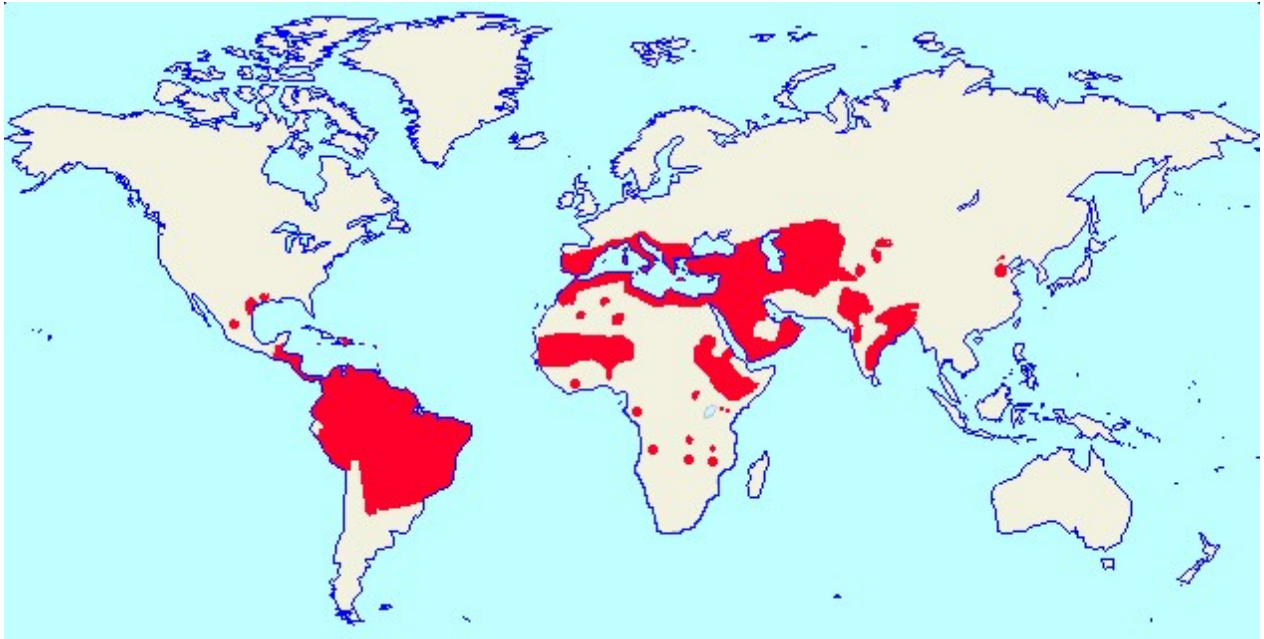


FP6: A GREATER CHALLENGE, EpiLeishNet SA

Co-ordinator: M.Miles, LSHTM



The agent of VL in Europe (*L. infantum*) is shared with that in South America ("*L. chagasi*", synonymous with *L. infantum*).

Development of MLST and MLMT is required for the *Leishmania* of the subgenus *Viannia*, agents of CL and MCL confined to Latin America.

The aim of LeishEpiNetSA:

"To apply molecular epidemiology to improve understanding and control of visceral leishmaniasis (VL) and cutaneous/mucocutaneous leishmaniasis (CL/MCL) in South America."

Summary of LeishEpiNet specific objectives:

1. Develop multilocus microsatellite typing (MLMT) for *L. braziliensis/guyanensis*.
2. Develop multilocus sequence typing (MLST) for *L. braziliensis/guyanensis*.
3. Assemble existing and new isolates of *L. infantum (chagasi)* and *L. braziliensis/guyanensis* to address a series of epidemiological questions.
 - 4a) Can we routinely apply PCR to identify sand fly bloodmeals, and to identify *Leishmania* infections in sand flies?
 - 4b) Do dogs and humans carry different *L. infantum*, and *L. braziliensis* genotypes?
 - 4c) Are small rodents reservoirs of *L. braziliensis* in Paraguay?
 - 4d) Are there different *L. infantum* and *L. braziliensis* genotypes in different endemic foci?
 - 4e) Are there novel genotypes in HIV patients?
 - 4f) Are VL relapses in HIV due to recrudescence or re-infection?
 - 4g) Does VL/HIV co-infection act as a source of new sandfly infections?
 - 4h) How common are hybrid strains of *Viannia*?
 - 4i) Are hybrid strains of *Viannia* more virulent?
5. Can we identify molecular markers for *Viannia* strains associated with MCL?

6. Can we find molecular markers for drug resistance in *L. infantum* and *Viannia*, and can we show how drug resistance emerges and spreads?
7. We will establish: a) an expanded cryobank, in FIOCRUZ, and
b) a database for project outputs.
8. We will undertake a KAP study in endemic areas to assess how control can be improved.

LeishEpiNetSA: some early outputs (period 1):

Good partnership and steering group established.

- Panel of reference strains assembled.
- Free exchange of methodologies.
- More than 10 MLST targets amplified, subset of further 10 targets under investigation.
- A panel of 14 new MLMT targets selected for the subgenus *Viannia*.
- Comparative MLMT analysis of European *L. infantum* and >40 isolates of *L. infantum* from South America.
- An extensive range of field isolates assembled.
- Collaboration in progress with the *Leishmania*/HIV coinfection network.
- Treatment outcome linked to *Viannia* infecting species (*L. braziliensis*).
- Cryobank database designed in Rio de Janeiro; website agreed for Rio.
- KAP studies well under way in Venezuela, Paraguay, Peru, initiated in Brazil.

The LeishEpiNetSA Partners

No.	Name	Short name	Country
1	London School of Hygiene and Tropical Medicine	LSHTM	UK
2	Universitaetsmedizin Berlin	CUMB	Germany
3	Instituto de Salud Carlos III	ISCHII	Spain
4	Prins Leopold Instituut voor Tropische Geneeskunde	ITG	Belgium
5	Universidade Nova de Lisboa	IHMT	Portugal
6	Universidade Federal do Piaui	UFPI/LIB	Brazil
7	Universidad Nacional de Asuncion	IICS	Paraguay
8	Universidad Peruana Cayetano Heredia	IMTAvH	Peru
9	Unversidade Federal de Minas Gerais	UFMG	Brazil
10	Universidad de Carabobo	UC_BIOMED-CNRFV	Venezuela
11	Fundacao Oswaldo Cruz	Fiocruz-IOC	Brazil
12	Bernhard Nocht Institute for Tropical Medicine	BNI	Germany