

MNBS 2014

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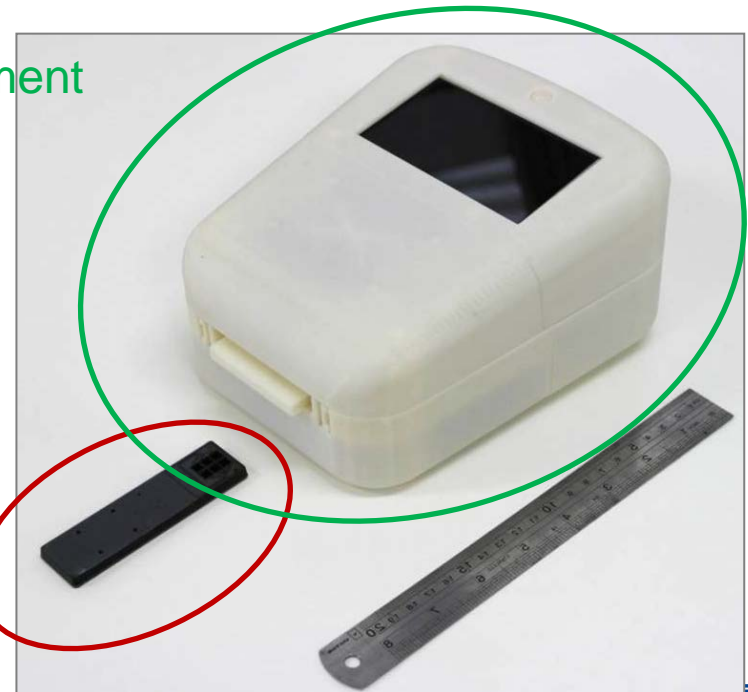
Outline

- Project's goal and consortium
- User's needs and unique value
- Innovation process and road to exploitation
- Distance to the market



Disposable cartridge

Portable instrument



Project Objectives and consortium

Objectives: The PodiTrodi project aims to **overcome the draw-backs of current Point-of-Care tests** by developing technologies for really integrated (but low-cost) sample preparation. The prototype to be developed as proof of concept demonstrator will be a self-contained device **that heterogeneously integrates microsystems** (biosensors and microfluidics), and **control electronics**. The device is controlled by a portable instrument including **sensor read-out, human-machine interface, embedded processor** and **power supply**, suitable for point- of-care diagnosis of Chagas' Disease.

Partners:



User's needs and unique value (1/2)

- A simple **diagnostic test** for detecting both the *Chagas' parasite* and the *host's immune response* to be used in low-resource settings and little-to-none skills of the operator.
- **Point of contact with end user:** Fiocruz laboratories are one of the possible end users; in addition they are in permanent contact with other laboratories with low resources which are potential end users.
- **Product promotion:** the advantages of the solution are explained using specification, promotional materials and pre-series prototypes which are objectives of validation during the testing phase.
- Position of users: final and integrator.
- Unique value of the solution on the market:
 1. it brings together two complementary technologies that are essential for the correct diagnostic of the disease phase;
 2. the development partners are in close contact with the users.

User's needs and unique value (2/2)

- **Response to user's needs:** via direct inquiry and participation in the development of the experimental process.
- The Poditrodi solution aims to allow for *point of care* diagnostic in **delocalized** places at a *competitive cost* to industrial large scale laboratories without the need of trained personell

We target **Chagas disease** as first case scenario but we aim to classical laboratory analysis of DNA and RNA for applications ranging from medical diagnostics to environmental control and food production.

The system is designed for easy use by **unskilled personnel** as a point-of-care instrument.

Compared with standard lab instrumentation, the **lower price** (per single run) eliminates the need to perform a batch of tests in order to be cost effective.

- Road to exploitation: licensing or partnership. We are establishing a common **IP strategy** among partners.
- Technology validation through end users **field test** on real samples
- Completed **cost study** on all expected industrial production steps
- Preparation of informative material
- **Customers acceptance** study through questionnaires
- **Market pervasion** starting from selected early adopters

Market Penetration



Early release:

A few adopters of R&D centers and delocalized diagnostic centers



Penetration:

Adoption by big hospitals and delocalized centers within the countries of the early adopters, 1-1.5 years



Expansion:

Adoption by R&D and medical institutions over South America and other

Competition:

- ▶ No comparable tools currently available
- ▶ No data about comparable on-going developments
- ▶ 2.5 years for follow-up technology development
- ▶ 2.5 years for clinical validation

Distance to the market

- We are ready for **early adopters** test field
- We are about 12-18 months from the market (time necessary for finishing validation and performing a basic stability validation study).
- Identification of non-technical steps. Discussion with users - ongoing.
- **Manufacturing.** Yes, we know who and how we can manufacture the components.
- Completed cost estimates for the final industrial solution for low, mid and high volumes
- Access to the market: **Yes**, one of the partners has direct access to the market.