

# Persistent digestive disorders and their association with bacterial, parasitic and viral pathogens in Dabou, south Côte d'Ivoire

<b>Submission date</b> 29/08/2013	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 02/10/2013	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 28/03/2019	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Diarrhoea continues to be a major public health problem, particularly in tropical and subtropical countries. While acute diarrhoea has been extensively studied, few studies have focused on the diagnosis and treatment of long-lasting diarrhoeal episodes (14 days and longer). Many pathogens could possibly be involved, including more than 30 bacterial, parasitic and viral infectious agents. However, the most relevant pathogens in tropical settings still need to be identified. The main aim of this study is to find out whether a study setting in Dabou, south Côte d'Ivoire might be suitable to serve as study site in a multi-country investigation to assess persistent diarrhoea in Africa and Asia. To do this, we will look at the prevalence of a wide range of pathogens and selected bacteria in people with and without symptoms of diarrhoea.

### Who can participate?

Individuals aged over 12 months who live in the city of Dabou or one of 11 surrounding villages.

### What does the study involve?

Symptomatic patients presenting with persistent diarrhoea (14 days or more, as assessed by trained medical staff) will be assigned to the symptomatic group, while asymptomatic patients without any gastrointestinal complaints at time of enrolment and in the four preceding weeks will be assigned to the control group. All participants will be examined with standardised, quality-controlled tests. A small amount of stool will be stored and a subset of samples will be tested for several different types of bacteria, parasites and viruses. Finally, a questionnaire survey will be conducted.

### What are the possible benefits and risks of participating?

A detailed laboratory diagnostic assessment of stool samples for various pathogens will be offered to all study participants. If a helminth or a symptomatic intestinal protozoan infection is diagnosed, free treatment will be offered to the infected individual, according to national guidelines. All personnel who will perform medical examinations and treatment will be qualified and well experienced (i.e., medical doctors, nurses and technicians who are well acquainted to do this type of work). All methods applied within the study are routinely used in the field, the

laboratories and the hospitals and therefore do not place participants under any specific risk. The treatment with the medication in case of parasitic infection will be done following national guidelines. These treatments might result in side effects (e.g., headache), but these are usually mild and disappear after a short while.

Where is the study run from?

The study will be conducted in the Hôpital Méthodiste de Dabou, located in south Côte d'Ivoire (about 40 km west of Abidjan, the economic capital of Côte d'Ivoire).

When is the study starting and how long is it expected to run for?

The study will start in October 2012 and will run for about 4 weeks. Detailed laboratory follow-up work might take up to 1 year.

Who is funding the study?

The study is funded by the NIDIAG network supported by the European Commission.

Who is the main contact?

Prof. Dr. Jürg Utzinger  
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## Contact information

### Type(s)

Scientific

### Contact name

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## Additional identifiers

### ClinicalTrials.gov (NCT)

NCT02105714

## Study information

### Scientific Title

Persistent digestive disorders and their association with bacterial, parasitic and viral pathogens in Dabou, south Côte d'Ivoire: an exploratory case-control study

### Study objectives

Persistent diarrhoea (lasting 14 days or longer) is associated with a broad range of infectious pathogens of the gastrointestinal tract, including bacteria, parasites and viruses (for further

details of our study hypothesis, see Becker et al., 2013, Persistent digestive disorders in the tropics: causative infectious pathogens and reference diagnostic tests. BMC Infect Dis 13: 37).

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

1. Institutional Research Commission of the Swiss Tropical and Public Health Institute (Basel, Switzerland) and the Swiss Center for Scientific Research in Côte d'Ivoire (Centre Suisse de Recherches Scientifiques en Côte d'Ivoire) (CSRS; Abidjan, Côte d'Ivoire)
2. Directorate General of the Methodist Hospital Dabou (Direction Générale de l'Hôpital Méthodiste de Dabou). Dabou, Côte d'Ivoire, 01 October 2013

## **Study design**

Case-control study

## **Primary study design**

Observational

## **Study type(s)**

Diagnostic

## **Health condition(s) or problem(s) studied**

Persistent diarrhoea, gastrointestinal infection, bacteria, helminths, intestinal protozoa, viruses

## **Interventions**

All non-pregnant participants who are diagnosed with soil-transmitted helminths and symptomatic participants who are diagnosed with intestinal protozoa will be offered free treatment:

1. Soil-transmitted helminths (*Ascaris lumbricoides*, *Trichuris trichiura*, hookworm): Albendazole 400 mg (single dose)
2. *Strongyloides stercoralis*: Ivermectin 200 µg/kg (single dose)
3. *Schistosoma mansoni*: Praziquantel 40 mg/kg (single dose)
4. *Entamoeba histolytica*: Metronidazole 500-750 mg (thrice a day for 7 days)
5. *Giardia intestinalis*: Metronidazole 250-400 mg (thrice a day for 5 days; pediatric dose: 5 mg/kg)

No follow-up examinations were performed in our study, meaning that all examinations were carried out at baseline.

## **Intervention Type**

Other

## **Phase**

Not Applicable

## **Primary outcome(s)**

Infection status in relation to gastrointestinal complaints measured using a clinical questionnaire and battery of diagnostic tests employed on human stool samples.

## **Key secondary outcome(s)**

Clinical symptomatology and related variables (specific symptoms, treatment prior to enrolment, age and sex), comparison of different diagnostic techniques measured using a clinical questionnaire and battery of diagnostic tests employed on human stool samples.

**Completion date**

31/10/2013

## Eligibility

**Key inclusion criteria**

1. Individuals aged above 12 months presenting with persistent diarrhoea ( $\geq 3$  stools per days for  $\geq 14$  days; symptomatic group) or without any gastrointestinal complaints in the 4 preceding weeks (asymptomatic control group) will be eligible to participate.
2. Participants from the City of Dabou and 11 surrounding villages will be invited to participate.
3. Written informed consent of all participating individuals will be obtained. If the individual is aged below 16 years, the written informed consent will be signed by the child's parents or legal guardians; additionally, these young participants will assent orally.

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Other

**Sex**

All

**Key exclusion criteria**

1. Individuals in need of immediate intensive care.
2. Individuals who are unable or unwilling to give written informed consent.
3. Individuals who do not meet the inclusion criteria for either study group, e.g. people with acute diarrhoea.

**Date of first enrolment**

01/10/2012

**Date of final enrolment**

31/10/2013

## Locations

**Countries of recruitment**

Côte d'Ivoire

Switzerland

**Study participating centre**  
**Socinstrasse 57**  
Basel  
Switzerland  
4002

## Sponsor information

**Organisation**  
Institute of Tropical Medicine (Belgium)

**ROR**  
<https://ror.org/03xq4x896>

## Funder(s)

**Funder type**  
Government

**Funder Name**  
NIDIAG network (collaborative project; <http://www.nidiag.org>) supported by the European Commission under the Health Cooperation Work Programme of the 7th Framework Programme (grant agreement no. 260260)

## Results and Publications

### Individual participant data (IPD) sharing plan

**IPD sharing plan summary**  
Not provided at time of registration

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/10/2018		Yes	No
<a href="#">Protocol article</a>	protocol	18/08/2015		Yes	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes