

## Bioproduct with plastic digester potential. The teaching of environmental ethics by the project SAPB-LIPAT/UFRJ & UNIFASE-FMP



<https://doi.org/10.56238/interdiinnovationscresce-069>

### Fernando Coutinho Cruz Filho

Medical Residency in Internal Medicine at UNIFASE-FMP.

E-mail: fernandocoutinhofilho@hotmail.com

### Felipe Freire Souza Silva

Graduated in Medicine

Institution: Arthur Sá Earp Neto College, Petrópolis School of Medicine (UNIFASE/FMP)

E-mail: freire01@gmail.com

### Gabriela Miranda Bellizzi

Post-Graduate in Phytotherapy and Supplementation in Sports and Clinical Nutrition

Institution: Faculty of Medicine of Petrópolis (FMP)

E-mail: bellizzigabriela@gmail.com

### Isabela de Souza Ramos Silva

Undergraduate student in Medicine

Institution: Faculty of Medicine of Petrópolis (FMP)

E-mail: isabela.srs@hotmail.com

### Sandra Ávila Gaspar

Graduated in Agricultural Sciences from the Federal Rural University of Rio de Janeiro (UFRRJ)

Institution: Apiário Estação 4x4

E-mail: sandra.avila.gaspar@gmail.com

### Claudia Correia Gorini

Master's degree in Bioethics, Applied Ethics and Public Health from the Oswaldo Cruz Foundation (FIOCRUZ)

Institution: Arthur Sá Earp Neto College, Petrópolis School of Medicine (UNIFASE/FMP)

E-mail: kawgorini@bol.com.br

### Alexander dos Santos Pyrrho

Doctor in Sciences - Biophysics/UFRJ

Institution: School of Pharmacy - Federal University of Rio de Janeiro (UFRJ)

E-mail: pyrrho@pharma.ufrj.br

### Marcia Cristina Braga Nunes Varricchio

Doctor in Biological Sciences, Post-Doctorate in Traditional Knowledge and Associated Rights.

Adjunct Professor, Department of Internal Medicine, UNIFASE-FMP.

Institution: Faculty of Medicine of Petrópolis

E-mail: mtvarricchio7@gmail.com

### ABSTRACT

This chapter traces the historical trajectory of teaching via the hidden curriculum of bioethics, plant biotechnology, phytotherapy and homeopathy through the partnership between the university center UNIFASE-FMP and the Environmental Health, Parasitology, Bioethics Project of the Immunoparasitology and Toxicological Analysis Laboratory of the Faculty of Pharmacy at UFRJ. Through scientific initiation activities, rational skills were developed for thinking aimed at solving sustainability problems with raw plant extracts and ultra-diluted and energized solutions. In parallel, the development of cultural competence and competence in environmental ethics. Actions in primary health care via health education and health promotion were carried out. As a result of scientific initiation investigations, bioproducts showed potential as resources for sustainability, especially one of them with very promising plastic digester potential. We declare that there are no conflicts of interest. This path of innovative teaching focused on environmental ethics at graduation and Medical Residency is in line with the new code of medical ethics and the concept of environmental health. This gathering of concepts and practices represents an advance in contemporary science, integrating knowledge and knowledge, towards complexity.

**Keywords:** Bioethics of Interethnic and Intercultural Clinic, Plant Biotechnology, Homeopathy, Phytotherapy, Hidden Curriculum.



## 1 INTRODUCTION

After scientific research on the biotechnological and adaptogenic potential of *Euphorbia tirucalli* (Aveloz; Cassioneira, Stick fire) by the Graduate Program in Plant Biotechnology of the Federal University of Rio de Janeiro (UFRJ - VARRICCHIO et al., 2008 – Chart 1).

Chart 1: Academic scientific production that preceded scientific initiation trials with undergraduate and graduate students.

<b>Authors</b>	<b>Thematic</b>	<b>Publication Available at:</b>
VARRICCHIO, M.C.B.N.; PINTO, L.F.; ANDRADE, E. M. DE; PELLAGIO, S.S.	<i>USE OF THE CACTUS CACTUS (Euphorbia tirucalli) DYNAMIZED IN THE TREATMENT OF CANCER.</i>	<b>Journal of the Hahnemannian Institute of Brazil (IHB).</b> P. 64 -67. 2000.
VARRICCHIO, M.C.B.N.; LAW, I.C.N.; MOREIRA, C.B.; EMMERICH, V.; MORENO, G.; PEREIRA, C.; ARAÚJO, B.E.; SALES, M.D.C.; CASTELO BRANCO, M.T.L.; HOLANDINO, C.; KUSTER, R.M.	<i>QUALITATIVE EVALUATION OF THE PRODUCTION OF DITERPENOIDS FROM Euphorbia tirucalli (AVELOZ) UNDER CONTROLLED CONDITIONS FOR MEDICINAL PURPOSES.</i>	<b>Annals of FERTBIO/EMBRAPA CENTRO-OESTE journal</b> , p. 20 -24. MS, September 2006. Available at: <a href="https://sites.google.com/view/lipat/sapb-artigos?authuser=0#h.p_FryEpGVjHHTF">https://sites.google.com/view/lipat/sapb-artigos?authuser=0#h.p_FryEpGVjHHTF</a> .
VARRICCHIO, M.C.B.N.; ORMELEZ, E.G.; SILVA, S.; MOREIRA, C.B.; LIMA, S.S.; VICTÓRIO, C.P.; LOPES, J.B.; HENRIQUES, A.B.; SATO, A.; ESQUIBEL, M.A.; KUSTER, R.M.; LAGE, C.L.S.	<i>MULTIDISCIPLINARY CONTRIBUTION OF PLANT BIOTECHNOLOGY TO THE AREAS OF HEALTH.</i>	<b>Revista Arquivos FOG</b> , - Journal of support to UNIFASE-FMP, <b>Petrópolis, RJ: 4(1): 15-22, Mar. 2007.</b>
VARRICCHIO, M.C.B.N. ; SILVA, S.. OF; GOMES, N. B. N.; KUSTER, R. M.; LAGE, C. L. S.	<i>THE USE OF Euphorbia tirucalli (AVELOZ) IN TRADITIONAL MEDICINE AND THE SCIENTIFIC EVIDENCE.</i>	<b>Journal of Biology and Pharmacy - BIOFAR/UEPB.</b> Paraíba: PB, ISSN 1983-4209 - Volume 03 – Number 01- p77 – 2008.
VARRICCHIO, M.C.B.N.; SILVA, S.; HOLANDINO, C.; LAGE, C.L.S.; KUSTER, R.M.; CASTELO-BRANCO, MTL.	<i>CHROMATOGRAPHIC ANALYSIS OF AVELOZ LATEX AND THE RISKS OF NON-STANDARDIZED PLANT EXTRACTS.</i>	<b>Revista Arquivos FOG - Revista de Apoio à UNIFASE-FMP, Petrópolis, RJ: 5(2): 113-136 Oct. 2008a.</b>
VARRICCHIO, M.C.B.N.; ORMELEZ, E.G.; SILVA, S. DA; SATO, A.; HENRIQUES, A.B.; LAGE, C.L.S.	<i>Euphorbia tirucalli: QUALITATIVE ANALYSIS OF PLANT DEVELOPMENT DURING IN VITRO CULTIVATION.</i>	<b>Journal of Biology and Pharmacy - BIOFAR/UEPB.</b> Paraíba: PB, ISSN 1983-4209 - Volume 03 – Number 01- p1-13 – 2008b.
VARRICCHIO, M.C.B.N.; ORMELEZ, E.G.; MOREIRA, C.B.; SILVA, S. DA; KUSTER, R. M.; LAGE, C.L.S.	<i>IN VITRO CULTIVATION OF Euphorbia tirucalli (AVELOZ), EVALUATION OF THE CHEMICAL CONSTITUTION OF LATEX, UNDER DIFFERENT CULTIVATION CONDITIONS, AND LARVICIDAL AND JUVENILIZING ACTIVITY TEST IN Aedes Aegypti.</i>	<b>Journal of Biology and Pharmacy - BIOFAR/UEPB.</b> Paraíba: PB, ISSN 1983-4209 - Volume 02 – Number 1- p1-14 – 2008c.
VARRICCHIO, M. C. B. N.; SALES, F.; SILVA, S.; KUSTER, R. M.; PYRRHO, A. S.; CASTELO, B. M. L. T.	<i>CHRONIC TOXICOLOGICAL EFFECTS OF CRUDE LATEX FROM Euphorbia tirucalli L. (AVELÓZ) ON LIVER AND SPLEEN WEIGHT ACCORDING TO TRADITIONAL USE: A PRELIMINARY STUDY.</i>	<b>Journal of Biology and Pharmacy - BIOFAR/UEPB.</b> Paraíba: PB, ISSN 1983-4209. V.2, n.2, p.6-11, 2008d.



