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# Women made visible: a different perspective on the history of the Institute of Tropical Medicine in Portugal, 1943-1966

## *Mulheres visíveis: uma perspectiva diferente na história do Instituto de Medicina Tropical em Portugal, 1943-1966*

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### Abstract

This work focuses on the scientific research conducted by women at Portugal's Institute of Tropical Medicine between 1943 and 1966. The Institute's scientific journal documents the participation of women in tropical medicine during this period. Their publications addressed a variety of subjects and resulted from research carried out in the metropolis as well as Portugal's overseas colonies. Most of the articles written by these women were co-authored by their male colleagues, reflecting the incorporation of female researchers into scientific networks already established by men. This work in progress provides a starting point to lend visibility to a group of scientific actors who are practically absent from the historiography of tropical medicine.

Keywords: tropical medicine; scientific journal; female researchers; Portugal.

### Resumo

O foco deste trabalho é a pesquisa científica realizada por mulheres no Instituto de Medicina Tropical, em Portugal, entre 1943 e 1966. O periódico científico do Instituto documenta a participação das mulheres na medicina tropical nesse período. Suas publicações abordavam uma diversidade de temas e resultaram de pesquisas realizadas na metrópole, bem como nas colônias ultramarinas de Portugal. A maioria dos artigos escritos por mulheres contava com a coautoria de seus colegas homens, refletindo a incorporação de pesquisadoras às redes científicas já estabelecidas por homens. Este trabalho em andamento representa um ponto de partida para dar visibilidade a um grupo de atores científicos que está praticamente ausente da historiografia da medicina tropical.

Palavras-chave: medicina tropical; periódico científico; pesquisadoras; Portugal.

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This work in progress is part of a wider research project “Saberes médicos em rede: o Instituto de Medicina Tropical entre instituições, atores, doenças e agentes patogénicos (1935-1966)” [“A network of medical knowledge: the Institute Of Tropical Medicine among institutions, actors, diseases, and pathogenic agents (1935-1966)”], which is intended to cast light on the construction of medical knowledge within Portugal’s Institute of Tropical Medicine (ITM) during this period. Identifying the networks for the production and circulation of scientific knowledge established by the ITM’s researchers is essential to attaining this goal.

The study of scientific networks has been one of the most heuristic approaches in the history of science, since it can reveal connections between a variety of actors while interpreting, negotiating, and appropriating scientific concepts and practices (Latour, 2005; Raj, 2007; Neill, feb. 2009, 2012; Bastos, Barreto, 2013).

Such networks can be identified by analyzing scientific production, particularly through papers published in scientific journals, and to do so we utilized the journal of the ITM, the *Anais do Instituto de Medicina Tropical*.

During this process, it became clear that a number of articles were authored by women. This was surprising, since the published history of the ITM barely mentions their research (Azevedo, 1952; Abranches, 2004). This present work describes the contribution of these women in constructing scientific knowledge on tropical medicine in Portugal. As subsequent research is conducted, this preliminary survey will allow us to understand the role they played in the networks that produced and circulated scientific knowledge and included the ITM.

## The Institute of Tropical Medicine

The ITM was created in 1935, following the extinction of the School of Tropical Medicine (1902-1935). Both institutions were dedicated to training and research in tropical medicine (Portugal, May 1935). The ITM was institutionally equated to universities, with regulations quite similar to those of the Portuguese schools of medicine (Portugal, 14 April 1939).

When the ITM was created, the School of Tropical Medicine was experiencing difficulties. This backdrop led the director of the new institution, João Fraga de Azevedo (1906-1977), to define ambitious goals, particularly to leverage scientific research and promote scientific recognition at home and abroad. In 1943, the ITM’s budget began to expand (Portugal, 24 Nov. 1943), which permitted the hiring of researchers, greater participation in scientific meetings, and the creation of the *Anais do Instituto de Medicina Tropical* (1943) and a research center (1944). Scientific missions to Portuguese overseas colonies were also resumed (Azevedo, 1945).

