

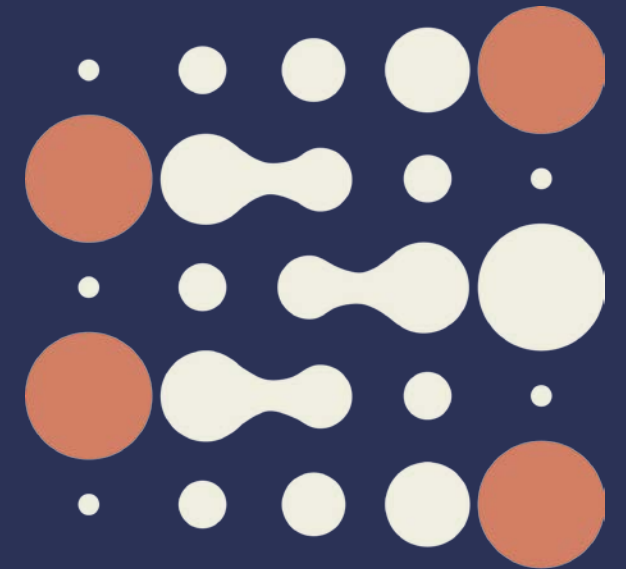
# Investigating the effect of children nutrition on the microbiome and ALL

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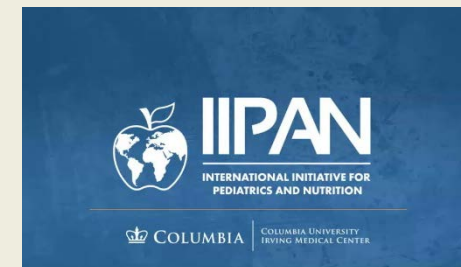
# International Lifestyle behaviour & Biobanking Program in Paediatric Oncology

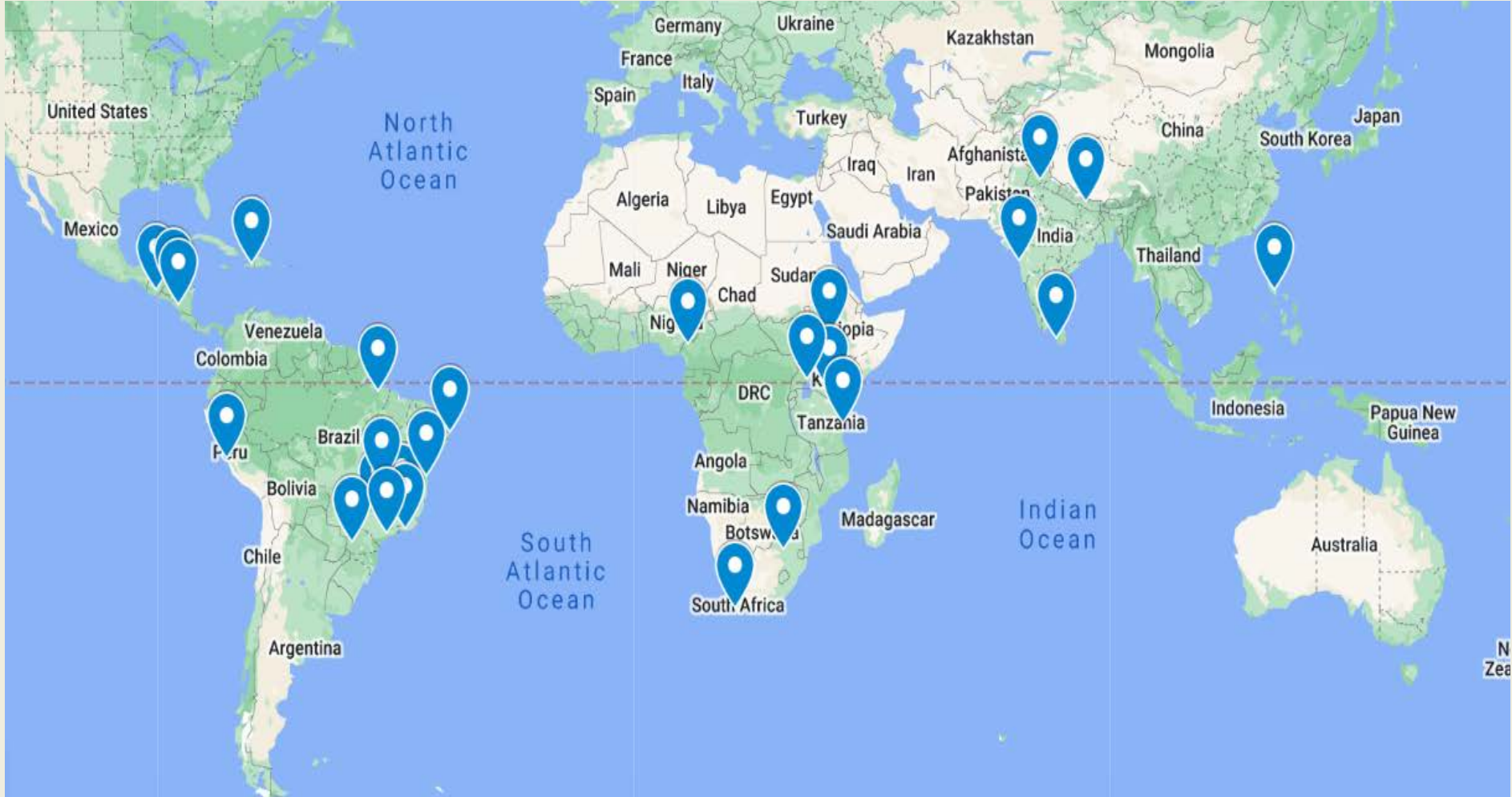
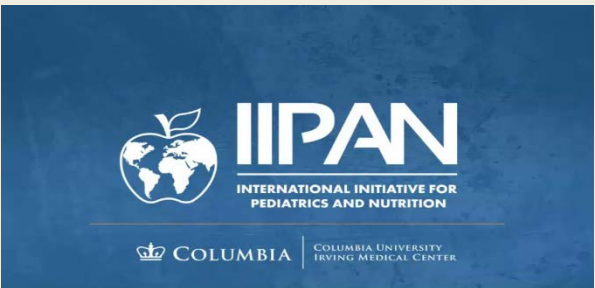
**Prospective multinational child & adolescent cancer patients cohort**