VARRICCHIO, M.C.B.N.; ESPIÚCA, D.; CANANO, J.L.G.; ANDRADE, E.M.; MALFACINI, S.S.; GOMES, N.B.N.; HOBAICA, P.E.M.; FALCÃO, P.; DIAS, V.L.A.; TAVARES, F.; LOPES, J.B.; ROCHA, T.; NAGAMATSU, D.; LYRIO, C.; CASTELO- BRANCO, MTL.	<i>HEALTH, ENVIRONMENT AND ULTRA-DILUTED SOLUTIONS: RESEARCH AND TEACHING.</i>	<b>Revista Arquivos FOG - Revista de Apoio à UNIFASE-FMP, Petrópolis, RJ: 5(2): 89-98, Oct. 2008e.</b>
VARRICCHIO, M.C.B.N.; CASERTA, T.R.; SOUZA, C.; VARRICCHIO, M.T.; SILVA, S.; MENEZES, F.S.; FERREIRA, A.; KUSTER, R.M.; LAGE, C.L.S.	<i>SURVEY OF THE RECORDS OF THE TOXICOLOGICAL INFORMATION CENTER - RJ ON HUMAN AND ANIMAL POISONING BY PLANTS IN THE PERIOD FROM JANUARY 200 TO OCTOBER 2004.</i>	<b>Revista Arquivos FOG - Revista de Apoio à UNIFASE-FMP, Petrópolis, RJ: 6(1): 69-86, Mar. 2009.</b>
VARRICCHIO, M.C.B.N.; SOUZA, C.; SILVA, S. DA; MALFACINI, S. DA S.; NAGAMATSU, D.; KUSTER, R.M.; CASTELO-BRANCO, M.T.L.	<i>INSECTICIDAL AND JUVENILIZING ACTIVITY TEST OF THE ULTRADILUTED SOLUTION OF THE ETHANOLIC EXTRACT AND THE TOTAL AQUEOUS EXTRACT OF THE STEM OF <i>Euphorbia tirucalli</i> (AVELOZ) IN A LARVAL MODEL OF <i>Aedes aegypti</i>.</i>	<b>Revista Arquivos FOG - Revista de Apoio à UNIFASE-FMP, Petrópolis, RJ: 6(1): 61-67, Mar. 2009a.</b>
VARRICCHIO, M.C.B.N.; SILVA, S. DA; VARRICCHIO, M.T.	<i>Euphorbia tirucalli: CLINICAL RESIZING AND CONTRIBUTION TO UNDERGRADUATE AND GRADUATE STUDIES AFTER RESEARCH IN PLANT BIOTECHNOLOGY.</i>	<b>Journal of Biology and Pharmacy - BioFar/UEPB. Paraíba: PB, ISSN 1983- 4209 - Volume 03 – Number 1 - p71-80 - 2009b.</b>
<b>VARRICCHIO, M.C.B.N.</b>	<b>I HOMEOPATHY: Biotechnological Potential of the <b>Adaptogenic-Similar Effect</b> to Secondary Prevention and Research on Metabolic Disorders and Host Defense Mechanisms – <b>E-BOOK</b>, Technology in Research series. 54p. 2010.</b>	Project Website SAPB- LIPAT/FF/DAC/UFRJ
VARRICCHIO, M.C.B.N.; SILVA, S. DA; VARRICCHIO, M.T.	<i>QUANTUM IDENTITY: HEALTH, ENVIRONMENT and PHILOSOPHY. Environmental Awareness versus the Law of Similarity: The Ecological Quantum Subject.</i>	<b>Journal of Biology and Pharmacy – BioFar/UEPB. Paraíba: PB, ISSN 1983- 4209. 2010a.</b>
GASPAR, S. A.; GUALBERTO, M.J.V., VARRICCHIO, M.C.B.N.	GERMINATION OF <i>Vigna unguiculata</i> WITH ULTRADILUTED SOLUTIONS.	<b>INFO-SAPB Magazine – Magazine to support the SAPB- LIPAT/FF/DAC/UFRJ Project. V.1 No. 1 May, 2017. Available at: <a href="https://sites.google.com/view/lipat/sapb-revista_info-sapb#h.p_Ao31wclpMYL6">https://sites.google.com/view/lipat/sapb- revista_info-sapb#h.p_Ao31wclpMYL6</a></b>

Due to its traditional use, a feedback project in Collective Health was carried out for ethnic groups in urban situations in the city of Rio de Janeiro together with the Environmental Health, Parasitology, Bioethics Project of the Immunoparasitology Laboratory of the Faculty of Pharmacy of



UFRJ and the professor of the discipline Traditional Knowledge and Associated Rights of the National Institute of Industrial Property (VARRICCHIO et al., 2019), deepened, and a project was developed to develop cultural and environmental ethical competence for health professionals and also for undergraduate and Medical Residency students at UNIFASE-FMP, a work presented to the Brazilian Association of Medical Education (MACHADO/Duigó-TUKANO et al., 2019;).

Activities in Health Education (secondary, primary prevention and promotion of quality of life) included the ethnic leaders of indigenous, black and gypsy knowledge present in the municipality of Rio de Janeiro, in a transdisciplinary partnership, with the purpose of multiplying their traditional ethnic communities (VARRICCHIO et al., 2019).

Subsequently, an outpatient service was provided with a volunteer medical team for the exercise of clinical bioethics, based on the Clinical Bioethics of the Interethnic and Intercultural Clinic (Resolution 510/2016 CFM), in the Homeopathy Service of the 7th Infirmary of the General Hospital of Santa Casa da Misericórdia do Rio de Janeiro, an outpatient clinic open to teaching for undergraduate students and medical residencies (in general) and in Homeopathy of the Gaffrée Guinle University Hospital, by spontaneous demand (MUSMANNO et al., 2022; 2023).

Therefore, over the course of 20 years in which notions of Phytotherapy, Pharmacobotany, Ethnomedicine and Bioethics of interethnic and intercultural clinic were introduced at UNIFASE-FMP to undergraduates, residents, health professionals and related areas through Philosophical Café, extension courses and scientific initiation work (VARRICCHIO et al., 2019; MACHADO/Duigó-TUKANO et al., 2019; 2023).

Through didactic activities carried out for medical students and other faculties in our university center, the following were carried out: Workshops and pre-Scientific Weeks courses (2003; 2005; 2008; 2010); Extension Courses in Brazilian and Anthropological Phytotherapy; Pharmacobotany and Immunology from the Cultural Center of UNIFASE-FMP (2014); Round Tables on Scientific Seminars (2007; 2008; 2009; 2011; 2017) on Phytotherapy and Ethnicities; Classes on anamnesis focused on ethnicities and refugees in undergraduate medical studies (2017; 2018); Extension Course to the Petropolitan community on Spirituality in Quality of Life, with Cia do Riso (2018), a Bioethics discipline that teaches Environmental/Spiritual Health, Clinical Bioethics and Environmental Ethics in UNIFASE-FMP Residencies (2017 onwards); Extra Quantum Philosophical Café, with workshops from plants to human and animal health with cultivation techniques; Classes of multiethnic chiefs and shamans (2010 and 2017), ethnomedical gypsy (2018) and representatives of black knowledge (2019) at UNIFASE-FMP and at the Homeopathy Service of the 7th Infirmary of the General Hospital of Santa Casa da Misericórdia; Extra Quantum Philosophical Coffee in partnership with Profa. Yara Brito in the Medicinal Plants Sector of the Botanical Garden of Rio de Janeiro (JBRJ): What is a Plant? (2019) (*In* VARRICCHIO & LAGE, 2020).



There was the creation of didactic-pedagogical material (<https://sites.google.com/view/lipat/sapb>) and the creation of an online communication channel to ethnic communities (also accessible to the general public), through the Environmental Health, Parasitology, Bioethics Project: Project SAPB – LIPAT/FF/DAC/UFRJ (2016 onwards) (In VARRICCHIO & LAGE, 2020).

The implementation on our campus of diversified activities related to the various aspects related to Phytotherapy and Biotechnology represents the practice of the notion of care, wealth, respect for diversity, corresponding to the innovative educational practice aimed at sustainability, whose cultural competence developed in the students, made them capable of developing empathy for Brazilian ethnicities and other peoples located in our country in conditions of vulnerability and risk (MUSMANNO et al., 2023).

Through this transdisciplinary trajectory, going from assistance to research, with teaching in Phytotherapy (prioritizing Brazilian plants), pharmacobotany, geopharmacognosy, ethnomedicine (MUSMANNO et al., 2022; 2023), we arrived at the practice of bioethics of interethnic and intercultural clinic, based on KOTTOW (2011), we believe we have contributed to raising awareness of the theme of biodiversity, promoted education for sustainability in this institutional partnership. We would like to express our special thanks to the Cultural Center of UNIFASE-FMP (FREIRE SOUZA SILVA et al., 2023).

## 2 OBJECTIVES

- Trace the historical course of teaching themes related to Plant Biotechnology via hidden curriculum for immediate application in society, through actions in Primary Health Care;
- List the bioproducts obtained from trials and their main potential applications to sustainability.

## 3 METHODOLOGY

Literature review study.

## 4 RESULTS

Clinical and pathophysiological evidence investigated (APOLINÁRIO et al., 2000) traced the historical path in basic research in plant biotechnology (VARRICCHIO et al., 2006; 2008; AQUINO et al., 2008) determining the consequences for population health and environmental health (; VARRICCHIO et al., 2008,a,b).

In this way, the approach of clinical training students to research with crude plant extracts in a multi and interdisciplinary perspective was initiated, with only the concern of access to scientific





training associated with clinical vision, without concern with patents, with free publication of the records obtained because there were no conflicts of interest, of a financial nature (VARRICCHIO et al., 2009).

As a result of this scientific evidence, the space for reflection on philosophy of science was inaugurated, bringing together the three major areas of science, thus promoting the encounter with traditional Brazilian and foreign knowledge, addressing complexity, then called the Quantum Philosophical Café (CFQ) held at the UNIFASE-FMP Cultural Center from 2008 onwards (MACHADO/Duigó-TUKANO et al., 2019).

Part of the information on clinical experience in Homeopathy, a medical specialty, with authorization from Research Ethics Committees (REC) was published (VARRICCHIO, 2010 – Chart 1; ANDRADE et al., 2022) aiming at future investigations by the Homeopathy Service when new PSC authorization will be obtained.

From all the results obtained, we move on to the analysis, review and reflection of this model of frontier science, this time, seeking conceptual aspects in philosophy for the deepening of the study (VARRICCHIO et al., 2010), and also from the dissemination of homeopathic philosophy as a contribution to the promotion of values in society, so disoriented, paragraph 9 of the Organon of the Art of Healing as health promotion (ALMEIDA SILVA et al., 2022).

Around 2005, the World Health Organization (WHO) expanded the concept of health. The notion of Environmental Health necessarily includes the perception of Diversity and Sustainability. Therefore, based on the National Curriculum Guidelines for Higher Education – Medical (DCN 2014), the New Code of Medical Ethics (2018) and activities of the CFQ/Centro Cultural UNIFASE-FMP since 2008, we obtained as developments the hybrid teaching via Hidden Curriculum (MACHADO/Duigó-TUKANO et al., 2019): of Ethnobotany, transculturality and interculturality (OLIVEIRA et al. 2019); scientific initiation research on natural products, plant extracts and Homeopathy (HANSEL – MARTINS et al., 2022, a) and environmental ethics (FREIRE SOUZA SILVA et al., 2023).