At that time, Portugal was governed by a dictatorial regime: the Estado Novo, established in 1933. The ITM largely benefited from this regime’s colonial policy,<sup>1</sup> which encouraged Portuguese citizens to emigrate from the mainland to the overseas colonies (Castelo, 2009). More than fighting diseases that plagued native African populations, the need to protect new settlers from illness added new impetus to the practice of tropical medicine, strengthening its link to imperialism (Worboys, 1976; Amaral et al., 2013).

The creation of the Instituto para a Alta Cultura [Institute of Higher Culture] in 1936 was also crucial for the ITM at this time. This institute was responsible for coordinating scientific research in Portugal, creating research centers, and providing scholarships in the country and abroad (Portugal, 11 April 1936; Portugal, 19 May 1936; Lopes, 2018).

Another important factor was Portugal's admission to World Health Organization (WHO) in 1948. The Portuguese government had to comply with WHO guidelines regarding the establishment of international policies to fight certain diseases, and the medical practices at the ITM consequently complied with these standards (Abranches, 2004; Amaral et al., 2013; Havik, 2015; Amaral, 2016; Lobo, Monteiro, 2016).

## **Women in science**

Until quite recently, women were invisible in the historiography of science. Only in the 1980s did female protagonists began to receive some attention, when a large number of studies addressing the role of women in science emerged, reflecting the development of gender research in scholarship on the history of science (Merchant, 1984; Herzenberg, 1986; Abir-Am, Outram, 1987; Weisbard, Apple, Searing, 1993; Rose, 1994; Kohlstedt, 1999; Rhodes, 2004).

The invisibility of women in science reflects the role of women in Western society, namely subordinate to men, within the context of maintaining male power and social order. Especially during the nineteenth and early twentieth centuries, women were perceived to be physically and psychologically less capable than men, and expected to restrict their activities to the home environment while men participated in public life (Rhodes, 2004).

The realm of science was no exception: women faced limitations because scientific practice was considered detrimental to their "femininity" (Rhodes, 2004; Wirtzfeld, 2009; Jefferson, Bloor, Maynard, 2015). However, some scientific activities such as botany were considered suitable for women, perceived as requiring little effort and great sensitivity and thus perfectly suited to women's socially established attributes (Allen, 1976; Rossiter, 1984; Phillips, 1990; Martin, 2011).<sup>2</sup>

When women did pursue academic careers in science, their scientific work was hardly recognized, and they encountered more barriers to career progression than men. In order to obtain recognition, women generally had to publish far more than their male colleagues, and their contributions were often overlooked in situations of co-authorship (Oreskes, 1996; Parkes, 2004; Martins, 2014).

In Portugal, only men were able to attend universities and other institutions of higher education until the end of the nineteenth century (Simões et al., 2013), when a few women began to engage in higher studies; by the founding of the First Republic in 1910, there was a total of 23 female students in universities and other higher education institutions (Gonçalves, 2000; Simões et al., 2013). This change was related to the propagation of Socialist, Masonic, and Republican ideals and values that promoted "education for all" in the urban centers (Simões et al., 2013; Monteiro, 2018).

During the 1930s, women began to pursue academic careers and conduct scientific research in biology, physics, and chemistry, reflecting the influx of female students during

the First Republic. Their numbers continued to grow: by 1950, women accounted for 32% of science students in the Faculty of Sciences at the University of Lisbon. During the second half of the twentieth century more women pursued science-related degrees, but women who followed academic careers faced various difficulties (Vaquinhas, 2000, 2002, 2005; Alvim, Cova, 2004; Simões et al., 2013).

