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Obituary

Alda Lima Falcão (★1925 ✝2019)

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Researcher Alda Lima Falcão, born in the city of Aracati in Ceará on March 27, 1925, was the second daughter in a family of five. The 1930s saw a major outbreak of malaria in Brazil, especially in the Northeast including Aracati. It was caused by the mosquito *Anopheles gambiae*, which resulted in many deaths in 1938 and 1939. Centro de Pesquisas da Fundação Rockefeller was established around this period in Alda's hometown. At the age of 14, Alda worked on the team of Dr. Maria Deane and subsequently, with Dr. Deane's fiancé at that time, Dr. Leonidas Deane.

Initially, she was responsible for washing the laboratory glassware, but soon became interested in insects and began to collect, mount, identify, and breed mosquitos. She worked at the center until the eradication of *Anopheles gambiae*, which led to the end of Centro de Pesquisas da Fundação Rockefeller. She then moved to Fortaleza in 1943 and joined the Serviço Nacional de Malária (National Malaria Service) as an entomologist. The service was soon incorporated into Departamento Nacional de Endemias Rurais. According to the norm of the new institution, Professor Alda and all the other entomologists were required to study other vectors, and not just the mosquitoes, about which she already had knowledge. Thus, she went to Recife to learn about triatomines with Dr. Durval Lucena, who also worked with phlebotomines. Alda immediately asked Dr. Lucena to teach her about phlebotomines. However, he argued that he could not do so because she had come to Recife to learn about triatomines. Nonetheless, it was with Dr. Lucena that Alda first saw a phlebotomine, the species *Nyssomyia whitmani*, under the microscope.

In 1950, Alda married Alberto Rocha Falcão, a flight controller in Recife. In 1952, they moved to Belo Horizonte. Alberto changed his profession and both of them started working at the Serviço Nacional de Malária using the infrastructure of the entomology laboratory of the Fundação Ezequiel Dias. One day, Alda went to Funasa (Fundação Nacional de Saúde), located on Rua Rio de Janeiro, and met Professor Amilcar Martins. At the invitation of Dr. René Rachou, Alda started working at the Instituto Nacional de Endemias Rurais (currently Instituto René Rachou) in 1955 with Professor Amilcar and her husband Alberto (**Figure 1**). As soon as they settled, Alda insisted to Professor Amilcar that they should study phlebotomines. They made their first collection near what is currently the Parque das Mangabeiras in Belo Horizonte and later at Gruta da Lapinha in Lagoa Santa. Examining the material, Alda discovered her first new species, which was confirmed by the renowned scientist Dr. Mauro Pereira Barretto. The species was named *Phlebotomus renei*, in honor of Dr. René Rachou.

FIgure 1

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From that moment, the formation of Coleção de Flebotomíneos da Fiocruz began, which is now considered one of the most important phlebotomine collections in the world. The collection has approximately 92,000 phlebotomine specimens distributed across 370 species from the Americas and 43 other species of the genera *Phlebotomus* and *Sergentomyia* from Europe, Asia, and Africa (**Figure 2**). In 1958, Alda attended a medical entomology course at the school of Saúde Pública of Universidade de São Paulo. In professional training on taxonomy, her pioneered phlebotomines course, trained 190 professionals and students from all Brazilian regions in the art of phlebotomine identification. All these professionals and students were carefully recorded in a notebook that she referred to as the "caderno vermelho" (red notebook).

FIgure 2

Faced with the vocation of teaching, Alda created the Centro de Referência Nacional e Internacional para Flebotomíneos in 1991, which provided valuable services for health surveillance in Brazil. During her career, she published one book and 101 scientific articles, the first on culicids and the others on phlebotomines and leishmaniasis. She described 43 new species, one new subgenus, and one genus of phlebotomines. Descriptions of the species *Evandromyia aldafalcaoae* (Santos, Andrade-Filho, & Honer, 2002), *Pintomyia limafalcaoae* Wolf & Galati, 2002 and *Pintomyia falcaorum* Brazil & Andrade-Filho, 2002, as well as creation of the subgenus *Aldamyia* (Galati, 2003), were done in her honor.

Alda was the head of the Laboratório de Leishmanioses at the Instituto René Rachou from 1976 to 1994. In 1994, she was forced to retire, as she was 70 years old. During her tenure, she went through an episode that, according to her, was the most unpleasant episode of her career. It was due to misinterpretation of a 1990 federal regulation that prevented related civil servants from working together[1]. Thus, Alda Falcão and her husband Alberto Falcão could no longer work in the same laboratory and Alda, as the head of the laboratory, enforced the norm very unwillingly. Alda Falcão established a clinic for leishmaniasis at the Instituto René Rachou, a place that currently bears her name. She was part of a group of phlebotomine experts called the CIPA group (*Computer Aided Identification of Phlebotomine sandflies of Americas). In 1991, she was awarded the* Medalha Meio século de Contribuição a Ciência *by Fiocruz. In 2005, she became* Pesquisadora Honorária pela Fundação Oswaldo Cruz. Shortly thereafter, in 2007, she received the title of Pesquisadora Emérita da Fiocruz[2].

Always smiling, she was always pleased to examine a phlebotomine under a microscope when she came across a hard-to-identify specimen that she did not know and joked that it was better to break the slide. She would often come into the lab the next day and talk about the species in question. Alda's dedication and love for the profession are marked by those who had the honor to live with her and to learn from her.

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