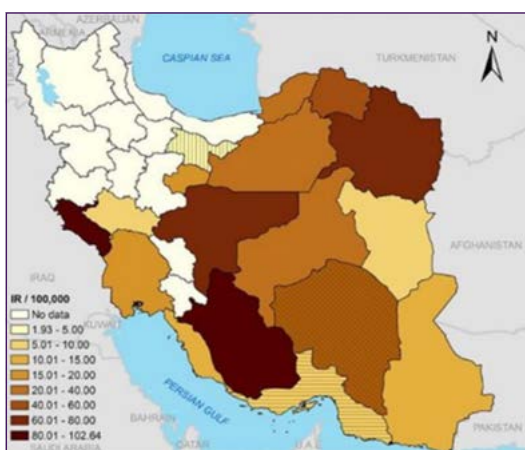
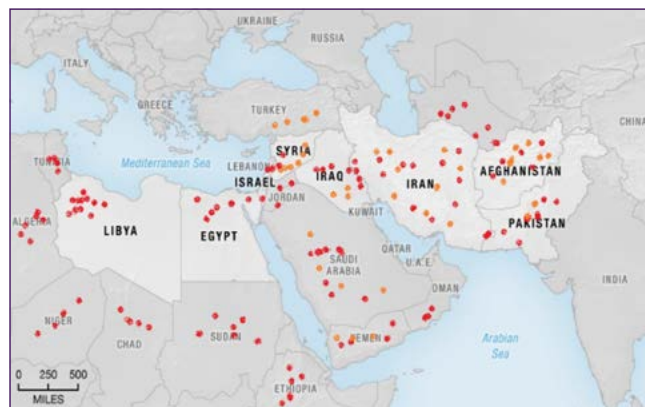


# Iran suffers from a high incidence of cutaneous leishmaniasis (CL)

# TT4CL

TARGETED TREATMENT FOR CUTANEOUS LEISHMANIASIS

Old world cutaneous leishmaniasis (CL) is a heavy burden on large areas of the middle east and northern Africa where the parasite is transmitted by the *Phlebotomus* genera (sand flies). *L. major*, *L. tropica*, *L. infantum*, *L. aethiopica* and *L. donovani* have been demonstrated to be mainly responsible to cause cutaneous leishmaniasis in Old World.



Cutaneous leishmaniasis incidence rates in endemic provinces in Iran, 2013; Source: *Iran J Parasitol*: Vol. 15, No. 4, Oct-Dec 2020, pp. 608-614

The annual incidence of the CL in Iran from 1983 to 2013 was 30.9 per 100,000.

Strict strategies have been undertaken to control CL in Iran: WHO reported that CL cases have been decreased by around 50% for the last ten years.

However, new foci have emerged in the center, northeast, and west parts of Iran.

Ongoing instability in the area due to human conflict and the huge increase in displaced persons has exacerbated the problem with reduced healthcare facilities and vector control programmes being additional casualties.



Professor Khamesipour (PhD) has been working on Cutaneous Leishmaniasis for decades: "In my home country of Iran there are ~20,000 identified cases of CL annually nowadays. There is a **dire need for effective, affordable,**

**acceptable and accessible treatment strategy for cutaneous leishmaniasis.** Current therapies are not very effective (~50%) and are not well tolerated by the patients."

Professor Khamesipour is a key member of the TT4CL consortium which has been running for the last five years. From different CL endemic areas, **he screened and recruited volunteers suffering from CL** who consented then to provide *ex vivo* parasite samples.

*Ex vivo* parasite samples means that parasites are taken from the volunteers' skin lesions and then cultured in a controlled laboratory environment. This kind of study helps researchers to understand various aspects of the parasite biology, drug responses, and identify the potential treatment strategies. For TT4CL, a new drug under development D121 was tested this way for its possible efficacy. Over 260 *Leishmania* positive samples were collected and confirmed the species which was either *L. major* or *L. tropica*. Final report writing with the results is on its way and will be published.

"**This drug does not need multiple painful injections** and I hope future studies of this new drug will be swift and successful so that a new therapy for CL will be placed in the hands of the healthcare professionals in the middle east and beyond for the treatment of this terrible disfiguring disease," concludes Professor Khamesipour.



This project received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 815622.

