

History of scientific thoughts on the etiology and treatment of malaria

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Scientific approaches to the etiology and treatment of malaria have a long history. Torti is often credited as the first to use the term malaria, but we were unable to find the word in his “Therapeutice specialis ad febres periodicas perniciosas (1756)”. Likewise, Lancisius never included the word in his “De noxiis paludum effluviis, eorumque remedies libri duo (1717)”. The term mala aria (based on a mistranslation of the Latin term “coeli gravitate”) was first seen in print in the Italian translation of Leonardo Bruni’s “Historiae Florentini populi (1444)”, titled “Istoria Fiorentina (1476)”, by Donato Acciaiuoli. In addition to correcting the attribution of the term malaria, we will present several other milestones in malaria research, including:

- Meckel’s description of the pigment observed in the organs of patients who suffered from malaria. Meckel never mentioned malaria in his famous paper, Ueber schwarzes Pigment in der Milz und dem Blute einer Geisteskranken (1847). He thought malaria pigment was melanin, and his misconception was supported by Laveran.
- Virchow’s analysis of malaria pigment. Despite its obvious importance, Virchow’s description of malaria pigment “Zur pathologischen Physiologie des Bluts (1849)” has been all but forgotten. He was the first to realize the pigment was hematin.
- Schaudinn’s description of direct invasion of red blood cells by plasmodia. His theory, which was later disproven, dominated malaria research for almost 40 years.

Biography

Ernst Hempelmann had completed his MS (Diploma) in Biochemistry at Eberhard Karls University, Tübingen, 1974-1977. He done his fellowship at WHO, MRC, Mill Hill, London, 1977-80. He worked as a Research Assistant at Georg-August University, Göttingen, during 1981-82. And his Research Associate at Ruprecht Karl University, Heidelberg, during 1983-88. He worked as a Scientist in Hadassah Medical School, Jerusalem, 1989, Witwatersrand University, Johannesburg, 1990-93, Ludwig-Maximilians-University, Munich, 1995-96, King's and St. Thomas' Sch. Medicine, London, 1998-99 and Federal University, Rio de Janeiro, 2001-02.

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