ParaDrug: an E-tool to analyze and report drug efficacy data in preventive chemotherapy programs targeting schistosomiasis and soil-transmitted helminthiasis

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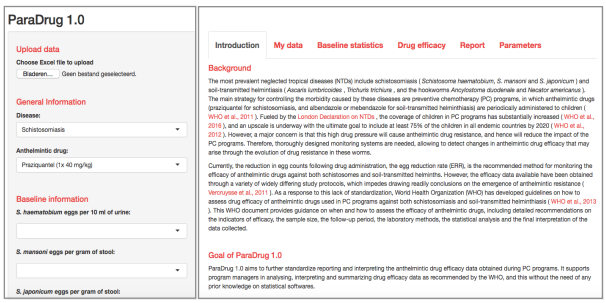
Goals of ParaDrug

- **Standardize reporting and interpretation** of the anthelmintic drug efficacy data obtained during preventive chemotherapy (PC) programs against soil-transmitted helminths (STH).
- Support program managers in **analysing, interpreting and summarizing** drug efficacy data according to WHO guidelines

User interface – www.starworms.org/tools

Side panel | Main panel



- 4 sections
  - ✓ upload data; general information; baseline and follow-up information
- Drop down lists
- 6 tabs
  - ✓ background; my data; baseline statistics; drug efficacy; report; parameters
- Built-in links to WHO documents
- Reactive analysis/reporting of data

Output parameters

- Number of subjects
  - ✓ number of subjects enrolled
  - ✓ number of cases per worm species
  - ✓ number of mixed infections
  - ✓ number of complete cases
- Intensity of infections
  - ✓ mean egg count at baseline per species
  - ✓ spread of egg count at baseline per species
  - ✓ number of low, moderate and high intensity infections per species
- Spread of follow-up period
- Egg reduction rate + 95% confidence intervals
- Interpretation according to WHO guidelines

Software

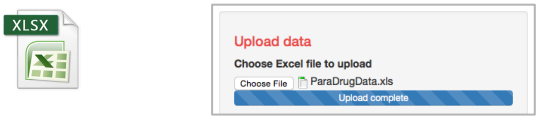
- ParaDrug was developed using the *Shiny* package of R studio
- R studio is an open source software for R

Work with ParaDrug

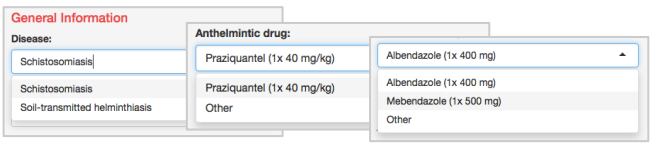
Step 1: Check data requirements – my data tab

- Required data
  - ✓ egg counts
  - ✓ Follow-up period
- Missing data
  - ✓ impossible value (e.g, -1)
- Required format
  - ✓ xlsx-file
  - ✓ first worksheet
  - ✓ unique headers
  - ✓ integer numbers

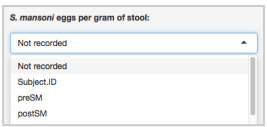
Step 2: Upload data – side panel



Step 3: Provide information on the trial – side panel

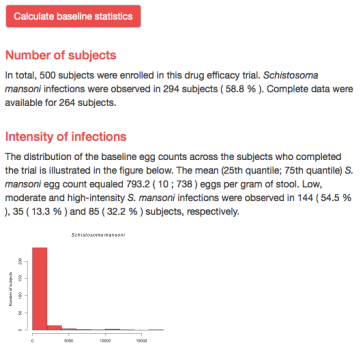


Step 4: Match your data – side panel

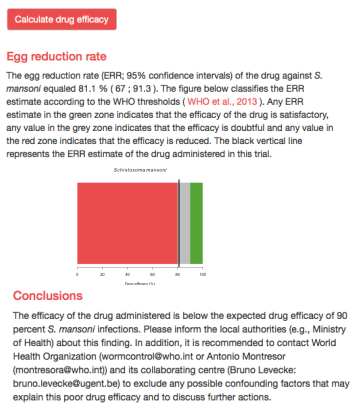


	A	B	C
1	Subject ID	preSM	postSM
2	102	434	2
3	158	0	0
4	185	0	15
5	220	5	0

Step 5: Press *calculate baseline statistics*



Step 6: Press *calculate drug efficacy*



Step 7: Customize and download report – report tab

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