

Neural dysfunction and neuroinflammation in African brain disorders

1R21NS064888-01A1 (April 2010 – May 2012)

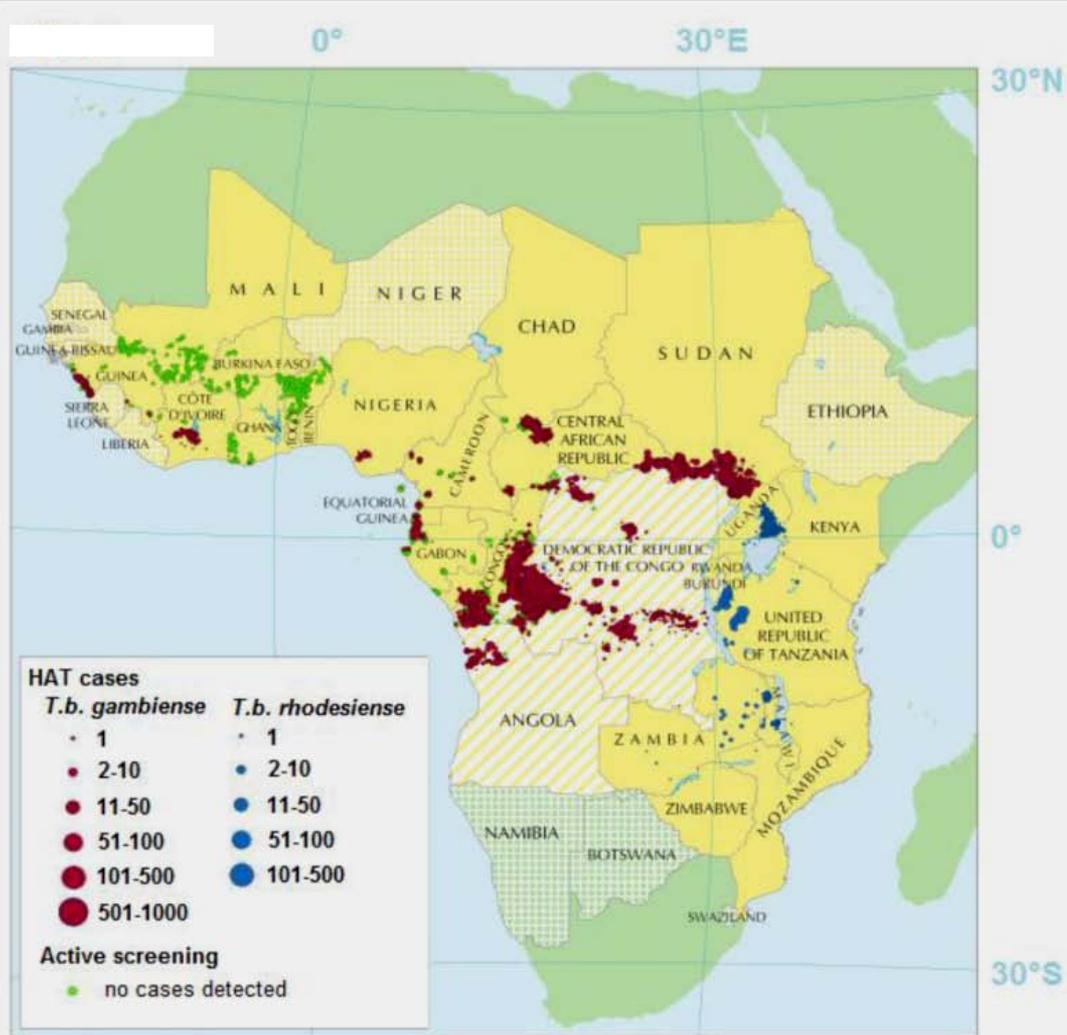
PI: Krister Kristensson, *Karolinska Institutet, Stockholm Sweden*

Major foreign collaborators:

