African Network for improved Diagnostics, Epidemiology and Management of Common Infectious Agents
• Strengthen collaborations between German and African research institutions to address current research questions related to health

• Investigate **neglected and poverty related** diseases to sustainably improve health data → applied focus
• Long-term African collaborators expressed need to research „common health problems“

• Respiratory tract infections, gastrointestinal infections and fevers of unknown origin are a main cause of morbidity and mortality in Africa\textsuperscript{1,2}

• Poverty and resource-weak healthcare: contact to wildlife and domestic animals especially in rural areas

→ Proliferation of (new) zoonotic agents

• Need for comparative studies

\textsuperscript{1}Walker et al., Global burden of childhood pneumonia and diarrhea. The Lancet, 2013. 381(9875): p. 1405-1416.
\textsuperscript{2}WHO fever management report 2013.
Fevers of unknown origin
Acute gastrointestinal infections
Acute respiratory tract infections

Syndromic Approach

Globale Gesundheit im Mittelpunkt der Forschung
Eine Strategie zur Verbesserung der Gesundheit durch evidenzbasierte Forschung

Ending Preventable Child Deaths from Pneumonia and Diarrhoea by 2025
The integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD)
Partner countries

Côte d’Ivoire
- University Teaching Hospital, University of Bouaké (project lead)
- National Laboratory of Agricultural Development

Democratic Republic of Congo
- National Institute for Biomedical Research
- University Kinshasa

Republic South Africa
- National Institute for Communicable Diseases
- University of Pretoria
E.g. in depth comparative analyses of pathogens and epidemiology

One Health:

Investigations of zoonotic reservoirs, link to climatic and sociological data

Image: http://iiad.tamu.edu/about/thrusts/one-health/
Approach - Sentinel surveillance

“Arid” zone
mostly animal husbandry

“Humid” zone
contact to wildlife (National Parks, bushmeat)

Rural
Small hospital/hospital ward

Urban
“Better” equipped hospital
Urban 
"Better" equipped
hospital

Rural 
Small hospital/
hospital ward

"Arid" zone
mostly animal husbandry

"Humid" zone
contact to wildlife
(National Parks, bushmeat)

Increasing contact to novel/zoonotic pathogens
Increasing contact to global microbiome
Increasing antibiotic use

Approach - Sentinel surveillance
Enrolled patients:
Comprehensive diagnostics
Epi-investigation

Targeted OR broad detection
Specific investigations
Interventions

- RTI
- GI
- AFDUC

2018 2019 2020 2021 2022
After initial challenges...

Total: 8505
More information on ANDEMIA: www.andemia.org