

Leishmaniasis



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There is so much prejudice against the disease. One day, when I was sick, a woman even refused to get in the same bus as me.

Moacir

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Moacir in his garage, living with the disease for the past 26 years, Brazil

An unusual case, Moacir has had cutaneous leishmaniasis in its most aggressive form for over 26 years. His feet were so badly affected that he couldn't wear shoes on his wedding day, so he and his wife decided to get married barefoot. The whole family is affected by the social stigma of his disease.

Moacir has gone through countless treatments and suffered greatly from drug toxicity, including a heart attack, loss of one kidney, and high blood pressure. He continues to relapse.

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 effective in many regions).

Alternatives exist for VL, partly thanks to DNDi's work to optimize regimens based on existing medicines. As a result, the shorter combination of SSG with paromomycin is now the standard VL treatment in East Africa, while single-dose AmBisome is the first-line treatment in South Asia, with paromomycin-miltefosine as second line. These treatments are better than SSG monotherapy, but they remain sub-optimal, as they still have issues with toxicity, administration, affordability, and access.

The ongoing need for effective new treatments that are safe and (ideally) all-oral remains the basis for DNDi's long-term R&D strategy.

Research needs in leishmaniasis are further complicated by specific unresolved scientific questions. 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 patients and possibly asymptomatic carriers must be clarified if elimination is to be sustained. Better treatments also need to be developed for patients co-infected with HIV, as current options are unsatisfactory, requiring long and often repeated courses of treatment, due to a high risk of relapse.

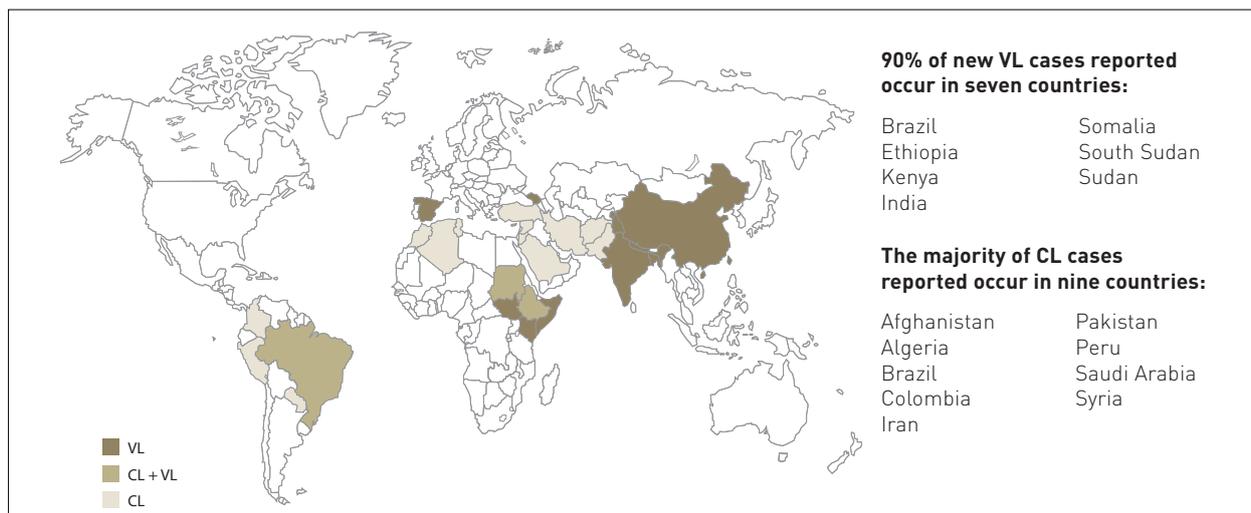
THE DISEASE

- Parasitic disease transmitted by sandfly bite
- Leishmaniasis can be zoonotic (transmitted from animals to humans) or anthroponotic (humans are only a reservoir), depending on the *Leishmania* parasite
- Multiple forms, including: visceral (VL), also known as kala-azar, fatal without treatment; cutaneous (CL); mucocutaneous (MCL); and post-kala-azar dermal leishmaniasis (PKDL), mostly affecting individuals after treatment for VL
- PKDL may play a role in disease transmission
- Children represent a significant proportion of VL patients
- VL in people living with HIV is a growing concern
- Treatment depends on disease type, co-infections, parasite species, and geography

1 | people around
the world at risk
BILLION

**50,000–
90,000** | new cases of
VL annually

**20,000–
30,000** | deaths
due to VL
annually



90% | occurred in seven
countries
NEW CASES

50% | of VL patients in India,
Sudan, and Brazil
UNDER 15
YEARS OLD

DNDi aims to deliver:

- An oral, safe, effective, low-cost, and short-course treatment for VL
- A new treatment for PKDL that is shorter and better tolerated than current options
- A new treatment regimen for people co-infected with HIV and VL
- A safe, effective, and shorter treatment for CL