The investigation of the Brazilian legal protection of traditional knowledge and ethno-knowledge in the aspects of Diversity, Sustainability and Ethnodevelopment by the BPTO, understanding Knowledge as a good in itself (PATEL et al., 2018; VARRICCHIO & LAGE, 2020).

Feedback activities in Bioethics and Secondary Prevention - SAPB-LIPAT Project Actions such as the teaching of Environmental Ethics to health professionals by the Medical Residency Program of UNIFASE-FMP; to the members of the LAFFH UNIFASE-FMP and to those of the SAPB-LIPAT/UFRJ PROJECT, also to the components of the HOMEOPATHY SERVICE of the 7th Infirmary of the Santa Casa da Misericórdia General Hospital (BELLIZZI et al., 2022; a, b).



Hybrid teaching activities via hidden curriculum of these themes in urgent demand needed to be expanded, with the creation of journals to support the SAPB-LIPAT Project since 2017: INFOSAPB, SEIVA and, finally, VITAE (2020 – to support Homeopathy) for the development of themes in depth, aiming to increase the technique of their scientific writings.

Thus, the subsequent submission to peer review in scientific weeks, congresses, events, and other journals was valued: This process of knowledge synthesis strengthened everyone involved, and this innovative teaching practice culminated in the positive evaluation by the World Organization for Intellectual Protection/WIPO, receiving prominence (VARRICCHIO et al., 2022).

Other Innovative Teaching Practices were (GASPAR et al., 2022; 2023):

Art therapy with the seeds studied in the Service as shown in Figures 1a,b:



Source: HOMEOPATHY SERVICE – 7th Infirmary of HGSCM-RJ (2020; 2021, a; 2022).

Semiology Extension Event with homeopathic listening to the uniqueness of individuals, collectives and groups evidenced by their narratives (Figure 2):

EXTENSÃO FMP/FASE						
PRINCIPAL	PROGRAMAÇÃO	INSCRIÇÃO	BOLETO	CERTIFICADO	f	tw
SEMIOLOGIA: CUIDADOS, INTER TRANSDISCIPLINARIDADE, BIOÉTICA E ESPIRITUALIDADE						
INSCRIÇÕES ATÉ: 17/10/2019	PERÍODO: 19 DE OUTUBRO DE 2019	HORÁRIO: 12:00H ÀS 18:00 H (SÁBADO)				
OBJETIVO	PÚBLICO-ALVO	PROFESSORES RESPONSÁVEIS				
- Refletir sobre a Arte da Semiologia: Encontro, Cuidado, Bioética e Espiritualidade.	Médicos e profissionais de saúde que se interessem pelo tema.	Profa. Dra. Marcia C.B.N. Varricchio				

Source: VARRICCHIO & LAGE (2020).



Multi, inter and transdisciplinary feedback meeting with professionals from different regions of Brazil:



Source: VITAE Magazine supported by the SAPB-LIPAT/FF/UFRJ Project.

## 5 DISCUSSION

For the present reflection, it is necessary to make clear the definitions and concepts in health, so that the evolution of the professional path in teaching, primary health care, culminating in the potential in research, becomes clear to undergraduate and graduate students.

## 6 PRIMARY HEALTH CARE

**Primary Health Care (PHC)** is the first level of health care and is characterized by a set of health actions, at the individual and collective levels, which encompasses health promotion and protection, disease prevention, diagnosis, treatment, rehabilitation, harm reduction and health maintenance with the objective of developing comprehensive care that positively impacts the health situation of communities (<https://www.gov.br/8ompo/en-us/8o-mposition/saps/what-is-primary-care>). It is a large umbrella that encompasses the other concepts in health.

Collective *health is* a field of theoretical and practical knowledge whose objective is to promote the health of populations. It is a multidisciplinary area of knowledge built at the interface of knowledge produced by the biomedical sciences and the social sciences.

Among others, it aims to investigate the determinants of the social production of diseases in order to plan the organization of health services. The professional can develop proposals for policies and actions aimed at promoting public health, and work in teaching and academic research, as reflected by Natália Gonçalves et al. (2019), Maryana Mendes (2022), and Maryana Mendes et al. (2022a).





One of her areas of professional expertise is Health Promotion – study and development of policies and strategies that favor health promotion (<http://www.juventudect.fiocruz.br/saude-coletiva>). Based on this, events and work were carried out by undergraduate students at UNIFASE-FMP (LAFFH, 2021; BELLIZZI et al., 2023; WENDLING DA SILVA et al., 2023; CAZUMBÁ et al., 2023).

Environmental Health, on the other hand, is all those aspects of human health, including quality of life, which are determined by physical, chemical, biological, social, and psychological factors in the environment (ANDRADE et al., 2022).

Strategic Actions in Environmental Health to Reduce Risks to Human Health implemented:

- Educational and social mobilization activities for public policies (BORSATO et al., 2021; WASIM et al., 2022; VACITE et al., 2023).
- Controlling the quality of water for human consumption (KATHAR et al., 2023)

Environmental education is the processes through which the individual and the community build social values, knowledge, skills, attitudes, and competencies aimed at the conservation of the environment, a good for the common use of the people, essential to a healthy quality of life and its sustainability (GASPAR et al., 2022).

## 6.1 NATURAL PRODUCTS, HOMEOPATHY AND PRIMARY HEALTH CARE

A natural product is a chemical compound or substance produced by a living being – found in nature and which usually has biological or pharmacological activity that can be used in the discovery or design of pharmaceuticals. These compounds provide the source or inspiration for new drugs. They can be of various origins: marine, vegetable, etc (BELLIZZI et al., 2022).

## 6.2 PLANT BIOTECHNOLOGY AND BIOPRODUCTS

Other jobs obtained from natural products (mineral, vegetable, and marine) useful to society and sustainability (DELAUNAY et al. 2023).

## 6.3 PHYTOTHERAPY

Use of Medicinal Plants with Brazilian anthropological roots (GASPAR et al., 2022).

## 6.4 HOMEOPATHY

Samuel Hahnemann (1810) rescued the concepts of healing paths from Hippocrates: Contrary cures contrary (Enantiopathy), Equals cures equals (Isopathy), Likecures like (Homeopathy). This type of study requires in-depth knowledge of Toxicology and Drug Properties. The four Pillars of Homeopathy are: Law of Similar; Minimum Doses; Single Medicine; Experimentation on the Healthy Man (VARRICCHIO, 2010).



Regarding Innovative Research Methodologies to Understand Homeopathy: In Basic Research we highlight the contributions of Bellavite & Signorini (1997), Khuda-Bukhsh (2002/2003), Garcia et al. (2010) and other basic researchers cited (*In SAREMBAUD & POITEVIN. ELSEVIER, 2011*). In Clinical Research, it is recommended to read Professor Marcus Zulian Teixeira (2018; 2021; 2023).

Returning to homeopathic semiology, the differentiated and valuable contribution of homeopathic anamnesis imprints the character of inserting qualitative information in a modalized (singularized) way, thus collaborating to avoid error and mistreatment; also for not sharing information on a network with people who are not health professionals. This homeopathic anamnesis can be discussed with dentists and veterinarians in its format and in its correlation with homeopathic pathophysiology. It can also dialogue with psychology, nursing, nutrology, among others.

It reaffirms medical ethics and the ethics of homeopathic medicine, in line with the code of professional ethics/CFM.

In the clinical part, the students also learned the semiological and pathophysiological evaluation of the constitutions and patterns of illness (identifiable by the narratives): anguish (Psora); to boast by showing, in truth, what is lacking (Sycese); fake news and hate speech, destructive and perverse inverting meanings (Syphillis). This semiotic view detects the expression of what the patients were unable to circumvent, solve, or elaborate on their own, and the homeopathic interrogation is pertinent to the singularities of human suffering and to environmental (epigenetic) causalities. Let's remember that a doctor can ask whatever is necessary to help someone with problems.

In this sense, the contribution of neuroscience is potent, which brings scientific evidence as to the pattern of conduct (pattern evidences the constancy of repetition of something) being determined and, in turn, determining, the continuity of the release of neurosecretions and other substances in the body, a fact that in the long term is capable of determining well-being and longevity with quality of life or, more often than not, the reverse. The study of miasms, or inherited or acquired patterns of illness, had already established the psychoneuroimmunoendocrine profile associated with biotypology for at least two centuries (HAHNEMANN, 1810 *apud* PUSTIGLIONE & CARILLO, 1997; CARILLO JR., 1997; 2000; PUSTIGLIONE et al., 2017).

As a culmination, the students came into contact with a clinical research authorized by CEP carried out in a university hospital by a professor of pulmonologist and phthysiologist from UFRJ, a member of our professional team, who used all these homeopathic concepts and also applied a Quality of Life protocol validated from the clinical observation study carried out by Professor (MSC) Ezemar Marques de ANDRADE et al., 2002, republished in 2022.



## 6.5 PRIMARY HEALTH CARE (PHC): HOW DID WE DO IT IN OUR PLACES?

The philosophical principles of the SUS (Universalization, Equity, Comprehensiveness, Regionality, Decentralization, Popular Participation/Contribution) were observed;

It aligned itself with Hahnemannian homeopathic philosophical principles;

Scientific studies on plant species whose anthropological roots are Brazilian were associated with Brazilian ethnic worldviews.

**Think global, act local (WHO, 2005)**

## 6.6 RESEARCH FOR SUSTAINABILITY AND SCIENTIFIC INITIATION

We observe nature through the natural (raw) resources of Brazilian biodiversity, especially those widely used by peoples and ethnicities, thus studying its mechanisms.

We use ultra-diluted solutions and dynamized by the Hahnemannian method as adaptogens - similes (PANOSSIAN et al., 2009) aiming at the recovery of elements from the kingdoms existing in nature.

