

*Curriculum Vitae*

# Thaís Pedrete

Ph.D. in Science

## **Home Institution**

Bleiholder Laboratory  
Chemical Laboratory Sciences - FSU  
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## ➤ **Education and Qualifications**

### **2014 - 2018 Doctorate in Public Health and Environment**

National School of Public Health - Oswaldo Cruz Foundation - FIOCRUZ

*Title:* Proteomic characterization of hypoglycemic plants

*Advisor:* Josino Costa Moreira, PhD

*Scholarship:* Coordination for the Improvement of Higher Education Personnel (CAPES)

### **2011- 2013 Master's degree in Chemistry**

Pontifical Catholic University of Rio de Janeiro, PUC-Rio.

*Title:* Environmental assessment of the sponge *Hymeniacidon heliophila* (Porifera: Halicondrida) and use of biomarkers in the evaluation of toxicity of Polycyclic Aromatic Hydrocarbons.

*Advisor:* Angela de Luca Rebello Wagener, PhD

*Scholarship:* National Council for Scientific and Technological Development (CNPq)

### **2007 - 2010 Bachelor's and license degree in Biological Sciences**

Santa Úrsula University, USU – Rio de Janeiro

*Title:* Determination of Polycyclic Aromatic Hydrocarbons metabolites in fish bile from Guanabara Bay, Rio de Janeiro.

*Advisor:* Angela de Luca Rebello Wagener, PhD

## ➤ **Complementary Education**

2019 – 2019 University Extension in Use and Management of Laboratory Animals. (Workload: 60h). University of São Paulo.

2018 – 2018 Certificate Program in Scientific and Technological Information in Health. (Workload: 180h). Oswaldo Cruz Foundation, FIOCRUZ.

2016 - 2016 II Workshop Advanced Topics in Proteomics. (Workload: 32h). Oswaldo Cruz Foundation, FIOCRUZ.

2016 - 2016 Standard Operating Procedure: Identification, Storage and Handling of Chemicals. (Workload: 3h). National School of Public Health, ENSP/FIOCRUZ.

2014 - 2014 University Extension in Epidemiology and Public Health. (Workload: 12h). Pontifical Catholic University of Rio de Janeiro, PUC-Rio.

2014 - 2014 Concepts and Routines of Biosafety. (Workload: 3h). National School of Public Health, ENSP/FIOCRUZ.

2014 - 2014 JCI Accreditation Standards. (Workload: 3h). National School of Public Health, ENSP/FIOCRUZ.

2013 - 2013 Human Health Risk Assessment: Fundamentals and Practice. (Workload: 8h). Society of Environmental Toxicology and Chemistry - North America, SETAC, US.

2012 - 2012 Experimental Planning and Multivariate Analysis. (Workload: 21h). Pontifical Catholic University of Rio de Janeiro, PUC-Rio.

2010 - 2010 1st PRIMO International School on Marine Ecology and Ecotoxicology. (Workload: 45h). Federal University of Rio de Janeiro, UFRJ.

➤ **Areas of Expertise**

Proteomics and Metabolomics  
Molecular Biology  
Public and Environment Health  
Analytical Chemistry

➤ **Work Experience**

• **Florida State University (FSU)**

**Postdoctoral researcher**

Department of Chemistry and Biochemistry  
Biomedical Center - Institute of Biology Roberto Alcantara Gomes  
Ago/2021 – Current

Project:

*Structural elucidation of protein by tandem-ion mobility spectrometry/mass spectrometry*

Scholarship: National Institutions of Health (NIH)

• **Rio de Janeiro State University (UERJ)**

**Postdoctoral researcher - Postgraduate Program in Bioscience**

Department of Physiological Sciences  
Biomedical Center - Institute of Biology Roberto Alcantara Gomes  
Dec/2018 – Jul/2021

Project:

*Mass Spectrometry Applied to Biomolecules: proteomics and metabolomics in experimental models in Neurophysiology and Endocrine Physiology*

Scholarship:

National Postdoctoral Program of the Coordination for the Improvement of Higher Education Personnel (PNPD/CAPES)

**Adjunct Professor**

Faculty of Oceanography  
Discipline conferred – Marine Pollution  
Sep/2013-Apr/2014

**Lab Technician**

**Marine Organic Geochemistry Lab**

Faculty of Oceanography  
Apr/2013-Sep/2013

Activities:

Analysis of hydrocarbons (GC-FID; GC-MS), total organic carbon (TOC)

- **Oswaldo Cruz Foundation (FIOCRUZ)**

**Doctorate Student**

Aug/2014 – Sep/2018

Activities:

Development of methodologies and applications of potential proteomic markers in the study of human diseases in the Laboratory of Toxicology of the Center for the Study of Worker's Health and Human Ecology (CESTEH).

Sample preparation for proteomic analysis.

Proteomic analysis by mass spectrometry (QTOF – Impact II)

Projects:

*Proteomics of Brazilian plants with hypoglycemic effect in the control of diabetes.*

**Guest Professor**

Mar/2016

Feb/2018

Lecture given on Proteomics from the class of Toxicogenomics, offered by the Postgraduation Program in Public and Environment Health.

