In my ongoing work as GIAS coordinator I try to encourage my colleagues to publish their research work. I think this is the most important role that someone can have when dealing with a young team (where I am included)...

but, really, as a researcher I try also to identify what are the main reasons to keep writing and submitting MS to the review of peers. There are three fundamental reasons that justify my option to publish:

1. Most of the times when you write you realize what "is the big picture" from your findings. Thus, you can identify bridges with other colleagues and research topics.

2. When you submit an article for publication, you have the opportunity to get important reviews that most certainly will contribute to improve significantly your paper and even your ongoing research.

3. When you publish you create the opportunity for new collaborations and this will boost your experience as a researcher and as a person since you will be working with people from your own country and from other countries.

So only good reasons to keep publishing!!!

Susana Viegas (GIAS Coordinator)
One of us!

Tiago Faria (T. Faria) graduated in Environmental Health by Escola Superior de Tecnologia da Saúde de Lisboa (2014) and holds a master degree in Environmental Engineering from the Universidade Lusófona de Humanidades e Tecnologias finished in 2016. Since his academic period until now he has been collaborating with GIAS’ research activities. Since 2013 he is a trainee in Instituto Superior Técnico having completed one academic internship at the Technological and Nuclear Campus of the Instituto Superior Técnico and participated in various seminars of entrepreneurship including the program COHITEC 2013.

At the moment he is a doctoral student at Instituto Superior Técnico – Universidade de Lisboa, maintaining a scientific collaboration with the group "ETN Nuclear Engineering and Techniques" of the C2TN Technological and Nuclear Campus – Instituto Superior Técnico, Universidade de Lisboa, where he is part of two projects (CLIMACT, INTERREG SUDOE, SOE1 / P3 / P0429, Jul2016-Jun19 and LIFE Index-Air project, LIFE15 ENV / PT / 000674, Oct2016-Mar20). In 2016/17 he worked as Assistant Professor at ESTeSL, in the Environmental Health Degree.

T. Faria is co-author of 4 book chapters and 14 scientific articles (1 as first author) in international journals with revision and 19 abstracts in conference books (4 as first author).

Its main scientific interests are environmental health, indoor and atmospheric air quality and health repercussions of exposure to atmospheric pollutants.

New Members in GIAS

Since May 2017 GIAS research group as 2 new members: Ricardo Moreira and Vanessa Santos. Both of them hold the graduation in Biomedical and Laboratory Sciences and applied to GIAS to:

- Be acquainted with laboratory life;
- Learn new techniques approached in GIAS;
- Participate in several projects from the GIAS group;
- Be able to write and publish scientific articles.
Highlighted

A major grant was obtained from FCT (http://www.fct.pt/index.phtml.en) for a project entitled “Establishing protocols to assess occupational exposure to microbiota in clinical settings” coordinated by Carla Viegas and comprising several GIAS members (Ana Monteiro, Anita Quintal Gomes, Edna Ribeiro, Elisabete Carolino, Liliana Aranha Caetano, Tiago Faria and Susana Viegas).

Project short description

Occupational exposure concern has been increasing. However, the majority of exposure studies in clinical settings is focused on patients, neglecting the workers’ even higher exposure to microbiota. Existing protocols are not adapted to health care facilities due to the higher risks associated with longer exposure periods and higher occupation density. Therefore, to improve public health and reduce national health costs, a network composed by the Polytechnic Institutes of Lisboa and Setúbal, the Universities Nova de Lisboa and Porto, the S. João Hospital in Porto and the ARS Lisboa e Vale do Tejo, have developed the present project proposal aiming to assess workers’ exposure to microbiota in clinical settings. The outcomes of this project will help to unveil how occupational exposure to microbiota is influencing workers’ and patient’s health. Moreover, protocols and guidelines for reducing hospital environment contamination and occupational exposure will also be developed.