### 6.6.1 Products Generated

#### 6.6.1.1 Technical-Cultural Products

► Revisiting the Ethnic Cultural Project – Garden Space of All Places. **Cultural and Environmental Educational Video** (PROVE-MEPPSO, SAPB-LIPAT, LAFFH-UNIFASE at the 7th Infirmary of Santa Casa RJ). Link available at: <https://sites.google.com/view/lipat/sapb?authuser=0#h.wyxxyzwtrzxa>

► **Work with the students who stood out the most in national and international territory:**

- Presentation of Cia do Riso in the Spirituality and Quality of Life Extension Course (COUTINHO CRUZ FILHO, Fernando et al., 2018 *In* VARRICCHIO & LAGE, 2020).

- Ethnobotany: History of the Pomegranate on the planet (VARRICCHIO et al. 2019).

- Dressings with plants and cultural/regional diversity: (OLIVEIRA, L. L. *Plantas cicatrizantes do Saber Negro*. 2021).

- Dressings with *Calendula officinalis* versus Homeopathic Semiology and Pathophysiology (HANSEL-MARTINS et al. *In* GIRI 2022).

There was a demand in this troubled period due to climate change, earthquakes and wars for these works produced by students of different nationalities and origins to be presented and recorded in other languages, as a humanitarian gesture revealing developed cultural competence (FREIRE SOUZA SILVA, 2023), and these educational videos are available at the XV Event of the SAPB-LIPAT/FF/DAC/UFRJ Project invites: Homeopathy Service of the 7th Infirmary of HGSCM-RJ &



Brazilian Federation of Homeopathy for IV Intergenerational, Intercultural and Interethnic Meeting of Humanities (October, 2023).

Finally, at the invitation of the Teaching Coordination of the Faculty of Pharmacy, this entire historical path of research in plant biotechnology focused on primary health care in diversity and cutting-edge research methodologies for sustainability was presented in a hybrid conference during a national event promoted by the Estácio de Sá University – National Health Week (VARRICCHIO, 2023).

With everything within our reach of knowledge and implementation carried out and disseminated to the vulnerable populations with whom we had contact, we turned to the development of rigor in basic research for students.

### 6.6.2 Bioproducts

From a presentation by a geologist, and in accordance with the New Code of Medical Ethics, emphasis was proposed in the preparation of students for the relevant issue of bioproducts in the face of the biodiversity existing in Brazil and its simple, easy and effective applicability to vulnerable populations under conditions of environmental racism, regional degradation and food shortage, the following products were generated:

- ▶ **1 E-book** Ethnobotany: (OLIVEIRA et al., 2019).
- ▶ 1 review article on endocrine disruptors and the evidence in the scientific literature on mental disorders (HANSEL-MARTINS et al., 2023).
- ▶ **1 book chapter on the potential antifungal activity of natural products**, which in addition to showing distinct quantum effects in assays with light fluences from those with ultradiluted solutions and dynamized by the Hahnemanian method (GASPAR et al., 2023).
- ▶ **1 publication** on the cultivation of cowpea (DELAUNAY DE SOUZA et al., 2023, a).
- ▶ 3 publications on potential plastic digester (FREIRE SOUZA SILVA et al., 2019; DELAUNAY DE SOUZA et al., 2023, a).

With the extensive plastic contamination in water, soil and air, compromising human health and non-rational animals, we will continue in this line of research on solid waste digesters, including different types of plastics, thus guiding our undergraduate and graduate students.

## 7 DISCUSSION

- ▶ Both research methodologies with crude plant extracts and ultra-diluted and dynamized solutions do not require patent applications or sophisticated techniques (DUTRA, 2012; VARRICCHIO & LAGE, 2020);



▶ Belong to traditional (and regional) knowledge – HOMEOPATHY SERVICE 2020; 2021, a, 2022; HANSEL – MARTINS et al., 2023; OLIVEIRA et al, 2023; VACITE et al., 2023).

All of this offers a lot of agility as a means to:

▶ **Achieve** the Sustainable Development Goals (PATEL et al., 2018; MUSMANNO et al., 2022),

▶ **Mitigate** chronic and neglected diseases (BENTES LOPES, 2019; ALMEIDA et al., 2022; DE SOUZA et al., 2023; GOMES et al., 2023, a; CARRUPT et al., 2023; GOMES et al., 2023; CAZUMBÁ et al., 2023)

▶ Confront the contemporary situations installed or pressing: pandemic, socio-environmental climate accidents and wars (WASIM et al., 2019; 2021; 2022; CAZUMBÁ et al., 2023a).

Therefore, educational, primary care and scientific initiation movements naturally converged towards the sustainable development goals. What are they? Remember.

## 7.1 SUSTAINABLE DEVELOPMENT GOALS

**01 – Poverty Eradication:** End poverty in all its forms, everywhere.

**02 – Zero Hunger and Sustainable Agriculture:** End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

**03 – Health and well-being:** ensuring healthy lives and promoting well-being for all, at all ages.

**04 – Quality education:** ensure inclusive, equitable and quality education, and promote lifelong learning opportunities for all.

**05 – Gender equality:** achieving gender equality and empowering all women and girls.

**06 – Clean water and sanitation:** ensure availability and sustainable management of water and sanitation for all.

**07 – Affordable and clean energy:** ensuring access to affordable, reliable, sustainable and renewable energy for all.

**Decent work and economic growth:** promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.

**Industry, innovation and infrastructure:** building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation.

**10 – Reducing inequalities:** reducing inequalities within and between countries.

**Sustainable cities and communities:** making cities and human settlements inclusive, safe, resilient and sustainable.





**12 – Responsible consumption and production:** ensuring sustainable production and consumption patterns.

**13 – Action against global climate change:** take urgent action to combat climate change and its impacts.

**14 – Life below water:** conservation and sustainable use of the oceans, seas, and marine resources for sustainable development.

**Life on land:** protecting, restoring and promoting the sustainable use of terrestrial ecosystems, sustainably managing forests, combating desertification, halting and reversing land degradation and halting biodiversity loss.

**Peace, justice and strong institutions:** promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels.

**Partnerships and Means of Implementation: Strengthen** the means of implementation and revitalize the global partnership for sustainable development.

In this way, we can see that initiatives in intersectoral and interinstitutional partnership for research in plant biotechnology applied to primary health care have covered most of the sustainable development goals (VARRICCHIO, 2023)

## 8 CONCLUSION

Based on the National Curriculum Guidelines (2014), on the foundation of teaching via the hidden curriculum (the one that is not part of the official curriculum and is sought by a defined group of students) and on the New Code of Medical Ethics, we have developed over many years the teaching of Homeopathy, Phytotherapy, Bioethics in Research, Clinical Bioethics of Interethnic and Intercultural Clinic and the Medical Residency Program, the teaching of Environmental Ethics.

We highlight the protagonism of the students since then, in addition to the continuation in intercultural, interdisciplinary, intersectoral and interinstitutional activities that denotes: the development of skills, the maturation in dealing with human resources and, consequently, the natural leadership profile with management potential in health systems.



## REFERENCES

- ALMEIDA SILVA, M.E.; VARRICCHIO, M.C.B.N.; DA SILVA, S. (2021). EDUCAÇÃO PELA LEI DA SEMELHANÇA (REGIÃO NORTE). In: XIV EVENTO: CIÊNCIA CIDADÃ E AMBIENTE Subseção: Saúde e Sociedade. Promovido pelo PROJETO SAPB-LIPAT & INPI & SERVIÇO DE HOMEOPATIA HGSCMRJ & ESTAÇÃO 4X4 & ITEGAM & CENTRO DE BIOTECNOLOGIA DA AMAZONIA. Dezembro, 2022. Disponível em: [https://sites.google.com/view/lipat/sapb-eventos\\_sapb#h.lxhvwyvkmvtv0](https://sites.google.com/view/lipat/sapb-eventos_sapb#h.lxhvwyvkmvtv0).
- ALMEIDA, D./TUKANO; MACHADO, C./DOETHYRÓ-TUKANO; ALVES, E./SATERÉ-MAWE; DE OLIVEIRA, L. L.; WENDLING DA SILVA, A. V.; BELLIZZI, G. M.; HANSEL – MARTINS, C.; WASIM, N.; GASPAR, S.A.; GORINI, C.; PYRRHO, A. DOS S.; VARRICCHIO, M.C.B.N.; DA SILVA, J.; LAGE, C.L.S.; DA SILVA, S. Anemias e potencial biotecnológico nutracêutico de Echinacea e de Açaí – Plantas de uso indígena (Estudo de Revisão). REVISTA SEIVA – Revista de apoio ao Projeto SAPB-LIPAT. Volume 6-2 - Out-2022. Disponível em: [https://sites.google.com/view/lipat/sapb-revista\\_seiva#h.p8ofrbj63j6g](https://sites.google.com/view/lipat/sapb-revista_seiva#h.p8ofrbj63j6g)
- ANDRADE, E. M. de; SCHILKOWSKY, L. B.; VIEIRA I. F.; ORTEGA, J. A.; MADEIRA, V.; VARRICCHIO, M. C. B. N. (2002). Complementaridade Homeopatia e Terapêuticas Convencionais: a realidade da clínica cotidiana. Anais do I Simpósio Internacional de Pesquisa em Homeopatia e VII Simpósio Nacional de Pesquisa em Homeopatia. CD-rom. Rio de Janeiro: UERJ/Federação Brasileira de Homeopatia.
- ANDRADE, E. M. de; VIEIRA I. F.; RAMOS DA SILVA, I. S.; BELLIZI, G. M.; WENDLING DA SILVA, A.V. & VARRICCHIO, M.C.B.N. Revisitando o Potencial Terapêutico Complementar de Solução Diluída e Dinamizada em Pacientes com SIDA grau IV com Para-efeitos no SAE do Hospital São Francisco – Município do RJ (HESFA/UFRJ). REVISTA INFO-SAPB – Revista de apoio ao Projeto SAPB-LIPAT/FF/DAC/UFRJ. Volume 6 - n1 - Mai 2022. Disponível em: [https://sites.google.com/view/lipat/sapb-revista\\_info-sapb#h.w82a8ch0732f](https://sites.google.com/view/lipat/sapb-revista_info-sapb#h.w82a8ch0732f).
- APOLINÁRIO, J.C.G., VARRICCHIO, M.C.B.N., CARILLO, R.JR. & PINTO, L.F. (2000). Abordagem fisiopatológica da constituição homeopática sulfúrica equilibrada no adulto. Revista Homeopatia Brasileira, Rio de Janeiro, v.6, n.2, p. 93 - 97.
- AQUINO, C. L., VARRICCHIO, M. C. B. N., MORENO, G., VEIGA, V. F., ZANCAN, P., SOLA-PENNA, M., KUSTER, R., HOLANDINO, C. ULTRADILUTED DYNAMIZED SOLUTIONS OF Euphorbia tirucalli LINEU (AVELOZ) MODIFY THE VIABILITY AND THE GLYCOLYTIC METABOLISM OF CELL LINES. International Journal of High Dilution Research. SP: ISSN 1679 – 8368. 2008.
- ASSOCIAÇÃO BRASILEIRA DE HOMEOPATIA MÉDICA.  
Disponível em: <https://amhb.org.br/>
- BELLAVITE, P.; SIGNORINI, P. et al (1997). The similia principle: from cellular models to regulation of homeostasis. British Homoeopathic Journal, v.86, p. 73-85, april.
- BELLIZZI, G. M.; MUSMANNO, P.; CLER, J.; DA SILVA, S.; PYRRHO, A. DOS S.; VARRICCHIO, M.C.B.N. PRODUTOS NATURAIS E CÂNCER: AVANÇO DA INVESTIGAÇÃO SOBRE ALIMENTOS FUNCIONAIS POR DÉCADAS. Resumo. XII Evento SAPB-LIPAT, abril, 2022.
- BELLIZZI, G.M.; WASIM, N.; RAMOS SILVA, I. de S.; GASPAR, S. A.; PYRRHO, A. dos S. & VARRICCHIO, M.C.B.N. Cultivo assistido de Vigna unguiculata induzido com extrato de Euphorbia