- **Proteomics Core Facility - Central European Institute of Technology – CEITEC – Czech Republic**

**Training**

Sep-Dec/2016

Activities:

Training of proteomic techniques for sample preparation (protein extraction, FASP, desalination and peptide fractioning), analysis by mass spectrometry and data processing.

Supervisor: Prof. Zbyněk Zdráhal

- **Pontifical Catholic University of Rio de Janeiro (PUC-Rio)**

### **Research Assistant**

#### **Marine and Environmental Studies Laboratory (LABMAM - Laboratório de Estudos Marinhos e Ambientais)**

Department of Chemistry

Sep/2013-Aug/2014

Activities:

Development and validation of techniques for biomarkers (neutral red, micronucleus and comet assay) for application in marine organisms. Analysis of PAHs metabolites in marine organisms by mass spectrometry (LC/MS, GC/MS). Validation of methods for pesticide analysis (LC/MS, HPLC/UV). Participation in environmental projects and reports.

Projects:

*Environmental assessment of hydrocarbons contamination from antropogenic sources in strategic areas in the coast of Rio de Janeiro State: integrated use of chemical and biological tools.*

*Identification and validation of bioindicators for PAHs contamination in marine environments.*

### **Master Student**

#### **Marine and Environmental Studies Laboratory (LABMAM - Laboratório de Estudos Marinhos e Ambientais)**

Department of Chemistry

Mar/2011- Mar/2013

Activities:

Participation in biomonitoring projects, analysis of environmental samples. Validation of methods for identification of PAHs metabolites in marine organisms. Development of molecular biomarkers. Application of bioassays to evaluate PAHs uptake and depuration by marine organisms.

### **Trainee**

#### **Marine and Environmental Studies Laboratory (LABMAM - Laboratório de Estudos Marinhos e Ambientais)**

Department of Chemistry

Mar/2008 – Dec/2010

Activities:

Participation in biomonitoring projects. PAHs evaluation in marine organisms and identification of their metabolites in fish bile and crabs urine. Development of analytical methods to determine PAH metabolites by HPLC-F, LC/MS and GC/MS.

Project:

*Study of the biotransformation of alkylated homologues of PAHs in *Ucides cordatus*: identification and quantification of metabolites in bioassays and in situ.*

### **➤ Publications**

### **Papers**

**PEDRETE, T.;** ABREU-VILLAÇA, Y.; MANHAES, A.C. Mass Spectrometry Imaging for Alzheimer's disease. 2021. A review manuscript submitted to the International Journal of Mass Spectrometry.

**PEDRETE, T.;** CARMO, J.O.S.; BARRETO, E.; MOREIRA, J.C. A preliminary study of the cytotoxicity of the protein extract of abajerú commercialized in markets. *Revista Fitos*, v.15, n.1, p. 11-21, 2021.

**PEDRETE, T.A.;** HAUSER-DAVIS, R.A.; PEREIRA, L.H.S.S; TORRES, M.B.; MOREIRA, J.C. Glutathione and metallothionein as oxidative stress biomarkers in the medicinal plant *Chrysobalanus icaco* L. from different Brazilian regions. *Journal of Plant Biology and Crop Research*, v.3, n.1, p.1015-1020, 2020.

**PEDRETE, T.A.;** HAUSER-DAVIS, R.A.; MOREIRA, J.C. Proteomic characterization of medicinal plants used in the treatment of diabetes. *International Journal of Biological Macromolecules*, v. 140, p. 294- 302, 2019.

**PEDRETE, T.A.;** COUTINHO, C.C.; BATISTA, D.; HAUSER-DAVIS, R. A.; NUDI, A.H.; WAGENER, A.L.R. Toxicity evaluation of PAHs in the sponge *Hymeniacidon heliophila*: field assessment and laboratory assays - a preliminary study. *Ecotoxicology and Environmental Contamination*, v. 12, p. 113-131, 2017.

RESENDE, L.; **PEDRETE, T.A.;** NUDI, A.H.; WAGENER, A.L.R. Nível de contaminação por hidrocarbonetos na Baía de Guanabara, Rio de Janeiro - RJ. *Revista Brasileira de Iniciação Científica*, v. 4, p. 90-117, 2017.

NOGUEIRA, L.S.P.; **PEDRETE, T.A.;** NUDI, A.H.; WAGENER, A.L.R. Uso de ferramentas químicas e biológicas na avaliação de ambientes contaminados por hidrocarbonetos policíclicos aromáticos (HPAs). *Revista Brasileira de Iniciação Científica*, v. 4, p. 133, 2017.

**PEDRETE, T.A.;** MOTA, C.L.; GONÇALVES, E.S.; MOREIRA, J.C. Towards a personalized risk assessment for exposure of humans to toxic substances. *Cadernos Saúde Coletiva*, v. 24, p. 262-273, 2016.

