# Chagas Drug Discovery

Eric Chatelain, PhD

Chagas Plataforma Rio de Janeiro, 7<sup>th</sup> June 2016

DNDi
Drugs for Neglected Diseases initiative

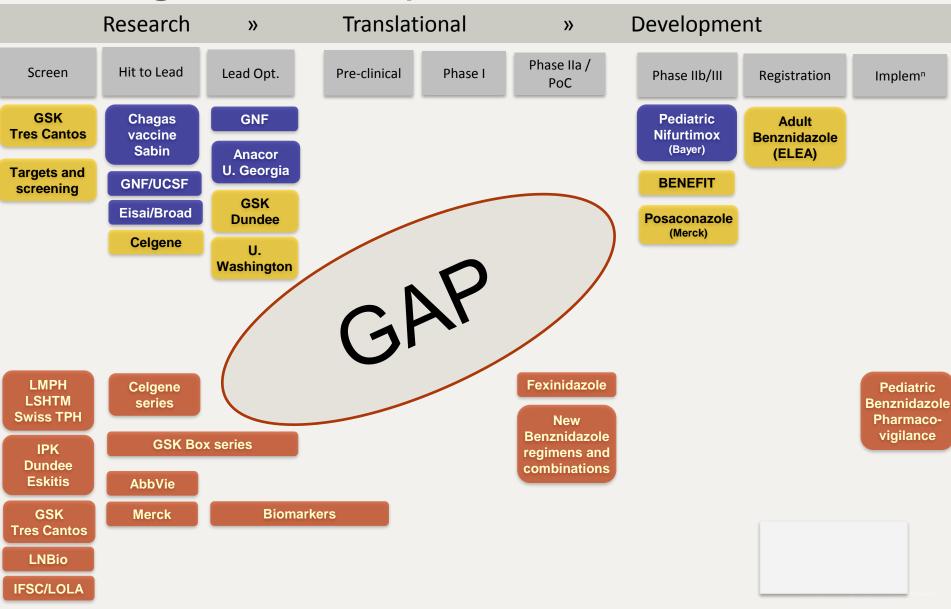


#### 6th June Discovery Workshop

- The Path to a Candidate: A multidisciplinary Effort and a lot of Hurdles (Eric Chatelain, DNDi)
- Chemical Matter: the Good, the Bad and the Ugly (Luiz Carlos Dias, UNICAMP)
- In vitro screening assays: HTS/HCS and secondary assays (Carolina Borsoi-Moraes, LNBio)
- Drugs for Chagas and Leishmaniasis from a translational medicine perspective (Facundo Garcia Bournissen, Hospital de Ninos, Argentina)
- Exploring drug efficacy in experimental Chagas disease using highly sensitive bioluminescence imaging (John Kelly, LSHTM)
- Discovery of biomarkers for diagnostics and treatment efficacy assessment: from the "eye" to the –omics (Momar Ndao, McGill University)



### Chagas landscape/ DNDi activities 2016











#### Still A Gap ...

- Dealing with complex issues/challenges
  - Drug Discovery & Development: lots of hurdles along the journey -> Attrition
  - Complex parasite
  - Complex disease with still a lot of unknown
  - Not enough clinical research data (with new candidates) feeding back into discovery/nonclinical process
  - Issue of biomarkers for treatment efficacy assessment



#### .... Making Progress

- New in vitro Assays; moving towards standardization and efficient screening cascade
- Tackling translational challenges: in vivo models predictive of outcome in clinical trials
- Moving toward more systematic PK/PD assessment with new compounds
- New technologies for the ID of potential markers of treatment efficacy
- Building of innovative partnerships and capacity in endemic countries (NTD booster, LOLA)



#### But ...

- Need for more Research
- Need for even more Synergy and Sharing between Initiatives/Groups to avoid duplication, do the "right" things
- Maybe (re)-define/(re)-think
   R&D Priorities for Chagas disease and act accordingly



## Pulling Together to Overcome Hurdles