tirucalli e SUD 5CH de Spongia tosta e Hekla lava. Resumo In: XVIII Semana Científica FMP-UNIFASE: (Re)-Existência e Consciência: 200 anos de quê? RJ – Petrópolis. 25 – 27/10/2022a. - [https://sites.google.com/view/lipat/sapb-eventos\\_sapb#h.o6zdbcf4isb9](https://sites.google.com/view/lipat/sapb-eventos_sapb#h.o6zdbcf4isb9)

BELLIZZI, G.; MUSMANNO, P.G.; MENDES, M.G.; GONÇALVES, N. dos S.; SOUZA SILVA, F.F.; HANSEL-MARTINS, C.; CAZUMBÁ, A.; WASIM, N.; KATHAR, K.R.; WENDLING DA SILVA, A.V.; SALOMÃO, E.; MACHADO, C.A.F./DOETHYRÓ-TUKANO; MACHADO, C.V. da S./DUIGÓ-TUKANO (in memorian); ALVES, E./SATERÉ-MAWÉ; VACITE, M.; DE LUNA, L.; XIMENES LINS, R.; FICH, I. A.; NAGAMATSU, D.; HOBAICA, P.E.M.; GEROLIS, C.M.; GASPAS, S.A.; LEAL, B.; GOMES, N.B.N.; MALFACINI, S.; BENTES, J.; BOLOGNANI, F.; GORINI, C.C.; SILVA S. da; PYRRHO, A. dos S.; VARRICCHIO, M.C.B.N. PRODUTOS NATURAIS E SUD PARA SUSTENTABILIDADE, DIVERSIDADE CULTURAL, SAÚDE AMBIENTAL: ENSINO DE ÉTICA AMBIENTAL – VITAE - ATENÇÃO, ASSISTÊNCIA, ENSINO - SERVIÇO DE HOMEOPATIA/ 7ª ENF HGSCMRJ Revista de apoio suportada pelo Projeto SAPB-LIPAT/FF/UFRJ. 2022b. Disponível em <https://sites.google.com/view/lipat/sapb-artigos#h.dqmr38jzwo9>

BENTES LOPES, J. Aula como professora convidada: Química Vegetal e Farmacognosia de plantas. Curso de Extensão Farmacobotânica, Fitoterapia, Imunologia. Coordenação: Marcia C.B.N. Varricchio, Morgana T. L. Castelo Branco & Alexandre Pyrrho. FMPFase. Abril, 2019.  
BORSATO, C.Z.; CORTASIO, A. S.; GORINI, C.; LAGE, C.L.S.; PYRRHO, A. DOS S.; VARRICCHIO, M.C.B.N. VULNERABILIDADE SOCIAL E CUIDADO NO BRASIL: Migrantes ambientais, étnicos e políticos. REVISTA SEIVA – Revista de apoio ao Projeto SAPB-LIPAT/FF/DAC/UFRJ. 2021. Disponível em: [https://sites.google.com/view/lipat/sapb-revista\\_seiva#h.p\\_2VXMCTdGGOWw](https://sites.google.com/view/lipat/sapb-revista_seiva#h.p_2VXMCTdGGOWw)

BRASIL. MINISTÉRIO DA SAÚDE. Política Nacional de Medicina Natural e Práticas Complementares (PMNPC). Rio de Janeiro, 2005.

BRASIL. MINISTÉRIO DA SAÚDE. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. Departamento de Assistência Farmacêutica. A fitoterapia no SUS e o Programa de Pesquisa de Plantas Medicinais da Central de Medicamentos / Ministério da Saúde, Secretaria de Ciência, Tecnologia e Insumos Estratégicos, Departamento de Assistência Farmacêutica. – Brasília : Ministério da Saúde, 2006. 148 p. – (Série B. Textos Básicos de Saúde) ISBN 85-334-1187-1. Disponível em: [https://bvsms.saude.gov.br/bvs/publicacoes/fitoterapia\\_no\\_sus.pdf](https://bvsms.saude.gov.br/bvs/publicacoes/fitoterapia_no_sus.pdf)

CARILLO JUNIOR, R. (1997). Fundamentos da Homeopatia Constitucional. São Paulo: Santos.

CARILLO JUNIOR, R. (2000). Homeopatia, Medicina Interna e Terapêutica. São Paulo: Santos.

CARRUPT, V.K.; ALMEIDA, D./TUKANO; DIAS, R.N./CAETÉS; SALOMÃO, E.; OLIVEIRA, C.C.; ALVES, E./SATERÉ-MAWÉ; DE LUNA, L.; DE OLIVEIRA, L.L.; DE OLIVEIRA, I.K.C.; CAZUMBÁ, A.; HANSEL – MARTINS, C.; BOLOGNANI, F.; LAGE, C.L.S.; VARRICCHIO, M.C.B.N.; PYRRHO, A.S. ANIMAIS PEÇONHENTOS NO NORDESTE BRASILEIRO. Cartilha, 2023. Disponível em: <https://sites.google.com/view/lipat/sapb-artigos#h.4xy6oekc9gqw>

CAZUMBÁ, A.; DA SILVA, J.; VARRICCHIO, M.C.B.N.; PYRRHO, A.S. POTENCIAL BIOLÓGICO DA *Jatropha multifida* Linnaeus: REVISÃO SISTEMÁTICA. Contemporânea: Revista de Ética e Filosofia Política. v.3,n.10,p.16663-16674. Out, 2023. Disponível em: <https://ojs.revistacontemporanea.com/ojs/index.php/home/issue/view/20>

CAZUMBÁ, A. da S.; BELLIZZI, G. M.; GONÇALVES, A.F.; DE FREITAS, J.M.V. de; DA SILVA, J.; VARRICCHIO, M.C.B.N. Educação em Saúde a Idosos em Tempos de Pandemia. X Mostra de



Práticas Educativas Inovadoras. XXIX Semana Científica UNIFSE-FMP. Petrópolis, RJ: 24 – 26 outubro, 2023a. Disponível no site da Even 3.

DE SOUZA, L. S.; TOSTA, C. L.; BORLOT, J.R. P. de O.; VARRICCHIO, M.C.B.N.; KITAGAWA, R.R.; FILGUEIRAS, P.R. & KUSTER, R.M. Chemical profile and cytotoxic evaluation of aerial parts of *Euphorbia tirucalli* L. on gastric adenocarcinoma (AGS cells). *Natural Product Research*. Fev, 2023. Disponível em: <https://doi.org/10.1080/14786419.2023.2179623>

DELAUNAY DE SOUZA, N.; MACÊDO REBELO, R. de; NIGRI, A. I.; GASPAR, S.A.; BRIOSO, P.S.T.; VARRICCHIO, M.C.B.N.; DA SILVA, S. *Euphorbia tirucalli*: potencial digestor de plástico e em bioeconomia. *Brazilian Journal of Development*. 2023. Disponível em: <https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/article/view/62666/45093>

DELAUNAY DE SOUZA, N.; FREIRE SOUZA SILVA, F.; GASPAR, S.A.; GORINI, C.C.; VARRICCHIO, M.C.B.N.; PYRRHO, A. dos S.; BRIOSO, P.S.T.; DA SILVA, S.

*Euphorbia tirucalli* elicitora EM CULTIVO DE *Vigna unguiculata*: BIOPROCESSO, BIOPRODUTO E POTENCIAL BIOTECNOLÓGICO DIGESTOR PLÁSTICO. *Contemporânea: Revista de Ética e Filosofia Política*. v.3,n.10,p.16713-16730. Out, 2023a. Disponível em: <https://ojs.revistacontemporanea.com/ojs/index.php/home/issue/view/20>

DUTRA, V. C. Dossiê Técnico: Agrohomenopatia. Rede de Tecnologia e Inovação do Rio de Janeiro – REDETEC. 2012 e Serviço Brasileiro de Respostas Técnicas – SBRT. 28/6/2012. Assunto: Serviço de pulverização e controle de pragas agrícolas. Disponível em: <https://drive.google.com/file/d/1cqAYqzICT65yXltcC9xF-57dNnXq1P3v/view>

FREIRE SOUZA SILVA, F.; PINTO, M. D. D. C. de A.; SILVA, A. V. W. da; MACHADO TUKANO, C. V.; BRIOSO, P.S.T.; PYRRHO, A. dos S.; CASTELO BRANCO, M.T.L.; VARRICCHIO, M.C.B.N. EUPHORBIA *tirucalli*, BIOPRODUTO E POTENCIAL BIOTECNOLÓGICO DIGESTOR PLÁSTICO: Resultados preliminares. Resumo. SEMANA CIENTÍFICA FMPFase - BioEconomia: O cuidar como ética de via currículo oculto vida. Outubro, 2019.