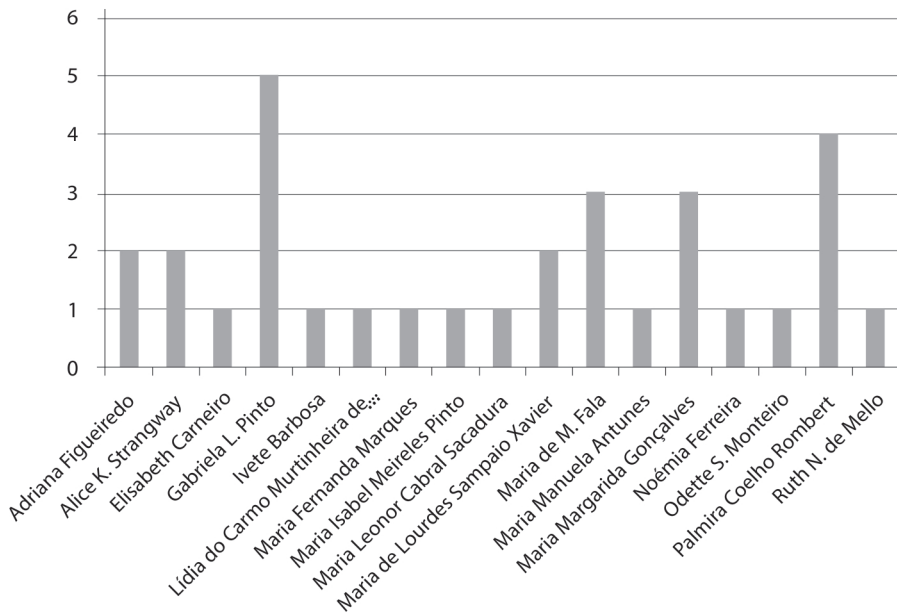
### **The scientific contribution of women in the ITM: survey and analysis of the *Anais***

The *Anais do Instituto de Medicina Tropical*, the scientific journal published by the ITM, is a fundamental analytical tool in the study of the scientific knowledge produced at this institution since researchers were compelled to publish their work in the journal. For this reason, all the papers published in the *Anais* between 1943 and 1966 were surveyed and analyzed to ascertain how many were written by women at the ITM,<sup>3</sup> whether these women published alone or with other researchers, and what scientific topics they addressed.

Of the 410 researchers who published in the *Anais* during the period of study, 17 were women (4.14%), and at least one woman is listed as an author in 30 of the total of 784 articles (3.82%). Six of these 30 publications list a woman as the first author, while the remaining articles list women among the second authors. In some cases, authorship was shared with two or more men.

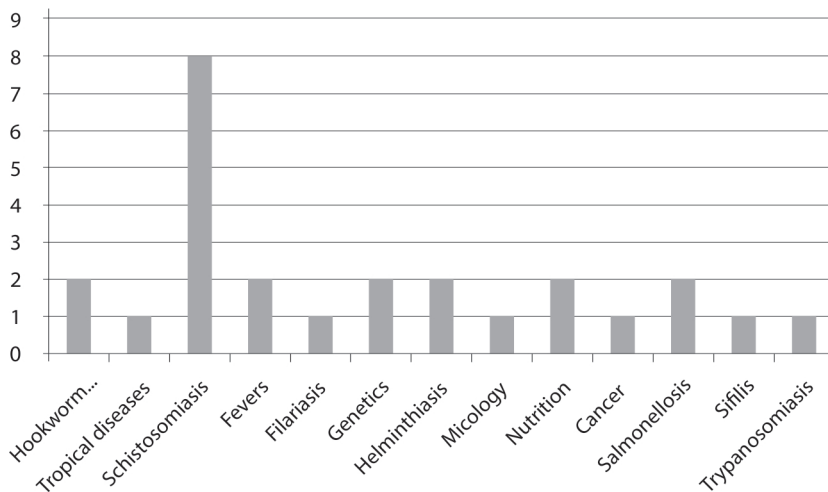
Fraga de Azevedo is the male author who published the most with women: he was first author in 1/3 of the 30 papers with female co-authors and a co-author in another with a woman lead author. There may be several reasons (most likely, overlapping) for this finding: Fraga de Azevedo's reputation as a researcher, his position as director of the ITM, and the fact that he was the scientific supervisor of some of these female researchers.

