

Brazilian Pioneering Female Toxicologists Mohini P. Vidwans*

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Citation: Vidwans MP (2023) Brazilian
Pioneering Female Toxicologists.
Farmacologia Y Toxicologia, Vol.13 No. 1: 152.

Abstract

Around the world, women have always contributed significantly to the growth of toxicology. Particularly in Brazil, there are more women working in the field of toxicology than in other nations, although there are few of them in positions of authority. Only seven of the 22 presidents of the Brazilian Society of Toxicology have been female over the course of the organization's 48-year history, despite the fact that women make up more than 62% of its membership. Based on interviews with five of these scientists who have transformed the subject of toxicology in Brazil as we know it today in its respective sub-areas, this article seeks to recognise the contributions of women to the discipline in Brazil. Drs. Silvia Berlanga de Moraes Barros, Dr. Ester de Camargo Fonseca Moraes, and Dr. Alice Aparecida da Matta Chasin, Dr. Tania Marcourakis, and Dr. Gisela de Arago Umbuzeiro. They are not only pioneers, but they also serve as models of outstanding tenacity in overcoming obstacles. They busted through the glass ceiling and created opportunities for upcoming generations of female scientists. This essay is meant to encourage women to pursue professions in toxicology.

Keywords: Toxicology, Women in toxicology, Brazil, Women in science, Brazilian scientists

Received: 02-Feb-2023, Manuscript No. ipft-23-13473; **Editor assigned:** 04-Feb-2023, Preq No. PQ- ipft-23-13473; **Reviewed:** 18-Feb-2023, QC No ipft-23-13473; **Revised:** 25-Feb-2023, Manuscript No. ipft-23-13473 (R); **Published:** 28-Feb-2023, DOI: 10.36648/2254-6081-13.1-152

Introduction

In every country, women have contributed significantly to the growth of the toxicology discipline[1]. In fact, the "Goddess of Healing" was mentioned in the earliest toxicology record (4000 BC), and many of the early practitioners of toxicology were female poisoners [2]. More specifically, general toxicity has been understood in Brazil since the days of the indigenous population. However, it first becomes a focus of research and instruction in 1966, when Dr. Ester de Camargo Fonseca Moraes established toxicology as a separate discipline inside the University of So Paulo's Pharmacy School[3]. The Brazilian Society of Toxicology (SBTox) was established in 1972 with the goal of bringing together academics, experts, businesses, and organisations engaged in the growth of toxicology in the nation[4]. The "1st Congress of Tropical Toxicology" was place in Manaus four years later, and the first official SBTox Congress, the "1st Brazilian Toxicology Congress," was held at a coastal city in the state of So Paulo in 1979[5]. Since the majority of toxicology experts in Brazil started their careers in pharmacy, biology, or chemistry courses, which include a sizable percentage, if not a majority, of female students, toxicology is a field with a significant female representation[6]. Three of the five scientists who have received the Ester de Camargo Fonseca

Moraes Medal, the highest accolade bestowed by the SBTox, are female: Drs. Maria Elisa Pereira Bastos de Siqueira, Silvia Berlanga de Moraes Barros, and Alice Aparecida da Matta Chasin. The number and participation of women at higher organisational levels are declining, as witnessed in many other workplaces, notwithstanding the high female presence in Brazilian toxicology. Women continue to encounter the glass ceiling that prevents them from rising to higher hierarchical positions because of the persistent idea that women and science are in some way incompatible. Despite the fact that more than 62% of SBTox members are women, only seven of the 22 previous presidents in the organization's 48-year history have been female[7]. As a result, this article, which is based on a compilation of interviews, honours the trailblazing Brazilian women in toxicology who shattered the glass ceiling and made significant contributions that helped future generations of women in science. Talking about Dr. Ester is a necessity while discussing the growth of toxicology in Brazil. All of the ladies honoured in this article, as well as all of the toxicologists in Brazil at the time, received training from Dr. Ester at some point. Dr. Ester got her Bachelor of Pharmacy degree from the then-named Pharmacy and Dentistry School of the University of So Paulo (USP) in 1942. She was born

on December 8, 1920, in the city of Paraibuna in the state of So Paulo. Dr. Ester's outstanding academic progress during her final year of undergraduate study drew the eye of Dr. Linneu Prestes, a

Professor in the Department of Toxicological and Bromatological Chemistry. She agreed to his request to serve as a voluntary assistant lecturer in 1943 [8-10].

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