FREIRE SOUZA SILVA, F.; MUSMANNO, P.G.; BOLOGNANI, F. de A.; GORINI, C.C.; DE FREITAS, J.M.V. de; PYRRHO, A.S.; LAGE, C.L.S.; VARRICCHIO, M.C.B.N. Ética profissional e bioética: contribuições do ensino de homeopatia e fitoterapia em liga estudantil de medicina para o desenvolvimento de humanidades e competência cultural. *Brazilian Journal of Development*. Curitiba, v.9, n.10, p. 28685-28699, oct., 2023. Disponível em: <https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/issue/view/220>.

GARCIA, S.; HARDUIM, R.C.; HOMSANI, F.; ZACHARIAS, C.R.; KUSTER, R.M.; HOLANDINO, C. PHYSICAL CHEMICAL AND CITOTOXIC EVALUATION OF HIGHLY DILUTED SOLUTIONS OF *Euphorbia tirucalli* L. PREPARED THROUGH THE FIFTY MILESIMAL HOMEOPATHIC METHOD. *Int J High Dilution Res*. v9 (31), p. 63-73. 2010.

GASPAR, S.A.; RONCARATI, E.; MUSMANNO, P.G.; WASIM, N.; CACIQUE DOETHYRÓ-TUKANO, DE OLIVEIRA, L.L.; VACITE, M.; VARRICCHIO, M.T.; TAVARES, F.; GEROLIS, C.; BRETAS, N.; BENTES, J.; VARRICCHIO, M.C.B.N.; BOLOGNANI, F. REGISTRO HISTÓRICO: REVITALIZAÇÃO DE JARDIM DO SERVIÇO DE HOMEOPATIA EM HGSCM NO CENTRO DA CIDADE DO RJ. *REVISTA SEIVA – Revista de apoio ao Projeto SAPB-LIPAT/FF/DAC/UFRJ*. 2022. Disponível em: [https://sites.google.com/view/lipat/sapb-revista\\_seiva#h.enmmoxlwemka](https://sites.google.com/view/lipat/sapb-revista_seiva#h.enmmoxlwemka)

GASPAR, S.A.; MUSMANNO, P.G.; BELLIZZI, G.M.; KATHAR, K. R.; VARRICCHIO, M.T.; VARRICCHIO, M.C.B.N.; PYRRHO, A. DOS S.; BRIOSO, P. S. T.; DA SILVA, S. *Environmental*



and Economic Values of salt tolerance. *Euphorbia tirucalli*: Phytoremediation potential. *International Journal of Advanced Engineering Research and Science (IJAERS) Peer-Reviewed Journal*. ISSN: 2349-6495(P) | 2456-1908(O) Vol-10, Issue-6; Jun, 2023 Journal Home Page Available: <https://ijaers.com/> Article DOI: <https://dx.doi.org/10.22161/ijaers.106.5>

GASPAR, S.A.; FREIRE SOUZA SILVA, F.; ALVES, E.; VARRICCHIO, M.T.; NIGRI, A.I.; BOLOGNANI, F. DE A.; PYRRHO, A. DOS S.; DA SILVA, S. & VARRICCHIO, M.C.B.N. Investigation of the antifungal action of natural products on seeds of *Euterpe oleraceae*: Bioproduct Potential. Capítulo E-book: “Uniting Knowledge Integrated Scientific Research for Global Development”. DOI: 10.56238/uniknowindevolp-120. PR: Editora Seven. Setembro, 2023a.

GOMES, N. B. DE N.; IABRUDI, R.C.; MACEDO REBELO, R. DE; GASPAR, S. A.; VARRICCHIO, M. C. B. N.; BRIOSE, P. S. T.; DA SILVA, S.; PYRRHO, A. DOS S. Leishmaniose, produtos naturais, bioeconomia e desenvolvimento sustentável. *Brazilian Journal of Development*. 2023. Disponível em: <https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/article/view/62510/44980>

GOMES, N. B. DE N.; FREIRE SOUZA SILVA, F.; WASIM, N.; IABRUDI, R.C.; DA SILVA, S.; BRIOSE, P. S. T.; VARRICCHIO, M.C.B.N.; PYRRHO, A. DOS S. Esquistossomose e o potencial bioeconômico brasileiro. *Brazilian Journal of Development*. Curitiba, v.9, n.10, p. 28700-28711, oct., 2023. Disponível em: <https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/issue/view/220>.

GONÇALVES, N. S.; OLIVEIRA, L. L.; PYRRHO, A. S.; VARRICCHIO, M. C.B.N. Cartilha Saúde da Mulher Negra: do descaso à conquista de políticas públicas. In: *Semana Científica FMP/Fase: BioEconomia: O cuidar como ética de vida*. Anais. Petrópolis, FMP/Fase, 2019. Disponível em: <https://fmpfase.databpro.net/sites/semana/trabs/279826.pdf>. Acesso em 02/06/2021.

HANSEL - MARTINS, C.; SPERDUTO, V.T.; BERNARDO, R.M.; PIRES, T. F. DO E. S.; VARRICCHIO, M. C. B. N. Practical teaching of pathophysiology to LAFFH at the IPD outpatient clinic of FMP/FASE: Historical Report. *IJHDR* 2022; 21(1):32-32. ISSN 1982-6206. DOI: <https://doi.org/10.51910/ijhdr.v20i4> Available online at [www.highdilution.org](http://www.highdilution.org)

HANSEL - MARTINS, C.; MUSMANNO, P.G.; GASPAR, S.A.; BENTES, J.; XIMENES LINS, R.; NAGAMATSU, D.; TAVARES, F.; BOLOGNANI, F.; VARRICCHIO, M. C. B. N. Teaching and practice in Homeopathy via pharmacobotany and pathophysiology. *IJHDR* 2022; 21(1): 37-37. ISSN 1982-6206. DOI: <https://doi.org/10.51910/ijhdr.v20i4>. Available online at [www.highdilution.org](http://www.highdilution.org)

HANSEL - MARTINS, C.; BOLOGNANI, F. de A.; BENTES LOPES, J.; PYRRHO, A. dos S.; VARRICCHIO, M.C.B.N. DISRUPTORES ENDÓCRINOS, TRANSTORNOS MENTAIS: ESTRATÉGIAS EM SAÚDE AMBIENTAL. *Revista FOCO*. 2023. Disponível em: <https://ojs.focopublicacoes.com.br/foco/article/view/2861>

KATHAR, K. R.; WASIM, N.; DA SILVA, S.; PYRRHO, A. DOS S.; VARRICCHIO, M.C.B.N. Wetlands Construídos: Tecnologia Para Remoção da Concentração de Fármacos das Águas. *International Journal of Advanced Engineering Research and Science*, 10(4)-108 – 119. 2023. ISSN: 2349-6495(P) | 2456-1908(O) DOI: <https://dx.doi.org/10.22161/ijaers.104.13>.

KOTTOW, M. Aspectos didáticos em bioética intercultural. *Rev. bras. educ. med.* 35 (2) • Jun 2011 • <https://doi.org/10.1590/S0100-55022011000200017>





KHUDA-BUKHSH, A. R. (2003). Towards understanding molecular mechanisms of action of homeopathic drugs: An Overview. *Molecular and Cellular Biochemistry*, 253(1-2): 339-345. Department of Zoology, University of Kalyani, Kalyani-741235, W.B., India.

LIGA ACADÊMICA DE FISILOGIA E FISIOPATOLOGIA HUMANA (LAFFH) – UNIFASE/FMP: I Evento de Saúde Ambiental e das Populações" Mesa redonda on line e apresentações dos artigos publicados: “Disruptores Endócrinos, Agrotóxicos, Inseticidas, Estado Cancerínico; Sexismo e Saúde da Mulher Negra e Indígena; Invisibilidade e Sexismo como Determinantes Sociais na Saúde da População Cigana” – 2021. [https://sites.google.com/view/lipat/sapb-aulas\\_e\\_apres#h.s1lqcmhwx3](https://sites.google.com/view/lipat/sapb-aulas_e_apres#h.s1lqcmhwx3)

MACHADO, C. V. da S./DUIGÓ - TUKANO); PINTO, M. D. D. C. de A.; LAGE, C. L. S.; PYRRHO, A. dos S.; AMARAL, M. do; VARRICCHIO, M. C. B. N. CAFÉ FILOSÓFICO QUÂNTICO do Centro Cultural da FMP Fase como sensibilizador à Bioética, Diversidade, Sustentabilidade, Saúde Ambiental e Saúde Espiritual. Resumo e Apresentação oral. ASSOCIAÇÃO BRASILEIRA DE ENSINO MÉDICO/ABEM RJ/ES. 2019.

MACHADO, C.V.da S./DUIGÓ-TUKANO); MUSMANNO, P. G.; BOLOGNANI, F. de A.; LEAL, B. M. P. da S.; VARRICCHIO, M.C.B.N.; DA SILVA, J. Ações de grupamentos tradicionais urbanos no RJ: Diversidade e Sustentabilidade. *Brazilian Journal of Development*. V.9,n.7,p.21669-21674. 2023. ISSN2525-8761. DOI:<https://doi.org/10.34117/bjdv9n7-034>.