Four women stood out among the authors: Gabriela Lopes Pinto, with five articles (Janz et al., 1955; Janz, Pinto, 1953; Janz, Pinto, França, 1953; Reis, Janz, Pinto, 1959; Trincão et al., 1955); Palmira Coelho Rombert, with four (Azevedo et al., 1965a, 1965b, 1965c; Azevedo, Rombert, 1965); and Maria de Matos Faia (Dias, Faia, 1953; Sampaio, Cruz, Faia, 1953; Sampaio, Faia, 1953) and Maria Margarida Gonçalves Pequito (Azevedo, Faro, Pequito, 1960; Azevedo, Gonçalves, 1956; Azevedo, Pequito, 1964), with three articles each (Figure 1). Gabriela Lopes Pinto studied at the ITM and became an assistant professor there, teaching from 1955 to 1965. Palmira Coelho Rombert and Margarida Gonçalves Pequito also studied at the ITM and worked there as "free assistant professors,"<sup>4</sup> Rombert from 1956 to 1965 and Pequito from 1962 to 1965.



**Figure 1: Number of articles published by women in the *Anais do Instituto de Medicina Tropical*, 1943-1966 (source: elaborated by the author)**

Figure 2 presents the articles according to research topic. Most address parasitic diseases, particularly their agents and animal vectors. Fraga de Azevedo often appears as the first author in these papers, which is understandable since most of his research up to this time had been focused on this subject.



**Figure 2: Number of articles published by women in the *Anais do Instituto de Medicina Tropical* by research topic, 1943-1966 (source: elaborated by the author)**

A range of studies on schistosomiasis address the taxonomy, comparative morphology, genetics, and ecology of aquatic gastropods, vectors of the parasite that causes this disease (Azevedo, Medeiros, 1954; Azevedo, Gonçalves, 1956; Azevedo, Faro, Pequito, 1960; Xavier, Azevedo, 1965). The lead author of one of the articles published on this topic was a woman (Xavier, Azevedo, 1965) – the only case in the period under study.

Another significant group of articles focuses on nutrition, which became an important field of research at the ITM from 1952. Nutrition played a significant role in preventing and curing certain diseases in the overseas colonies, and the study of eating habits among native populations was an objective of some of the scientific missions conducted by the ITM in Africa (Strangway, 1953; Strangway, Strangway, 1953; Janz, Pinto, 1953; Janz, Pinto, França, 1953; Janz et al., 1955).<sup>5</sup>

Four publications written by a team of several researchers (including two women, with Fraga de Azevedo as the lead author) discuss the application of radioisotopes in the study of tropical diseases. One of these women, Palmira Coelho Rombert, co-authored three of the articles (Azevedo et al., 1965a; Azevedo et al., 1965b; Azevedo et al., 1965c). The research that led to these publications was conducted in the Laboratory of Radioisotope Studies, which was created at the ITM by the Junta de Investigações do Ultramar [Board for Overseas Research] in the 1950s (IICT, 1983; Martins, Albino, 2010; Castelo, 2012).<sup>6</sup>

In the aftermath of Second World War, scientific institutions were established in several countries to research the uses of atomic energy for peaceful purposes.<sup>7</sup> Portugal was no exception: the Junta de Energia Nuclear [Board of Nuclear Energy] and the Laboratory of Physics and Nuclear Engineering are perhaps the most iconic institutions in the context of the nuclear research infrastructure that the Estado Novo established in the 1950s (Taveira, 2003; Gaspar, 2011). Similarly, the Laboratory of Radioisotope Studies was also created at the ITM, in 1956, to study the use of radioactive isotopes applied to tropical diseases.

## Final considerations

This work in progress presents a preliminary survey and analysis of the research published by women at the ITM between 1943 and 1966. The goal is to augment the visibility of these women, considering that the ITM's published history barely acknowledged the presence of any female researchers in the institution (Azevedo, 1952; Abranches, 2004).

