

# NiDiPac: How novel Nano-biosurfacing constructs can Improve the Diagnosis of Infectious diseases in the PACific region?

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PaceNet plus, June 29, 2016

Nadi, Fiji

# NiDiPac, the context

- Pacific region:

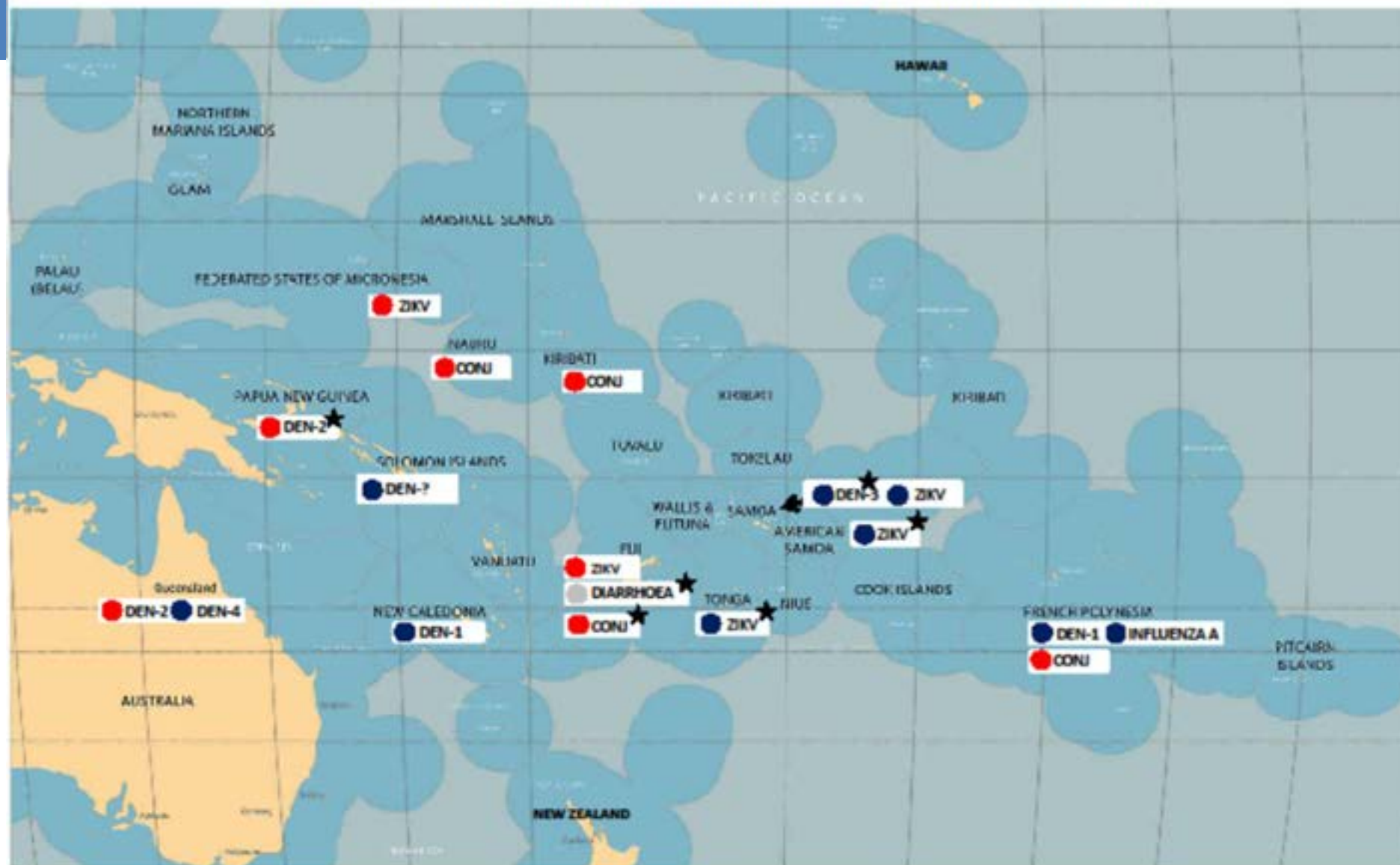


# NiDiPac, the context

- Pacific region:



## Epidemic and emerging disease alerts in the Pacific region as of 25 April 2016



for the Pacific Public  
Health Surveillance  
Network (PPHSN)

- Legend**
- Red dot: Cases reported are increasing or peaking.
  - Blue dot: Cases reported are decreasing or circulation is ongoing. Awaiting confirmation of aetiology.
  - Grey dot: No update provided for at least two weeks.
  - Star: No update provided for at least two weeks.