BARATA, C.; PAVESI, T.; MITRI, S.; **PEDRETE, T.;** LIMA, C.; SAGGIORO, E.; MEYER, A.; MOREIRA, J. The setting of the leukemia in residents of metropolitan region of Rio de Janeiro state during the period 2006-2014. *Toxicology Letters*, v. 238, p. S376, 2015.

SETTE, C.B.; **PEDRETE, T.A.;** FELIZZOLA, J. F.; Nudi, A.H.; Scofield, A.L.; Wagener, A.L.R. Formation and Identification of PAHs Metabolites in Marine Organisms. *Marine Environmental Research*, v. 91, p. 2-13, 2013.

BATISTA, D.; TELLINI, K.; NUDI, A.H.; **PEDRETE, T.;** SCOFIELD, A. L.; WAGENER, A.L.R. Marine Sponges as Bioindicators of Oil and Combustion Derived PAH in Coastal Waters. *Marine Environmental Research*, v. 92, p. 234-243, 2013.

### **Book Chapter**

**PEDRETE, T.A.;** MOREIRA, J.C. Biomarkers of Susceptibility for Human Exposure to Environmental Contaminants. In: Hauser-Davis, R.A.; Parente, T.E. (Org.). *Ecotoxicology: Perspectives on Key Issues*. 1ed.: CRC Press - Taylor & Francis Group, 2018, p. 251-280.

## **Main Presented/Published Works in Events**

**PEDRETE, T.A.;** CARMO, J.O.S.; HAUSER-DAVIS, R. A.; BARRETO, E.O.; MOREIRA, J,C. Proteomic characterization and use of protein extracts to verify the therapeutic potencial of the hypoglycemic plant *Chrysobalanus icaco* L. XXV Simpósio de Plantas Mediciniais do Brasil, São Paulo, 2018. Lecture conferred.

**PEDRETE, T.A.;** TORRES, M. B.; HAUSER-DAVIS, R. A.; MOREIRA, J,C. Proteomic characterization of hypoglycemic plants and quality control. II Latin American Congress of Clinical and Laboratorial Toxicology, Porto Alegre, 2018.

**PEDRETE, T.A.;** BATISTA, D.; NUDI, A.H.; WAGENER, A.L.R.; HAUSER-DAVIS, R. A.; COUTINHO, C.C. Environmental assessment of the sponge *Hymeniacidon heliophila* (Porifera halichondrida) and use of biomarkers in the evaluation of toxicity of polycyclic aromatic hydrocarbons. 34th SETAC North America Annual Meeting, Nashville, 2013.

**PEDRETE, T.P.;** WAGENER, A.L.R.; BATISTA, D.; COUTINHO, C.C.; NUDI, A.H.; HAUSER-DAVIS, R.A. PAH in Marine Sponge: Bioaccumulation, Transformation and Exposure Biomarkers. 2nd International Conference on Environmental Pollution Restoration and Management, Hanoi, 2013.

**PEDRETE, T.A.;** SETTE, C.B.; FELIZZOLA, J.F.; NUDI, A.H.; VIEIRA, F.; SCOFIELD, A.L.; WAGENER, A.L.R. Identification of PAHs metabolites in marine organisms by APCI+ LC/MS/MS. 4º Congresso Brasileiro de Espectrometria de Massas – BrMass, Campinas , 2011.

**PEDRETE, T.A.;** WAGENER, A.L.R.; NUDI, A.H.; SETTE, C.B.; FELIZZOLA, J.F. Toxicity of fishes from Guanabara Bay, using PAHs metabolites in bile as biomarkers. 1st PRIMO International School on Marine Ecology and Ecotoxicology – ISMEE, Arraial do Cabo, 2010. Lecture conferred

### ➤ **Student Mentoring**

Mylena Bandeira Torres. Comparative evaluation of protein extraction of the leaves of paw-of-cow (*Bauhinia forficata* e *Bauhinia variegata*) and quantification of proteins and associated metals. 2018.

BS, Chemistry - Federal Institute of Education, Science and Technology of Rio de Janeiro.

Larissa de Souza Pinto Nogueira. Implementation of biomarkers using *Perna perna* mussels for passive biomonitoring. 2014. Scientific Initiation. BS, Chemistry - Pontifical Catholic University of Rio de Janeiro.

Leonardo Lomba Resende. Monitoring of Polycyclic Aromatic Hydrocarbons and n-alkanes in water and fish tissues from Guanabara Bay, RJ. 2013. Scientific Initiation. BS, Chemical Engineering – Pontifical Catholic University of Rio de Janeiro.

### ➤ **Languages**

English - Understanding Fluent, Speaking Fluent, Writing Fluent, Reading Fluent

Spanish - Understanding Fluent, Speaking Functional, Writing Functional, Reading Fluent

➤ **Awards and Titles**

2018 Doctor of Philosophy, Science, Oswaldo Cruz Foundation.

2015 Certificate of Achievement, TOEFL ITP.

2013 Master of Science, Chemistry, Pontifical Catholic University of Rio de Janeiro.

2011 Bachelor of Science, Biological Sciences, Santa Úrsula University.

2009 English Language Instructor, CCAA.