In fact, it is difficult to find information about these women: most of the articles did not make any reference to the authors' affiliations, so it is difficult to specifically determine who worked at the institution and who did not. Additionally, since there are nearly no signs of the female researchers in the formal historical record of the ITM, it is hard to trace the development of these women's scientific and professional careers. Other available primary sources, such as the ITM's yearly institutional reports or reports on the scientific missions conducted by the institution, are also of little use.

Few women published in the *Anais do Instituto de Medicina Tropical* during the period of analysis, and most did so as co-authors alongside men. This is likely because these women's scientific research was supervised by their male colleagues who had been at the ITM for longer.

After women began to enter Portuguese universities in the early twentieth century, few pursued scientific careers in public institutions dedicated to scientific training and research, which became apparent from the 1930s and 1940s. Previously, only men had worked at these institutions, and the ITM was no exception. Women who joined the ITM had to fit themselves into a teaching and research structure dominated by men, so it is not surprising that they were supervised by them and ended up integrating the networks which were already established by their male colleagues. Still, the “absence” of women in the canonical history of the ITM is a strong indication that their careers at the institution were strongly conditioned, in line with a trend revealed by historical literature regarding women in science.

Since women at the ITM were inserted in scientific networks formerly established by the institution, most of their research was dedicated to subjects that belonged to a scientific tradition in tropical medicine in Portugal: multiple aspects related to tropical parasitosis. Nevertheless, some women addressed two new areas of research at the ITM, namely the role of nutrition and the use of radioactive isotopes in tropical medicine. Those research topics were particularly relevant at a time when the Estado Novo was encouraging new settlers to emigrate to various colonial possessions. The Portuguese government not only needed to prevent and control diseases that were typical of overseas territories, so the local labor force was not diminished, it also feared that the mobility of new settlers between the colonies and the metropolis would cause these diseases to spread.

Ultimately, women benefited from the relationship between Portugal’s colonial policy and the ITM, where they had the opportunity to conduct scientific research in their areas of training. This opportunity was bolstered in the decades following the 1930s, when the Estado Novo decided to promote scientific research in Portugal through the Institute for Higher Culture and the country joined the WHO.

Further research is needed to “make women visible,” but this work in progress is expected to draw attention to an issue that has been overlooked in the history of tropical medicine in Portugal.

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#### NOTES

<sup>1</sup> Some of the most significant features of this new colonial policy were the abolition of the Colonial Act, the revision of the Portuguese Constitution, and the name change from colonies to overseas provinces, all in 1951.

<sup>2</sup> This opportunity was only available to women of the social elite; lower-class women faced greater difficulty entering scientific work. Still, much historical research remains to be done on the role of lower-class women in science. In nineteenth-century Great Britain, women collected and sold fossil and mineral specimens, providing additional income or sometimes even the main livelihood for their families.

<sup>3</sup> “Women at the ITM” includes not only women who actually worked at the institution but also those who were published in the *Anais* even though they did not work at the ITM.



<sup>4</sup> The term in Portuguese was *assistentes livres*, a lower rank of auxiliary researchers.

<sup>5</sup> There were two strategies to fight parasitic diseases: medications, promoted by Brazilian researchers from the school of Oswaldo Cruz, or a balanced diet, advocated by the Germans.

<sup>6</sup> The Board for Overseas Research was subordinate to the Ministério do Ultramar [Ministry of Overseas Territories] and coordinated and promoted scientific work in the Portuguese colonies. The Board was responsible for conducting expeditions that addressed a variety of scientific areas including tropical medicine, but also established many scientific laboratories and research centers, in the colonies as well as in the metropolis, such as the Laboratory of Radioisotope Studies.

<sup>7</sup> The United States assumed a leading role in this context with two benchmarks: President Eisenhower's 1953 speech to the United Nations entitled "Atoms for Peace," and the creation of the International Atomic Energy Agency in 1957.

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