Alfred K Njamshi, *University of Yaoundé I, Yaoundé, Cameroon*

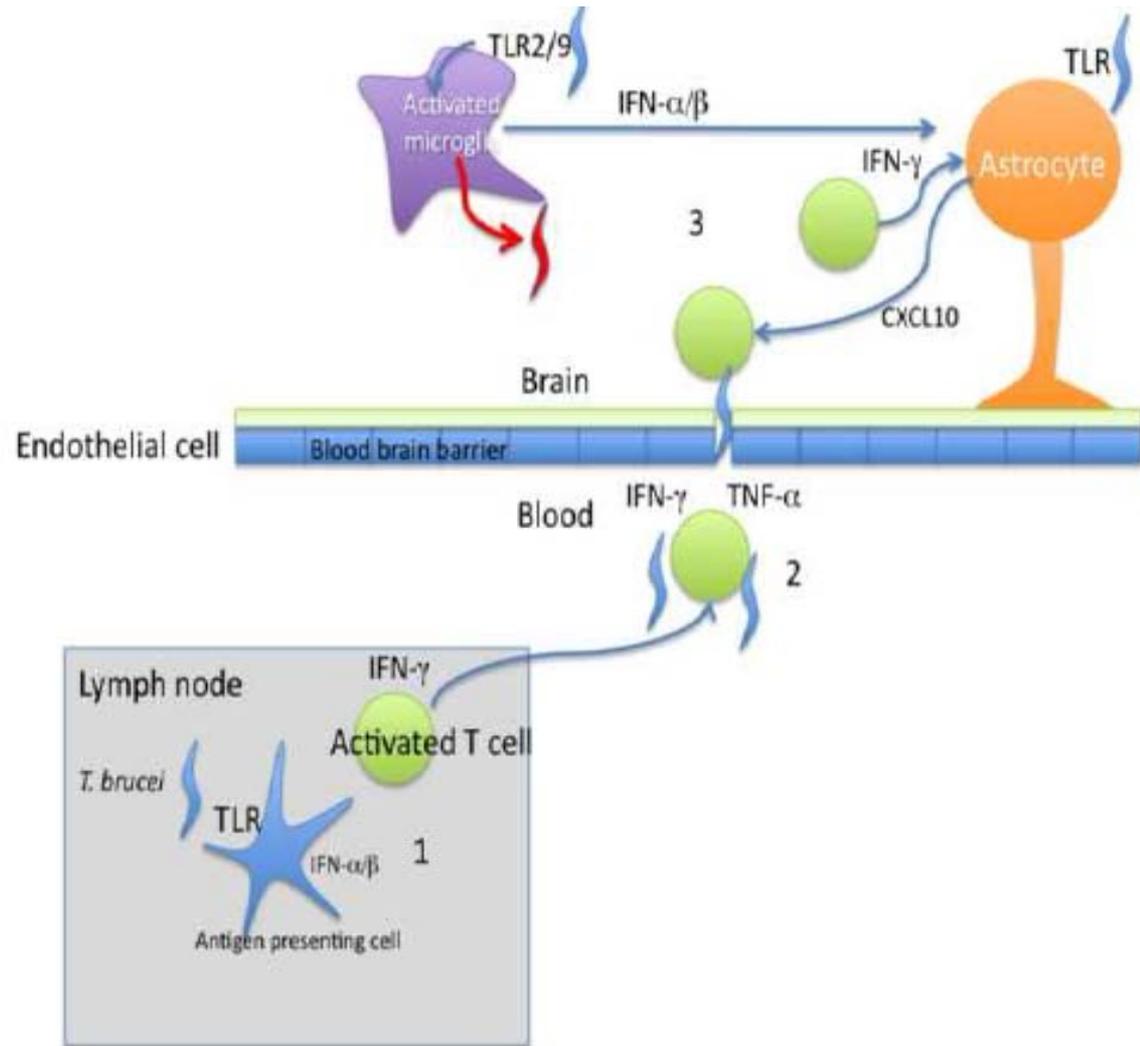
Marina Bentivoglio, *University of Verona, Verona, Italy*





