**SLUG: Book Review**

**Title: From the bug’s point of view**

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**Kalpish Ratna, *The Secret Life of Zika Virus,* Speaking Tiger Publishing Private Limited, New Delhi, 271, Rs. 299, ISBN: 9789386582423 Price:**

“An epidemic changes your life, even if you are not ill” – says Kalpish Ratna in yet another interesting book describing the Zika virus disease outbreak that rocked the Americas in early 2015. Epidemics are important not just because of the illness and suffering that they cause, but also for the fear that they incite in people, sometimes far removed from the place where the disease outbreak is active. Epidemics are not just biomedical and epidemiological phenomena. An epidemic has strong social, political, economic, historical and cultural influences. Kalpish Ratna, begin the book with the recent events of reporting of Zika virus in three patients in May 2017 in India, and its socio-cultural implications in the country.

The important message from the books is the role of environment and climate in human health. While most biomedical models of understanding disease restrict themselves to the nexus between the host (human), the agent (the Zika virus) and the vector (Aedes aegypti), the larger environmental determinants are often ignored. Large areas of Brazil were once covered by forests and rapid urbanisation led to removal of portions of this forest cover. This massive disruption of forest cover could be the major reason for the outbreak of Zika in the area. The role of environmental disruption in human disease has to be considered seriously.

The authors raise some very important questions in their book. One of the most interesting questions they raise is whether the Aedes aegypti mosquito which is said to be the vector responsible for transmission of Zika virus was imported to the Americas from Africa during the slave trade? They narrate several instances of documented history where illnesses resembled Yellow Fever in the times of Columbus. They also narrate stories of battles between Spaniards and the Native Americans, where large populations of the soldiers were wiped out by an illness very much like Yellow Fever. If Yellow Fever was existing in the Americas before the African slave trade, is it possible that Aedes aegypti was also native to the Americas?

The book has generous descriptions of the life, work and great contributions of heroes in the field of arbovirus epidemiology namely, Carlos Juan Finlay, Walter Reed, Jesse Lazear and James Carroll. Many of these men had suffered infections of Yellow Fever themselves and some succumbed to it. Kalpish Ratna use the history of understanding of Yellow Fever in the Americas to trace the life story of Zika Virus.

There are many instances throughout the book where the authors use the platform of the story of Zika Virus to comment on important social and political issues that are of currency in India and the world. In the chapter on the teratogenicity or ability of the Zika virus to cause malformations in the foetus, they allude to ‘tolerance’ and the current popular discourse of intolerance. They refer to tolerance as ‘the truce that concedes irremediable and long standing enmity’. Taking offense to the use of the term “teratology” which is the study of birth defects, as the word in Greek means ‘monster’, they subtly take a political stand against patriarchy and towards the rights of persons with disabilities.

As a medical student, I have always wondered how it would be if a microorganism or a bug narrated its experiences of causing illness in a human. I found such an interesting narrative from the point of view of the Zika virus as it enters the body of a patient in this book. The description is vivid and helps the reader see the illness from the virus’ point of view. When I finished reading the book, I found myself left with more disturbing questions than answers. I think the book was written in this design on purpose. At every point in the book where I thought the authors are arriving at some answers, they posed more questions. Where did the Zika virus come from? Why did it suddenly rise in the Americas? Why is it dangerous? How did it establish a relationship with Aedes aegypti? Is Aedes aegypti the definite vector of the virus? Why did it suddenly start affecting the brain of foetuses? Is the microcephaly (small head) a new phenomenon? What does identification of Zika virus in India mean? The book urges research in these domains to establish clear answers.

The book has drawn heavily from personal narratives, anecdotes and experiences of the authors. Be it the reference to the metaphorical kaleidoscope and father’s kit bag, paediatric surgery and encounters with congenital anomalies, experience of talking to her own parents about their fears of congenital rubella syndrome, all these instances resonate truly with the reader. Compared to their previous book on plague, this historical narrative has the distinct advantage of being brief and captivating. The non-linear narrative, throwing in of real life anecdotes, embellishment with metaphors and use of historically landmark quotes, have all made the book an essential read for someone interested in history and humanities in medicine.

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