MENDES, M. G.; GONÇALVES, N. dos S.; de OLIVEIRA, L. L.; VARRICCHIO, M. C. B. N.; PYRRHO, A. dos S. & LAGE, C.L.S. Da Proteção ao Conhecimento Tradicional Étnico até as Políticas Públicas de Saúde, Prática Educativa Inovadora Etnocentrada. In: Práticas de Ensino Inovadoras. XVIII Semana Científica FMP-UNIFASE: (Re)-Existência e Consciência: 200 anos de quê? RJ – Petrópolis. 25 – 27/10/2022, [https://sites.google.com/view/lipat/sapb-eventos\\_sapb#h.8avpfsa20yh3](https://sites.google.com/view/lipat/sapb-eventos_sapb#h.8avpfsa20yh3)

MENDES, M. G. Prática Educativa Inovadora Etnocentrada Vídeo Educativo - Apresentação: Maryana G. Mendes. 2022a. Disponível em: [https://sites.google.com/view/lipat/sapb-eventos\\_sapb#h.58blh7xzafct](https://sites.google.com/view/lipat/sapb-eventos_sapb#h.58blh7xzafct)

MUSMANNO, P.; GEROLIS, C.; TAVARES, F.; BOLOGNANI, F.; BENTES, J.; PYRRHO, A. DOS S.; VARRICCHIO, M.C.B.N. Avaliação e Prospecção de Assistência a Grupamentos Tradicionais Étnicos Urbanos - DESAFIOS E POSSIBILIDADES DA HOMEOPATIA NA 7ª ENFERMARIA DO HGSCMRJ PROJETO ÉTNICO CULTURAL EM TERRITÓRIO URBANO. 2022. Disponível em: [https://sites.google.com/view/lipat/sapb-eventos\\_sapb#h.gxs9jxrecvmi](https://sites.google.com/view/lipat/sapb-eventos_sapb#h.gxs9jxrecvmi)

MUSMANNO, P.G.; HANSEL - MARTINS, C.; BELLIZZI, G. M.; RAMOS SILVA, I. DE S.; LOPES, J.B.; BOLOGNANI, F. de A. Prática educativa inovadora em homeopatia brasileira. *BRAZILIAN JOURNAL OF DEVELOPMENT*, Curitiba, v.9, n.7, p. 21414-21425, jul., 2023. ISSN: 2525-8761. DOI:10.34117/bjdv9n7-014.

OLIVEIRA, L. L. de; MACHADO, C. V. Da S.; MUSMANNO, P.; PINTO, M.D.D.C. DE A.; VARRICCHIO, M. T.; VARRICCHIO, M. C. B. N. Farmacobotânica e pesquisa biotecnológica para sustentabilidade: sensibilização, impressão, questão, solução, produção. Petrópolis/RJ, 2019, 20p. E-book. Disponível em: [https://pergamumweb.com.br/pergamumweb\\_fmp/vinculos/000009/00000951.pdf](https://pergamumweb.com.br/pergamumweb_fmp/vinculos/000009/00000951.pdf). Acesso em: 10 ago. 2021.

OLIVEIRA, L. L. de. Plantas cicatrizantes do Saber Negro. RJ. 2021. Cartilha. Disponível em: <https://sites.google.com/view/lipat/sapb-artigos#h.cou5fs3qnxwc>. Acesso em: 22 ago. 2021.



OLIVEIRA, L. L. DE; DE LUNA, L.; MACHADO, C. A. F./CACIQUE DOETHYRÓ-TUKANO; ALMEIDA, D./TUKANO; OLIVEIRA DA SILVA, A.; NAGAMATSU, M.C.; GASPAR, S.A.; WASIM, N.; NAGAMATSU, D.; XIMENES LINS, R.; HANSEL – MARTINS, C.; WENDLING DA SILVA, A.V.; FREIRE SOUZA SILVA, F.; GOMES, N. B. DE N.; BOLOGNANI, F. DE A.; GORINI, C. C.; VIEIRA DE FREITAS, J.; PYRRHO, A. DOS S.; DA SILVA, S.; VARRICCHIO, M.C.B.N. Uso tradicional de mamão papaya (*Carica papaya*): Parte 1 - Aspectos em etnobotânica como estratégia para iniciação científica. Revista INFO-SAPB – REVISTA DE APOIO AO Projeto SAPB-LIPAT/FF/UFRJ – Suplemento 2023 da revista de 2020. Disponível em: [https://sites.google.com/view/lipat/sapb-revista\\_info-sapb#h.p\\_HFWfQZtxGOBL](https://sites.google.com/view/lipat/sapb-revista_info-sapb#h.p_HFWfQZtxGOBL)

PANOSSIAN, A.; WIKMAN, G. ; WAGNER, H. Plant adaptogens III. \*Earlier and more recent aspects and concepts on their mode of action. *Phytomedicine*, Germany, 6 (4), 287 – 300, 1999.

PATEL, V.; SAXENA, S.; LUND†, C.; THORNICROFT†, G.; BAINGANA‡, F.; BOLTON, P.; CHISHOLM, D.; COLLINS, P. Y; COOPER, J. L; EATON, J.; HERRMAN, H.; HERZALLAH, M. M; HUANG, Y.; JORDANS, M.J D; KLEINMAN, A.; MEDINA-MORA, M. E.; MORGAN, E.; NIAZ, U.; OMIGBODUN, O.; PRINCE, M.; RAHMAN, A.; SARACENO, B.; SARKAR, B. K; DE SILVA, M.; SINGH, I.; STEIN, D.J.; SUNKEL, C.; UNÜTZER, J. The Lancet Commission on global mental health and sustainable development. *The Lancet* www.thelancet.com Vol 392. October 27, 2018. 1553 – 1598.

PUSTIGLIONE, M. & CARILLO, R. Jr. (1994). *Organon da Arte de Curar de Samuel Hahnemann – versão sistematizada e comentada*. São Paulo: Homeopatia Hoje.

PUSTIGLIONE, M.; GOLDENSTEIN, E.; CHENCINSKI, Y. M. HOMEOPATIA: UM BREVE PANORAMA DESTA ESPECIALIDADE MÉDICA (2017). SP: Revista da Associação Paulista de Homeopatia (APH). Volume 80 nº 1/2 suplemento. P.6 – 15.

PROJETO SAÚDE AMBIENTAL, PARASITOLOGIA, BIOÉTICA XV EVENTO SAPB/LIPAT/FF/UFRJ: IV Encontro Intergeracional, Intercultural e Interétnico do Projeto SAPB/LIPAT/FF/UFRJ convida Serviço de Homeopatia do Hospital Geral Santa Casa da Misericórdia do Rio de Janeiro & Federação Brasileira de Homeopatia. Disponível em: [https://sites.google.com/view/lipat/sapb-eventos\\_sapb#h.xpva97pgcvk2](https://sites.google.com/view/lipat/sapb-eventos_sapb#h.xpva97pgcvk2)

SERVIÇO DE HOMEOPATIA – 7ª Enfermaria do HGSCM-RJ. JARDIM DE TODOS OS LUGARES 2020, [https://sites.google.com/view/lipat/sapb-nossos\\_videos#h.22hm08eoqim8](https://sites.google.com/view/lipat/sapb-nossos_videos#h.22hm08eoqim8)

SERVIÇO DE HOMEOPATIA – 7ª Enfermaria do HGSCM-RJ. Revisitando o Projeto Étnico Cultural - Espaço Jardim de Todos os Lugares, PROVE-MEPPSO, SAPB-LIPAT, LAFFH-UNIFASE na 7ª Enfermaria da Santa Casa RJ , 2021. <https://sites.google.com/view/lipat/sapb#h.wyxyzwtrzxa>

SERVIÇO DE HOMEOPATIA – 7ª Enfermaria do HGSCM-RJ. Jardins Temáticos do HGSCMRJ e Horta dos Funcionários: Atenção Primária em Saúde Atenção Psicossocial em Período Pandêmico 2020 - 2021, 2021a [https://sites.google.com/view/lipat/sapb-servi%C3%A7os\\_a\\_comunidade#h.rodinzd25cbi](https://sites.google.com/view/lipat/sapb-servi%C3%A7os_a_comunidade#h.rodinzd25cbi)

SERVIÇO DE HOMEOPATIA – 7ª Enfermaria do HGSCM-RJ. Evento Hospital Geral Santa Casa da Misericórdia do RJ - Retrospectiva e Evento Lei da Semelhança, Diversidade, Sustentabilidade - Evento devolutivo: clínico, científico e cultural aos homeopatas - 7ª Enfermaria de Homeopatia do Hospital Geral Santa Casa da Misericórdia do RJ 2022 - [https://sites.google.com/view/lipat/sapb-aulas\\_e\\_apres#h.ugva30o1p2xb](https://sites.google.com/view/lipat/sapb-aulas_e_apres#h.ugva30o1p2xb)



TEIXEIRA, M.Z. Special Dossier: “Scientific Evidence for Homeopathy”. Rev Assoc Med Bras. 2018; 64(2): 93-94. Disponível em: <https://doi.org/10.1590/1806-9282.64.02.93>.

TEIXEIRA, M.Z. Pseudoskeptical and pseudoscientific strategies used in attacks on homeopathy. Rev Assoc Med Bras. 2021; 67(6): 777-780. Disponível em: <https://doi.org/10.1590/1806-9282.20210367>

TEIXEIRA, M.Z. “Homeopatia não é efeito placebo”: comprovação das evidências científicas da homeopatia. São Paulo: Marcus Zulian Teixeira, 2023, 223p. Disponível em: <https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1451677>

VACITE, M. (In memoriam); BOLOGNANI, F. DE A.; VARRICCHIO, M.C.B.N.; PYRRHO, A. DOS S.; DA SILVA, J.; LAGE, C.L.S. SAÚDE DA POPULAÇÃO CIGANA URBANA NO RIO DE JANEIRO/BRASIL. Revista FOCO, e3258. 2023. Disponível em: <https://ojs.focopublicacoes.com.br/foco>

VARRICCHIO, M.C.B.N.; DIREITO, I.C.N.; MOREIRA, C.B.; EMMERICH, V.; MORENO, G.; PEREIRA, C.; ARAÚJO, B.E.; SALES, M.D.C.; CASTELO BRANCO, M.T.L.; HOLANDINO, C.; KUSTER, R.M. AVALIAÇÃO QUALITATIVA DA PRODUÇÃO DE DITERPENÓIDES DE *Euphorbia tirucalli* (AVELOZ) SOB CONDIÇÕES CONTROLADAS PARA FINS MEDICINAIS. Revista Anais da FERTBIO/EMBRAPA CENTRO-OESTE, p. 20 -24. MS, setembro 2006. Disponível em: [https://sites.google.com/view/lipat/sapb-artigos?authuser=0#h.p\\_FryEpGVjHTHF](https://sites.google.com/view/lipat/sapb-artigos?authuser=0#h.p_FryEpGVjHTHF).

