independently but simultaneously discovered the parasite responsible for the transmission of VL in the Old World. Leishman first encountered the parasite in 1900 while performing an autopsy on a soldier with a condition known as “Dum Dum fever.” The soldier had experienced general debility, recurring fevers, anemia, muscular atrophy and excessive swelling of the spleen, and later died. During the autopsy, Leishman observed trypanosomes in the macrophages of the patient, and Irish physician Dr. Charles Donovan, who studied splenic aspirates of VL patients, later confirmed the discovery. Major Ross, who named the organism *Leishmania donovani* after the two physicians, later discovered the link between the organism and the development of VL. Leonard Rodgers investigated the transmission of VL and shed light on the life cycle of *Leishmania donovani*. John Sinton observed that the distribution of VL coincided with the distribution of the sandfly, *Phlebotomus argentipes*, and in 1940, the transmission of parasite to host was confirmed.

Visceral leishmaniasis also affected those in the New World. In 1913, L.E. Migone reported the first case in Paraguay after identifying *Leishmania donovani* in a blood smear of an Italian who fell ill and died. With time, other countries in South America reported their first cases.

**Mapping the Disease**

Visceral leishmaniasis is no longer confined to the regions reported in its early history (See Figure 2). From 1996 to 1997 the number of confirmed cases of visceral leishmaniasis increased four-fold in Sudan. Treatment centers were consequently overwhelmed and drug stores depleted. The civil unrest caused a mass migration of people further carrying the epidemic to other countries. Brazil similarly experienced a sharp increase in the number of cases of visceral leishmaniasis due to migration of people, but the movement was within borders from the suburbs to the cities. Major epidemics with a high case-fatality rate in East Africa include Libo Kenkem, Ethiopia (2005); Wajir, Kenya (2007); and in the Upper Nile, southern Sudan (2009). Today the disease is widely known to be endemic in regions of the tropics and subtropics, and to areas that support the

**FIGURE 1** Kala azar of the Old World in India, 1903
Source: Thakur CP, Patna Medical College