Simarro
2010

***Trypanosome
brain
invasion and
expression of
inflammatory
molecules***

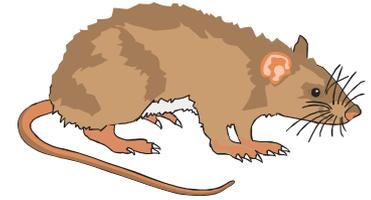
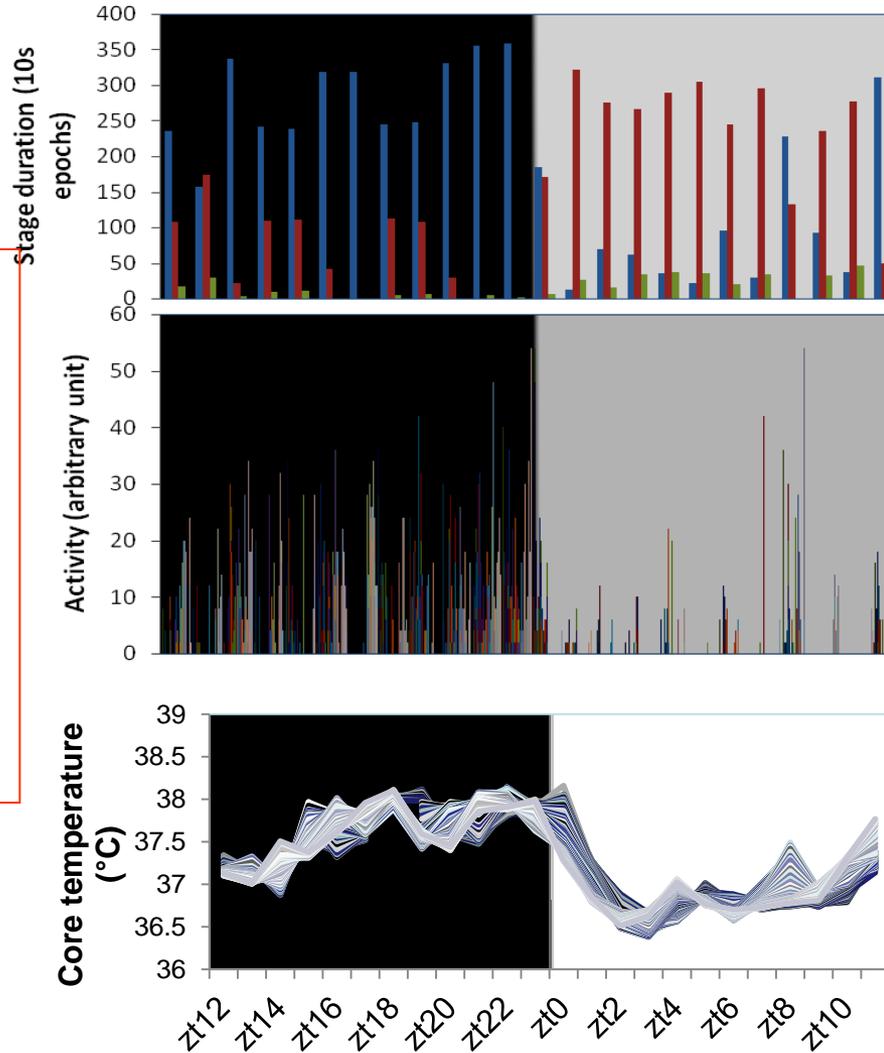


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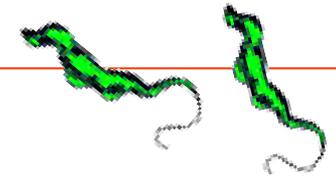
Dark phase
Light phase

