)	
Cam Internacional	(100)	
Institutional Development Support Foundation – CIE	(78)	
Brazilian Society for the Advancement of Science	(50)	
Selvagem Ciclo de Estudos Ltda.	(50)	
Conta Outras Produções Ltda.	(50)	
Stela Nesrine M, Alves Produções Artísticas Ltda.	(50)	
Lua Maré Produções Ltda.	(50)	
Leonardo Magalhães Aquino	(49)	
Science and DEvelopment Educational Foundation – FECD	(28)	(79)
Forest Survey Association	(20)	
Mancala Institute	(20)	(33)
Sérgio Luiz Novi Junior	(20)	
Juliano Franco Moraes	(20)	
Alessandra Lopes de Araujo	(11)	
Cecilia Siliansky de Andreatzy	(10)	
Federal University Support Foundation		(500)
International Center for Journalists – ICFJ		(434)
Hello Ciência! Produções e Serviços Digitais Ltda.		(302)
Nav Reportagens Ltda.		(299)
Steve Biko Cultural and Charitable Institute		(250)
Laboratório 37 Comunicação e Produções em Áudio Ltda.		(230)
Brazilian Center for Planning Analysis – CEBRAP		(230)

NOTES TO THE FINANCIAL STATEMENTS AS AT 31 DECEMBER 2023
In BRL thousand, unless otherwise stated

	2023	2022
Maranta Consultoria Ltda.		(220)
Sleeping Giants Brasil		(208)
First Look Media Brazil News Agency EIRELI		(200)
Wheat and Tares Institute		(151)
Alma Preta Institute Journalism		(120)
Infoamazonia Association		(115)
Vero Association for Research and Education in Technology and Digital Communication		(58)
Bazar do Tempo Produções e Empreendimentos Culturais Ltda.		(55)
Balance to carry over	<u>(6,706)</u>	<u>(16,291)</u>
	2023	2022
Balance carried over	(6,706)	(16,291)
Digital Journalism Association – Ajour		(55)
Four Five One Association		(55)
Caracol Web Pesquisa e Gerenciamento de Dados Ltda.		(50)
Tucanacá Edições e Produções Ltda.		(50)
Unas – Union of Nuclei, Associations		(50)
Group of Institutes, Foundations and Companies – GIFE		(50)
Federal University of São Carlos – UFSCAR		(47)
Center for Media Studies Marco Zero Content		(41)
Nexo Consultoria em Comunicação e Saúde Ltda		(33)
Selvagem Ciclo de Estudos Ltda.		(30)
International Insitute of Physics Association		(11)
Luciana Luna Anna Lomonaco		(10)
Bárbara Lopes Amaral		(10)
Vanessa Staggemeier		(10)
Alyne de Castro Costa		(9)
Unicamp Development Foundation – FUNCAMP		(7)
Other projects	(2)	(3)
	<u>(6,708)</u>	<u>(16,812)</u>

14 General and Administrative Expenses

General and administrative expenses (G&A) are as follows:

	2023	2022
Travel and lodging	(1,707)	(107)
Services rendered by legal entities	(1,467)	(1,370)
Projects and Events	(981)	
Event expenses	(554)	(957)
Services rendered by individuals	(339)	(154)
Property leases	(294)	(274)
Translation	(275)	(118)
Visual communication	(260)	(346)
Maintenance and repairs	(165)	(425)
Equipment rental	(135)	
Contributions to trade associations	(108)	(79)
Internet and telephone	(108)	(108)
Kitchen and pantry expenses	(104)	(59)
Advertising and publicity	(81)	(422)
Social security (INSS) on services	(68)	(33)
Office materials	(15)	(5)
Electricity	(7)	(8)
Shipping	(4)	(9)
Advertising and publicity		(134)
Miscellaneous Transportation		(69)
Notary fees		(3)
Air tickets		(595)
Other general and administrative expenses	(19)	(28)
	<u>(6.691)</u>	<u>(5.303)</u>

15 Personnel Expenditure

The composition of personnel expenses is as follows:

	2023	2022
Wages and salaries	(1,525)	(1,251)
Compensation	(961)	(951)
Social security (INSS) contributions	(692)	(590)
Healthcare	(459)	(331)
Workers' Food Program (PAT)	(274)	(214)
Holidays	(204)	(191)
Guarantee Fund for Length of Service (FGTS)	(150)	(124)
13th salary	(146)	(118)
Social Integration Program (PIS)		
payroll contribution	(19)	(15)
Training	(11)	(28)
Other personnel expenditure	(16)	(37)
	<u>(4,457)</u>	<u>(3,850)</u>

16 Tax Expenses

The composition of tax expenses is as follows:

	2023	2022
Tax on financial transaction (IOF)	(20)	(7)
Urban real estate tax (IPTU)	(17)	(16)
	<u>(36)</u>	<u>(23)</u>

17 Financial Income

	2023	2022
Financial revenues arising from:		
Gains/earnings from trading securities (Note 6)	99,474	39,164
Revenue from financial investments	2,557	2,290
	<u>102,031</u>	<u>41,454</u>
Financial expenses arising from:		
Negative effects of changes in foreign exchange	(3)	(2)
Bank expenses	(2)	(1)
	<u>(5)</u>	<u>(3)</u>
Financial income (expense)	<u>102,026</u>	<u>41,451</u>

18 Related Parties

The Institute has three types of related parties: the Founding Members, the Trustees and the Executive Directors. With the exception of the Executive Directors, who are professional and remunerated, the other related parties who have a relationship with the Institute act on a voluntary basis (see Note 22).

Key management personnel includes the members of the Executive Team. In 2023, the total remuneration paid or payable for the services of these professionals, including incidental expenses, amounted to R\$ 960 (2022 – R\$ 950).

19 Contingency Fund

The Institute is not aware of any contingent assets or contingent liabilities to be recorded as at December 31, 2023 and 2022.

20 Insurance Coverage

The Institute has a policy of insuring its assets against risks. The amounts of insurance coverage are considered sufficient to cover potential claims given the nature of the Institute's activities. The risk assumptions adopted are not part of the scope of the audit of the financial statements and have not been reviewed by the Institute's independent auditors.

The Institute has purchased insurance policies to cover leased property and the Institute's fixed assets.

21 Future Commitments

The Institute has real estate leases with varying terms, which are renewable. As at December 31, 2023, the Institute's annual commitments for future payments related to these contracts are approximately R\$280 per year.

22 Volunteer work

Volunteer work must be recognized at the fair value of the services provided to the Institute in accordance with CFC Resolution No. 1,409 of September 21, 2012, which approves NBC ITG 2002 (R1) for not-for-profit entities.

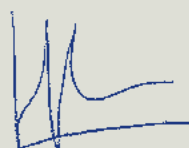
The estimated fair value of the volunteer services provided to the Institute is as follows:

	2023	2022
Volunteer work by:		
Legal entities	975	1,014
Individuals	<u>12</u>	<u>8</u>
	<u>987</u>	<u>1,022</u>



Alexandre Torqueti Toloï

CPF: 223.425.308-03
CRC: 1SP 337.737/0-3



Hugo Georges Roger Aguilaniu

CPF: 236.157.848-47
DIRETOR PRESIDENTE

Illustration produced by artist Julia Jabur for the text "[The Scent of Mortality](#)" by Marcelo L. Campos, published on the *Ciência Fundamental* blog in December 2023.

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