

Andries Hein Jonkers MD (1926-2008)

Andries H Jonkers or 'Dries' as we called him, joined the Trinidad Regional Virus Laboratory (TRVL) as a Rockefeller Foundation staff member in January, 1961. The TRVL, at that time, was engaged in a study of arboviruses and was supported by Caribbean Governments, the Rockefeller Foundation and the United Kingdom Government. He was employed as an epidemiologist.

When Dr Jonkers joined the TRVL, the staff consisting of Wilbur Downs, Leslie Spence and Thomas Aitken were already concentrating their studies in Bush Bush Forest. C Brooke Worth and Elisha Tikasingh joined the staff about the same time as Dr Jonkers did. Together they studied the ecology of arboviruses in this forest which one staff member described as a "Bush Bush Bonanza" with reference to the quantity and variety of strains of viruses isolated. In a series of six papers presenting the work in Bush Bush Forest, Dr Jonkers was senior author in one which summarized 593 isolates representing 19 different virus types and in the sixth paper in which he was also senior author, he presented

evidence to show that five of these types had similar transmission cycles which included a period of multiplication and viraemia in forest floor rodents. He also showed that the mosquito *Culex portesi* was the vector in these cycles.

Dr Jonkers undertook a series of studies of some of these viruses in wild rodents native to Trinidad. The viruses studied were: Cocal, Caraparu, Venezuelan equine encephalitis Group C and Guama viruses.

Apart from describing Restan and Soldado viruses as new to science, Dr Jonkers also described Cocal virus as new and studied its epizootiology in Bush Bush Forest and the Nariva swamp. He maintained a particular interest in the vesicular stomatitis viruses including Cocal virus and, in 1967, he published a reappraisal of the epizootiology of these viruses in the American Journal of Epidemiology.

Before coming to TRVL, Dr Jonkers undertook a study of encephalo-myocarditis virus antibodies in residents of southern Louisiana and Peruvian Indians.

Dr Jonkers also conducted serological surveys for arboviruses in Suriname and Venezuela. When Dutch soldiers were stationed in Suriname, he arranged with Dutch personnel to take blood samples before going into the forests and after leaving the forests for serological studies to determine if transmission of arboviruses had taken place, a unique way of using army personnel as sentinels.

While working in Bush Bush Forest, he used his engineering skills, as he was initially trained as an engineer, in assisting to build three tree towers for studies on the vertical stratification of mosquitoes. Further, when we were trying to follow the receding water line of the swamp surrounding the forest in order to determine the breeding habitats of *Culex portesi*, he designed and built a walkway and placed it on blocks of styrofoam. The first attempt failed as it sank in the water. The second attempt however, was successful which we promptly dubbed "Jonkers causeway".

With C Brooke Worth, he designed a mosquito trap called "No. 10 Trap" which was one of the most successful traps used for collecting mosquitoes in Trinidad.

In 1968, Dr Spence, who was Director of TRVL, left to take up another assignment. Dr Jonkers was appointed by the University of the West Indies with the concurrence of the Rockefeller Foundation to act as Director of TRVL. At about the same time, The Rockefeller Foundation decided they would no longer be supporting arbovirus studies. Trinidad Regional Virus Laboratory began to experience financial difficulty so that staff had to to be retrenched and activities curtailed. Dr Jonkers handled this difficult period with skill in maintaining a minimum programme with the funds available. In June 1969, with the appointment of a Director of TRVL, Dr Jonkers was transferred to Colombia.

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Dr Jonkers subsequently left the Rockefeller Foundation and took up a teaching position as an epidemiologist researching the epidemiology of cardiovascular diseases at the University of Leiden, Holland. Later, he became Director of the School of Public Health.

In 2001, he wrote to me about his work on arboviruses in Trinidad and noted that "it was for me, and I think for the others as well, the high point of my working life".

He died in his native Holland on July 12, 2008. He leaves to mourn him his wife, Ineke, three children and six grandchildren.

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