Telemetric monitoring of *Tb brucei*-infected rats at the time of neuroinvasion

W SS REM

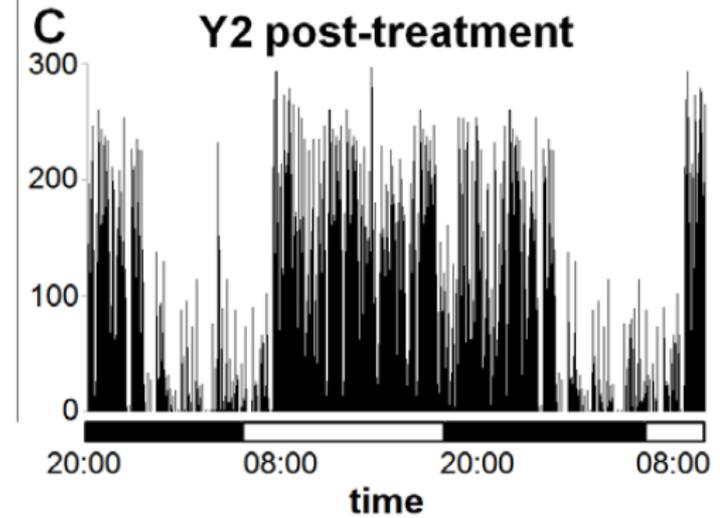
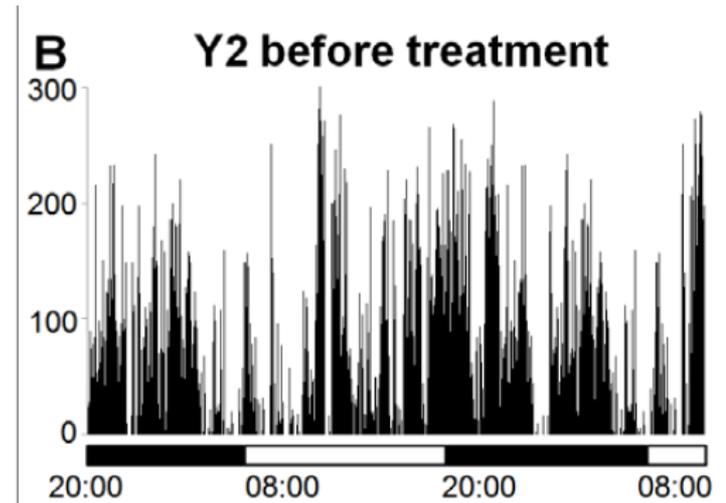
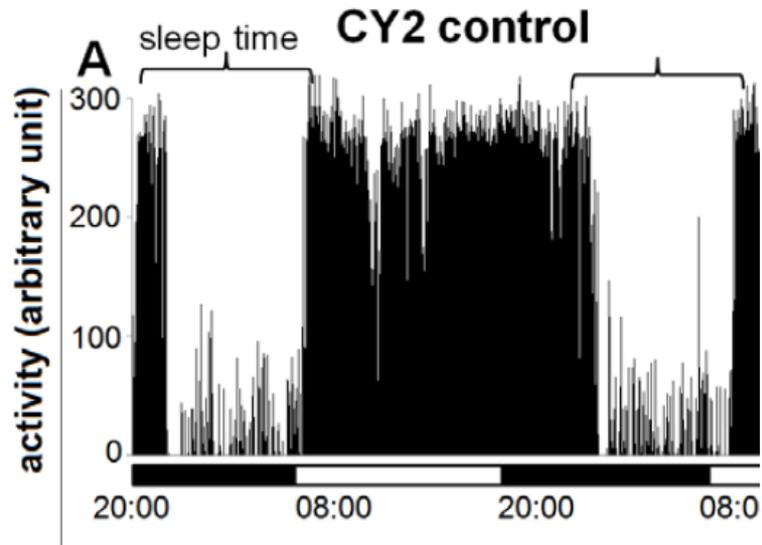


and verification of parasite in brain parenchyma



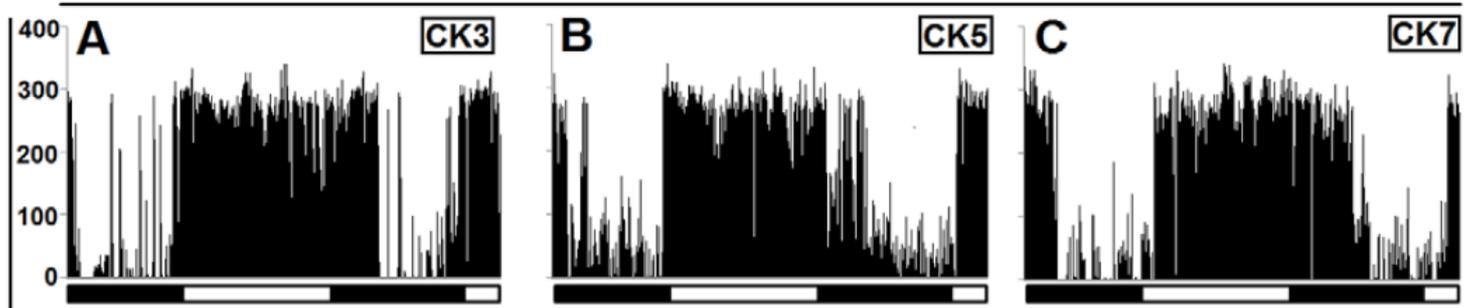
Results show that onset of functional changes revealed by sleep-wake anomalies precede *Tb* neuroinvasion. Their severity parallels disease progression