## **Principal Investigators (Multi-PI)**

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- Marc J. Gunter, Inge Huybrechts, Zisis Kozlakidis (IARC, Lyon)
- Ronald D. Barr (McMaster University; Hamilton, Ontario/ IIPAN, NY)

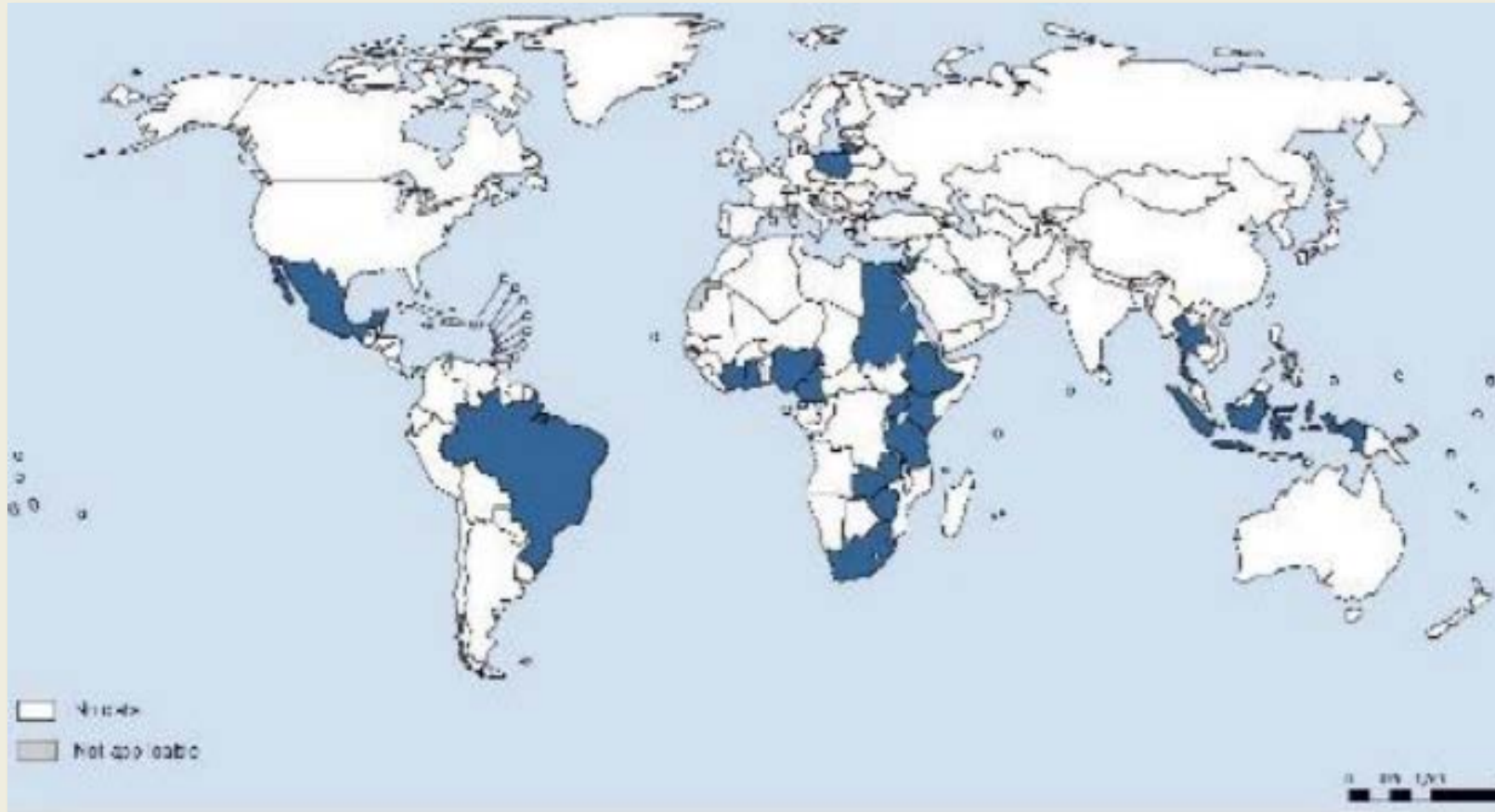
IIPAN = International Initiative for Pediatrics & Nutrition





# Developing capacity through a global network: BCNet

- Creation of a research-ready **infrastructure network within LMICs** (38 institutions in 23 countries)
- **Harmonisation of processes and training** on Biobanking standards and SOPs
- Ongoing support through online portal with educational material ([biobanklearning.iarc.fr](http://biobanklearning.iarc.fr)) and promotion of **open-source IT tools** for biobank-based research and collections catalogue



# Introduction/Background/Motivation

To develop an information resource for studying the impact of nutrition and other lifestyle factors on health outcomes in **children & adolescents with cancer** and to ultimately improve survival among children and adolescents with cancer through a multinational collaboration.

## InterNational Childhood Leukemia Microbiome/METabolome Cohort (NICHE):

Focus on children and adolescents 3-18y newly diagnosed with Acute Lymphoblastic Leukemia (ALL) in Low and middle income countries.