DEN: Dengue  
DEN-?: Dengue undetermined serotype  
TYPH: Typhoid fever

CHIK: Chikungunya  
ZIKV: Zika virus  
CONJ: Conjunctivitis

An interactive version of the map is available online at: [www.spc.int/whd/epidemics/](http://www.spc.int/whd/epidemics/)

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de Nouvelle-Calédonie



# NiDiPac: the project

- Partners:



- Objectives:

Improve the early diagnosis of infectious disease by implementing new easy-to-use and rapid bedside diagnostic tests using either serum or other samples using the kodecyte technology



# NiDiPac: the innovative technology

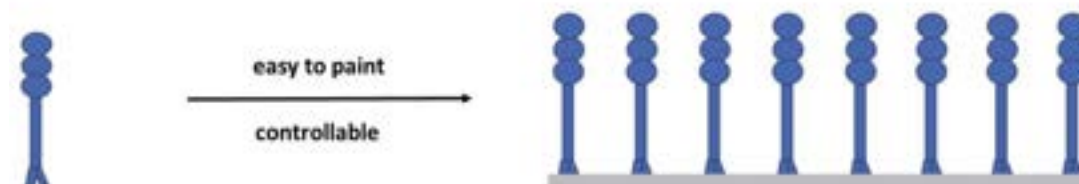


- KODE technology for enzymatic immunoassay:

- Classic:

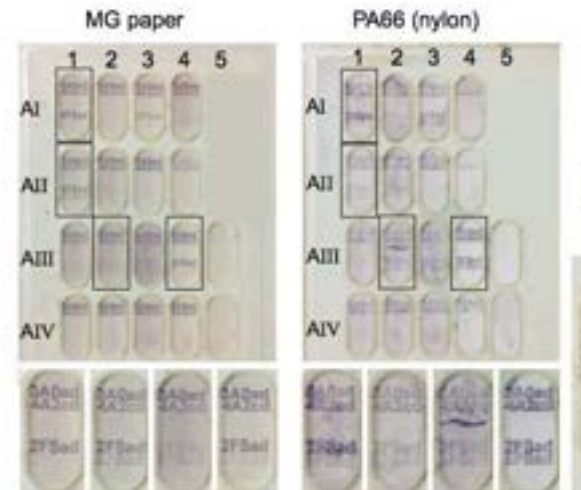
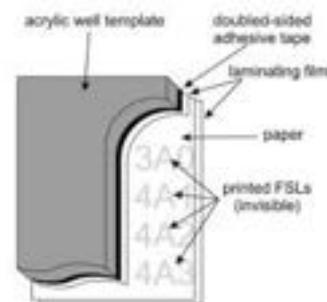


- Kode:



- The applications:

- For NiDiPac (Inkjet printing)

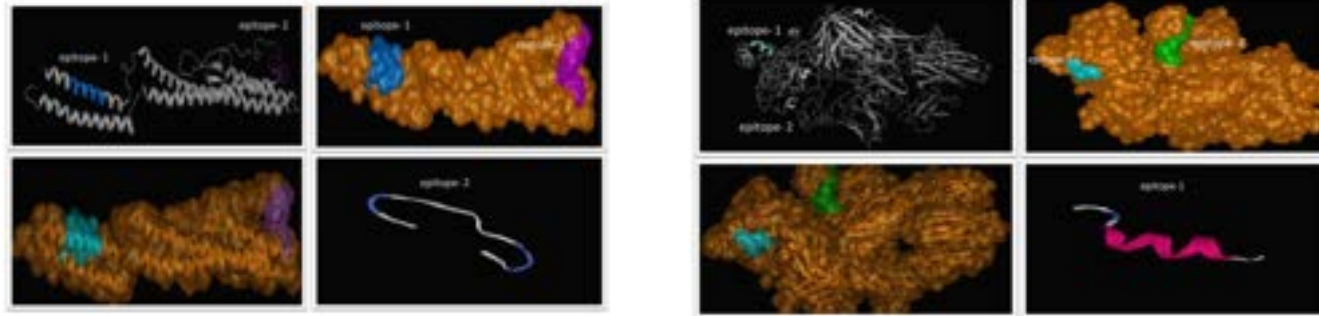
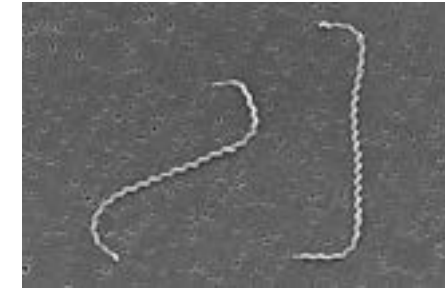


# NiDiPac: the test



- Design for leptospirosis diagnostic:

- Ethics clearance: OK
- Biobank selection (PNG-IMR and IPNC): OK
- Lepto peptides selection and production: OK



- Biobank screening for lepto by ELISA kits: in progress (end: mid-july 2016): PNG-IMR
- KODE-Lepto construct: in progress (end: september 2016): AUT/KODE
- Validation of KODE-Lepto regarding the reference method: scheduled in october 2016 (IPNC)

# NiDiPac: the workshop



## Discussions about:

- Diseases diagnostic in the Pacific with a special focus on Zika and Leptospirosis (PNG-IMR, IPNC, SPC, LabPlus)
- Test Validation and Commercialisation (QUT)
- Ethics procedures (AUT)
- Advancement of the project (PNG-IMR, AUT, IPNC)



# NiDiPac: the outcome

- NiDiPac:
  - Validation of the Proof of concept
  - Go/Not Go decision
- Next steps:
  - Develop the test for other diseases in order to propose a panel for febrile-illness (dengue, zika, chikungunya, leptospirosis, malaria), encephalitis-illness...
  - Validation at a wider scale: Fiji, PNG, Vanuatu where several diseases are circulating in the same time

Thank you!

