Until recently, pentavalent antimonials like sodium stibogluconate (SSG) were the mainstay of treatment for VL and CL, despite numerous drawbacks (toxic, difficult to administer, expensive, and even poorly efficacious in many regions). These drugs nevertheless remain the therapy of choice for CL, in the absence of an effective, safe, and affordable alternative, so R&D needs for CL remain acute.

For visceral leishmaniasis, alternatives do exist, with liposomal amphotericin B, paromomycin (PM), and miltefosine either developed or made available over the last 15 years. In its first decade of operation, DNDi research was aimed at optimizing regimens based on existing treatments.
As a result, the combination of SSG and PM (see p. 8) is now the standard treatment in East Africa, while in South Asia single-dose AmBisome® is the first option, with paromomycin and miltefosine as a second line. Yet, these treatments still present safety, logistical, affordability, and access drawbacks, and the search for entirely new treatments – more patient-friendly, effective, safe, and ideally oral – is still the basis for DNDi’s long-term R&D strategy.

Research needs in leishmaniasis are further complicated by specific questions that are yet to be addressed. While the VL case load is falling to such a degree that elimination targets appear to be within reach in South Asia, the role in Leishmania transmission played by PKDL and asymptomatic patients must be clarified if elimination is to be sustained. And in both South Asia and East Africa, better treatments are required for patients co-infected with HIV as current options are unsatisfactory, requiring long and often repeated courses of treatment, including with antimonials.

Dr Márcia Hueb
Julio Müller Hospital, Cuiabá, Brazil

20,000 to 30,000 deaths due to VL annually

200,000 to 400,000 cases of VL annually

5-10% of VL patients develop PKDL

DNDi aims to deliver:
- A safe, effective, low-cost and short-course, oral treatment for VL
- A new treatment for PKDL that is shorter and better tolerated than current options
- A new treatment regimen for patients co-infected with HIV and VL
- A safe, effective, and shorter-course treatment for CL

Ruby Devi
PKDL patient diagnosed when seven months pregnant, New Delhi, India

“I feel ashamed of myself and don’t feel like going anywhere. People around laugh at me with sarcasm and sometimes hatred. I felt humiliated because of these scars on my face.”

Tsadik
35 years old, HIV-VL patient, Abdurafi, Ethiopia

“This disease has destroyed my life, my wife left me, I can’t see my children as much as I used to and I was fired from my job because I was too weak to work. All that I had was used to pay medical bills.”

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Treatment for leishmaniasis involves complicated injectable drugs. The diagnosis isn’t easy, it depends on skill and knowledge. We must move forward.”

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