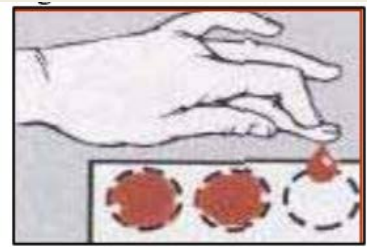
## Southern European Prospective Investigation into Childhood Cancer and Nutrition (EPICkids):

Focus on children, adolescents & young adults 3-21y newly diagnosed with brain tumour or ALL in Southern Europe



## Collecting biological samples

Collecting the biological samples will be limited to blood, urine and stool samples



# Results

In 2023 6 sites have been trained by in-person workshops and online support

8 sites have received IRB clearance for the study – 2 remain outstanding for IRB and training

An NIH pilot grant was provided to initiate the collections of samples in Guatemala – these are not at IARC for processing. The collection in Greece and Honduras has started in December 2023.

Food frequency questionnaires have been translated in all relevant languages, adapted for local context and validated

IIPAN-funded clinical nutritionists have been embedded within the paediatric oncology teams and have started data collection.

## Key take-home messages

Nutrition may be a practical, efficient and effective way of supporting the recovery of chemotherapy treated ALL adolescent patients.

However, the first aims are to understand the nutritional intake within context, as well as the impact of chemotherapy on the microbiome.