VARRICCHIO, M.C.B.N. ; SILVA, S. DA; GOMES, N. B. N.; KUSTER, R. M.; LAGE, C. L. S. O USO DE *Euphorbia tirucalli* (AVELOZ) EM MEDICINA TRADICIONAL E AS EVIDÊNCIAS CIENTÍFICAS. Revista de Biologia e Farmácia - BIOFAR/UEPB. Paraíba: PB, ISSN 1983-4209 - Volume 03 – Numero 01- p77 – 2008.

VARRICCHIO, M.C.B.N.; ORMELEZ, E.G.; MOREIRA, C.B.; SILVA, S. DA; KUSTER, R. M.; LAGE, C.L.S. CULTIVO IN VITRO DE *Euphorbia tirucalli* (AVELOZ), AVALIAÇÃO DA CONSTITUIÇÃO QUÍMICA DO LÁTEX, EM DIFERENTES CONDIÇÕES DE CULTIVO, E TESTE DE ATIVIDADE LARVICIDA E JUVENILIZANTE EM *Aedes Aegypti*. Revista de Biologia e Farmácia - BIOFAR/UEPB. Paraíba: PB, ISSN 1983-4209 - Volume 02 – Numero 1- p1-14 – 2008a.

VARRICCHIO, M.C.B.N.; ESPIÚCA, D.; CANANO, J.L.G.; ANDRADE, E.M.; Malfacini, S.S.; GOMES, N.B.N.; HOBAICA, P.E.M.; FALCÃO, P.; DIAS, V.L.A.; TAVARES, F.; LOPES, J.B.; ROCHA, T.; NAGAMATSU, D.; LYRIO, C.; CASTELO-BRANCO, MTL. SAÚDE, MEIO AMBIENTE E SOLUÇÕES ULTRADILUIDAS: PESQUISA E ENSINO. Revista Arquivos FOG - Revista de apoio à UNIFASE-FMP, Petrópolis, RJ: 5(2): 89-98, Out. 2008b.

VARRICCHIO, M.C.B.N; SOUZA, C.; SILVA, S. DA; Malfacini, S. DA S.; NAGAMATSU, D.; KUSTER, R.M.; CASTELO-BRANCO, M.T.L. TESTE DE ATIVIDADE INSETICIDA E JUVENILIZANTE DA SOLUÇÃO ULTRADILUIDA DO EXTRATO ETANÓLICO E DO EXTRATO AQUOSO TOTAL DE CAULE DE *Euphorbia tirucalli* (AVELOZ) EM MODELO DE LARVAS DE *Aedes aegypti*. Revista Arquivos FOG - Revista de apoio à UNIFASE-FMP, Petrópolis, RJ: 6(1): 61-67, Mar. 2009.

VARRICCHIO, M.C.B.N; SILVA, S. DA; VARRICCHIO, M.T. IDENTIDADE QUÂNTICA: SAÚDE, MEIO AMBIENTE E FILOSOFIA. Sensibilização Ambiental versus Lei da Semelhança: O Sujeito Quântico Ecológico. Revista de Biologia e Farmácia – BioFar/UEPB. Paraíba: PB, ISSN 1983-4209. 2010.



VARRICCHIO, M.C.B.N.; OLIVEIRA, L.L. de; VACITE, M.; MACHADO, C.V.; ALMEIDA, D. da S. de; LARANJA, C.; MACHADO TUKANO, C.D.; NAGAMATSU, D.; MAGNANINI, C.; TAVARES, F.; LOPES, J.B.; BOLOGNANI, F.; OLIVEIRA, G.S. e; GOMES, N.B. de N.; CAFUNDA, FR. S.; DIAS, G.; GORINI, C.; GOMES, J. P. da S.; BRITO, Y.; LAGE, C.L.S.; CASTELO BRANCO, M.T.L.; PYRRHO, A. dos S. FMPFASE & UFRJ: Assistência, Pesquisa, Ensino e Extensão em Fitoterapia, Farmacobotânica e Etnomedicina. XII Simpósio Brasileiro de Farmacognosia e XVII Simpósio Latinoamericano de Farmacobotânica. RJ: Petrópolis. Maio, 2019. Resumo disponível em: [www.farmacia.ufrj.br](http://www.farmacia.ufrj.br) Projetos de Extensão. LIPAT. SAPB (Saúde Ambiental, Parasitologia, Bioética).

VARRICCHIO, M.C.B.N.; PINTO, M. D. D. C. de A., MACHADO TUKANO, C.V.S.; BENTES, J.; NAGAMATSU, D.; PYRRHO, A dos S.; & CASTELO BRANCO, M.T.L. HISTÓRIA DA ROMÃ NO PLANETA. OH! Revista da Ordem Hospitaleira. Julho – Dezembro, 2019h. Pg 28 – 29. Published on Jul, 18, 2019h. <http://www.saojoaodedeus.org.br>.

VARRICCHIO, M.C.B.N. \*ANÁLISE QUANTO À EFETIVIDADE DA LEGISLAÇÃO SOBRE O ACESSO AO PATRIMÔNIO GENÉTICO BRASILEIRO, A PROTEÇÃO E O\* \*ACESSO AO CONHECIMENTO TRADICIONAL ASSOCIADO, ENQUANTO USO SUSTENTÁVEL DA BIODIVERSIDADE.\* Relatório Final de Estágio Pós-Doutoral, 2019. INSTITUTO NACIONAL DE PROPRIEDADE INDUSTRIAL. Supervisor: Prof. Dr. Celso Luiz de Salgueiro Lage. BRASIL - Rio de Janeiro. Janeiro de 2020. Produto Técnico temático em Conhecimento Tradicional/Étnico Brasileiro e Direitos Associados. Disponível em: <https://sites.google.com/view/lipat/sapb-artigos#h.phiqv323b8w6>

VARRICCHIO, M.C.B.N.; GORINI, C.; MACHADO, C. V. da S. /DUIGÓ-TUKANO (In memorian); MACHADO, C.A.F. /DOETHYRÓ-TUKANO; ALVES, E. /SATERÉ-MAWÉ; VACITE, M. (In memorian); VACITE, M.; DE LUNA, L.; GONÇALVES, N. dos S.; MENDES, M.G.; MUSMANNO, P.G.; WASIM, N.; HANSEL-MARTINS, C.; BELLIZZI, G.; FREIRE DA SILVA, F.; DELAUNAY, N.; KUSTER, R.M.; PYRRHO, A. dos S.; LAGE, C. L. S. Educação Intercultural para Integração Cidadã e Inovação Social a Grupamentos Étnicos em Situação Urbana no Rio de Janeiro. Exposição oral por Marcia C.B.N. Varricchio. XIV ENAPID ENCONTRO ACADÊMICO DE PROPRIEDADE INTELECTUAL, INOVAÇÃO E DESENVOLVIMENTO. Educação em Propriedade Intelectual no Âmbito do Empreendedorismo Inovador. Sessão Coordenada 4: Propriedade Intelectual aplicada ao Desenvolvimento Científico e Tecnológico/Propriedade Intelectual e Desenvolvimento Social. Evento da Academia de Propriedade Intelectual, Inovação, Desenvolvimento do Instituto Nacional de Propriedade Industrial. Ministério da Economia. Organizado por OMPI & Parque Tecnológico UFRJ & INPI. BR, RJ: 14 – 16 de setembro de 2022. Evento híbrido. Premiação com Menção Honrosa.

VARRICCHIO, M.C.B.N. Homeopatia, Extratos Vegetais, Produtos Naturais e Atenção Primária em Saúde: Experiência do Serviço de Homeopatia da 7ª Enfermaria do Hospital Geral Santa Casa da Misericórdia do Rio de Janeiro. Conferência In: Semana Nacional de Saúde da UNESA: Agenda 2030 e os Objetivos de Desenvolvimento Sustentável – Objetivo 03 Saúde e Bem-Estar. 19/10/2023.

WASIM, N.; MUSMANNO, P.; GOMES, N.B.DE N.; PYRRHO, A DOS S.; CASTELO BRANCO, M.T.L.; VARRICCHIO, M.C.B.N. Efeitos toxicológicos crônicos da solução diluída de 30ch de extrato total de *Euphorbia tirucalli* em camundongos saudáveis: um estudo preliminar. Resumo. Apresentação gravada de poster. XXVI Semana Científica UNIFASE/FMP, realizado em 21/10/2020 a 23/10/2020, na cidade de Petrópolis-RJ.

WASIM, N.; MUSMANNO, P.G.; NAGAMATSU, D.; GASPAR, S.A.; DA SILVA, S.; VARRICCHIO, M.C.B.N.; DA SILVA, J. & PYRRHO, A. DOS S. 2022. Produto Técnico: Potencial Biotecnológico de Produtos Naturais em desastres climáticos com repercussões psico-sócio-



ambientais. 2021. Disponível em Projeto SAPB-LIPAT/FF/DAC/UFRJ em:  
<https://sites.google.com/view/lipat/sapb-artigos?authuser=0#h.s5rjv6a0xmdm>

WASIM, N.; MUSMANNO, P.G.; VACITE, M.; DE LUNA, L.; DE OLIVEIRA, L.L.;  
NAGAMATSU, D.; DA SILVA, J.; LAGE, C.L.S.; PYRRHO, A. DOS S. & VARRICCHIO, M.C.B.N.  
Uso sustentável da biodiversidade, saúde espiritual, saúde mental. Cartilha. 2022. Disponível em:  
<https://sites.google.com/view/lipat/sapb-artigos#h.z2zv8y688nqk>