Curiosities

Several internships have been developed since 2016 focusing in the research topics from GIAS. The mobility period has been very diversified but the most common one is a three months period. Some of the activities developed include:

- Laboratory logistics, such as media and solutions preparation, equipment’s and other devices organization;
- Field work to ensure exposure assessment to occupational exposure to microbiota and particulate matter (sampling using different collection devices);
- Bench work to extract the bioburden from all the environmental samples, microbiota counting, slides preparation for microscopic observation and fungal identification;
- DNA extraction from different matrices and fungal detection by molecular tools;
- Exhaustive search of papers available in scientific databases for discussion of the data obtained aiming at publication;
- Co-authorship in scientific production obtained from the students contributions in the different scientific projects.
OnGoing Projects: BBIOR-Health

Bacterial Bioburden assessment in the context of occupational exposure and animal health of swine productions (BBIOR-Health) project started in July 2017 with the main goal of assessing occupational exposure to microbiota, both bacteria and fungi, including resistant strains through environmental sampling in swine facilities and workers’ biomonitoring. This project will allow performing a detailed assessment of total bioburden and related cytotoxicity and proinflammatory effects. Simultaneously, microbiota prevalence and antimicrobial resistance in animals will also be analyzed aiming at helping to unveil how occupational exposure to resistant bacteria in swinneries impacts workers commensal flora and health. Moreover the potential spread of resistant strains from workers to the community, including household members, is also a major concern with direct impact in public health, since colonization with resistant bacterial strains such as methicillin-resistant *Staphylococcus aureus* (MRSA) increases the risk of nosocomial infections. The project outcomes will contribute to the development of preventive guidelines to protect public and animal health.

In this project several GIAS members are involved (Edna Ribeiro, Carla Viegas, Susana Viegas, Ana Monteiro, Tiago Faria) and also students from Biomedical Sciences (CBL) and Environmental Health (SA) courses.

Achievements

Four research projects submitted to an internal call from Instituto Politécnico de Lisboa, have now received financial support. The projects will be coordinated by GIAS members (Ana Margarida Costa, Anita Quintal Gomes, Carla Viegas and Liliana Aranha Caetano). The project titles are:

- Outpatient oncologic therapy: Impact for public health and environment
- Establishment of calibration curves to determine fungal load by qPCR
- Pilot-project for bioburden exposure assessment in dwellings from cystic fibrosis patients in Portugal
- Pilot-project for bioburden exposure assessment in hemodialysis settings in Portugal

Exposure to Microbiological Agents in Indoor and Occupational Environments

A multi disciplinary and international team, constituted by three researchers of GIAS (Carla Viegas, Anita Gomes and Susana Viegas), one researcher of INSA (Raquel Sabino) and one researcher of the National Institute for Health and Welfare in Finland has edited a book in Springer entitled “Exposure to Microbiological Agents in Indoor and Occupational Environments”.

This book compiles information about bacteria, fungi and viruses and their metabolites in indoor environments. It has unique features about detection, exposure and health effects due to these biological agents, guiding the reader through the exposure assessment methods to the implementation of preventive and protective measures in several settings. Finally it covers, helpful information about preventive and protective measures to avoid health-hazardous. It is thus a great contribution to the field of public health.
Case Study: Occupational exposure to fungi, mycotoxins and particles in bakeries and health effects related

This project aims to assess occupational exposure to fungi, mycotoxins and particles and also the related health effects in Portuguese bakeries.

The project was funded by Autoridade Portuguesa para as Condições de Trabalho (Portuguese Authority for Working Conditions) and is coordinated by Escola Superior de Tecnologia da Saúde de Lisboa (Susana Viegas) and has the collaboration of Instituto Superior Técnico – Campus Tecnológico e Nuclear as well as that of University of Münster (Alemanha), Universidade de Kazimierz Wielki (Polónia), Instituto Nacional de Saúde Dr. Ricardo Jorge e a Egas Moniz – Cooperativa de Ensino Superior.

The occupational exposure to the several contaminants is being performed in a very detailed manner and using specific tools and methods. Several areas of knowledge are covered including such as: environmental health, biomedical sciences, chemistry, occupational hygiene, molecular biology, toxicology and much other.

Several GIAS researchers are engaged with this project namely, Ana Monteiro, Anália Clérigo, Ana Almeida, Anita Quintal Gomes, Carla Viegas, Edna Ribeiro, Liliana Caetano, Tiago Faria, Vanessa Mateus and Susana Viegas.

The project has already produced several papers and other type of scientific outputs, some of which are listed below:


## Future Events

**Focused Meeting 2018:**

**SHO 2018**

**28th European Congress of Clinical Microbiology and Infectious Diseases**

**20ª ICHS’s symposium**

**28th Annual ISES Meeting ISES-ISEE 2018 Joint Meeting**

**54th Congress of the European Societies of Toxicology**

**VIII Vertentes e Desafios da Segurança**

**40th Mycotoxin Workshop**

**Indoor Air 2018**
Field work from BBIOR-Health Project

Until the next issue in September 2018