HAT patient

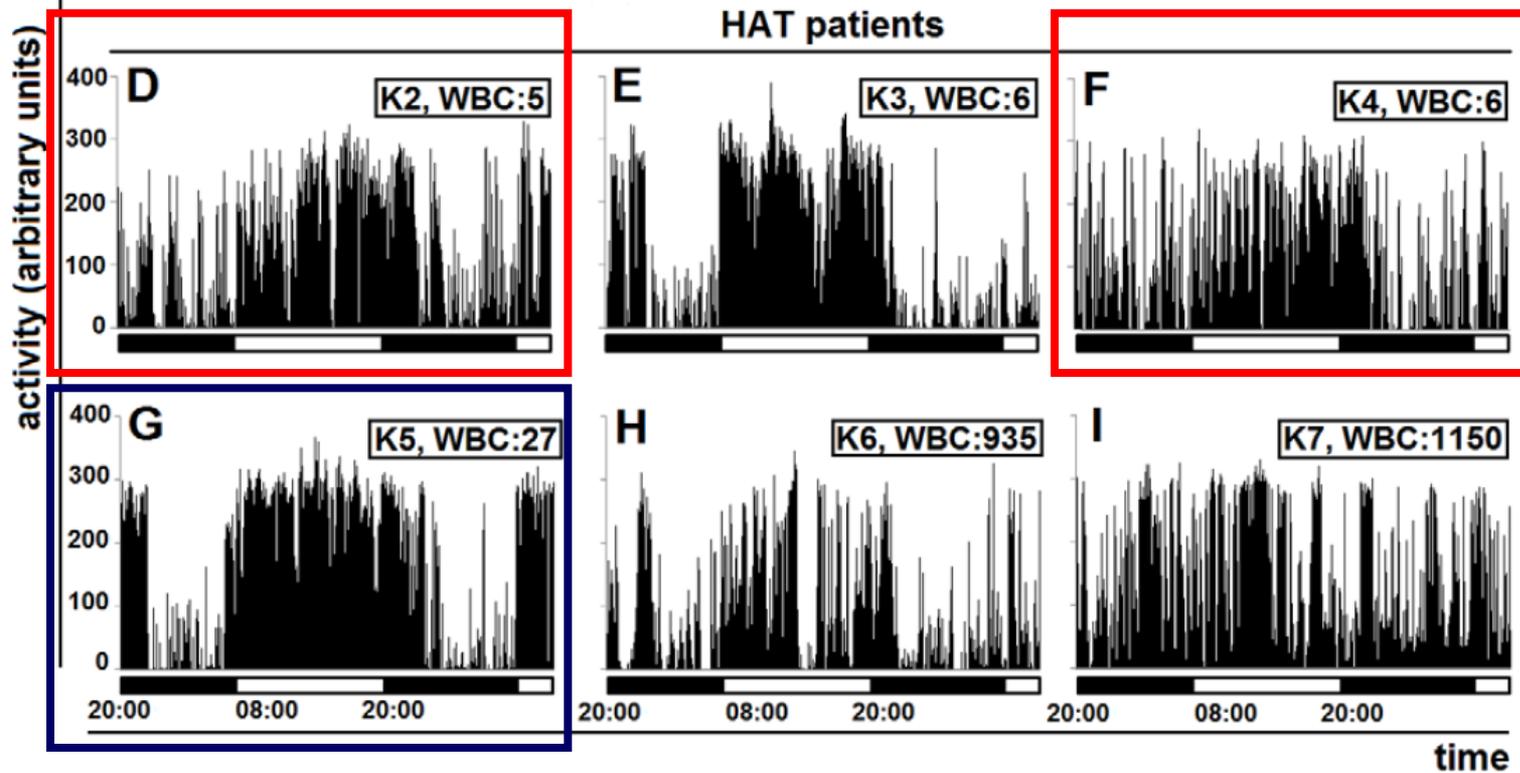


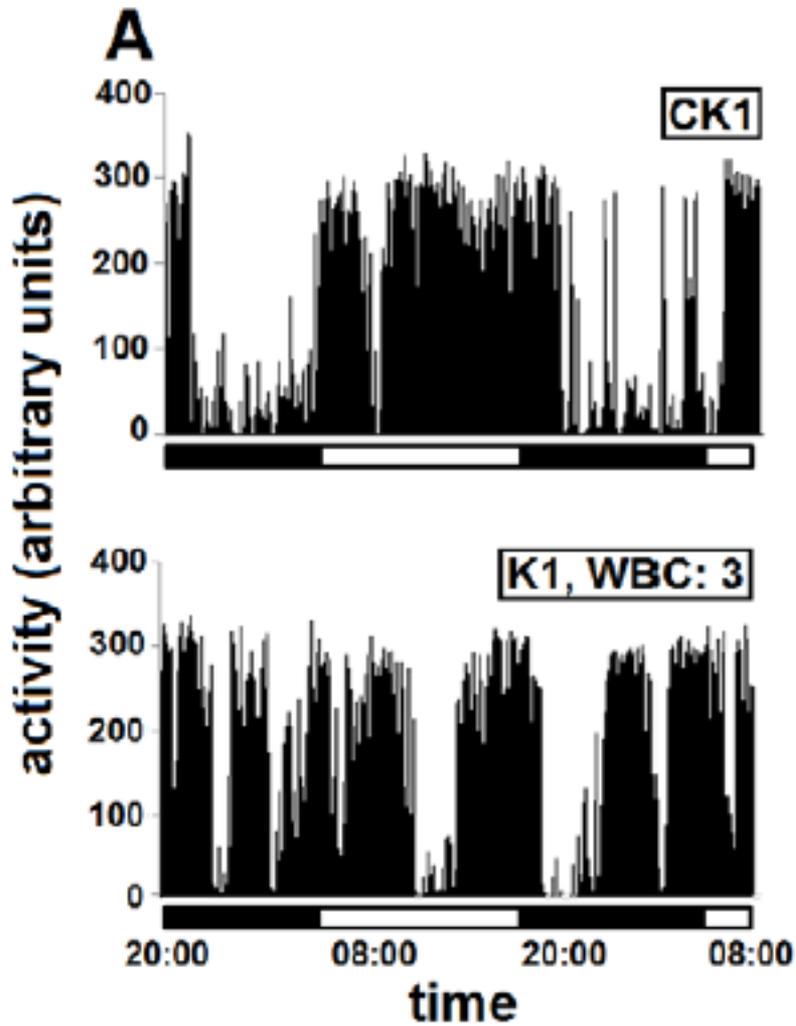
Njamnshi et al, 2012

Control subjects



HAT patients





5 year-old
healthy child

5 year-old child
affected by HAT

Njamnshi et al, 2012



Teaching event for medical students: NIH-Fogarty
teaching workshop "Sleep and Infections"
University of Yaoundé 1, 6 April 2011

UNIVERSITÉ DE CÔTE D'IVOIRE
The University of Ivory Coast

FACULTÉ DE MÉDECINE ET RECHERCHE BIOMÉDICALES
Faculty of Medicine and Biomedical Sciences

11 / Juin 2011 13h
21 Août 2011
21 Août 2011
par COCIS

Symposium des Neurosciences

Du: Août 2011 Lieu: C-11180
Du: Août 2011

Thème: Le Sommeil et les infections

11101: Mécanismes de	141001:
11101: Mécanismes de	141002:
11102: Mécanismes de l'impact de l'impact des pathogènes	141003: Mécanismes de l'impact de l'impact des pathogènes
11103: Mécanismes de l'impact de l'impact des pathogènes	141004: Mécanismes de l'impact de l'impact des pathogènes
11104: Le Sommeil, l'effet et les infections	141005: Le Sommeil, l'effet et les infections
11105: Mécanismes de l'impact de l'impact des pathogènes	141006: Mécanismes de l'impact de l'impact des pathogènes
11106: Les mécanismes de l'impact de l'impact des pathogènes	141007: Les mécanismes de l'impact de l'impact des pathogènes
11107: Mécanismes de l'impact de l'impact des pathogènes	141008: Mécanismes de l'impact de l'impact des pathogènes
11108: Mécanismes de l'impact de l'impact des pathogènes	141009: Mécanismes de l'impact de l'impact des pathogènes
11109: Mécanismes de l'impact de l'impact des pathogènes	141010: Mécanismes de l'impact de l'impact des pathogènes

 *Signature*





media
awareness of the event,
March 2012



April 2011



November 2011



April 2012



April 2012

Newly constructed Neuroscience Laboratory in FMBS, University of Yaoundé 1 with preliminary experiments for rest-activity recording in rats

Built on the results and accomplishments of this R21 project, an R01 application entitled “Neural dysfunction and neuroinflammation in African brain disorders” : submitted in January 2012.

- involves all the three partners of the R21 project
- foresees coordination by Partner 2 (University of Yaoundé I) instead of Partner 1 (Karolinska Institutet)
- to emphasize that the capacity building has progressed effectively for coordination transfer.
- This project focuses on specific pathogenetic questions on nervous system involvement in HAT and its comparison with that in toxoplasmic encephalitis.

