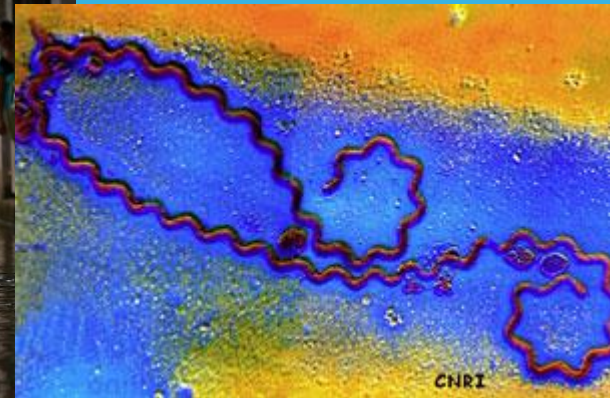
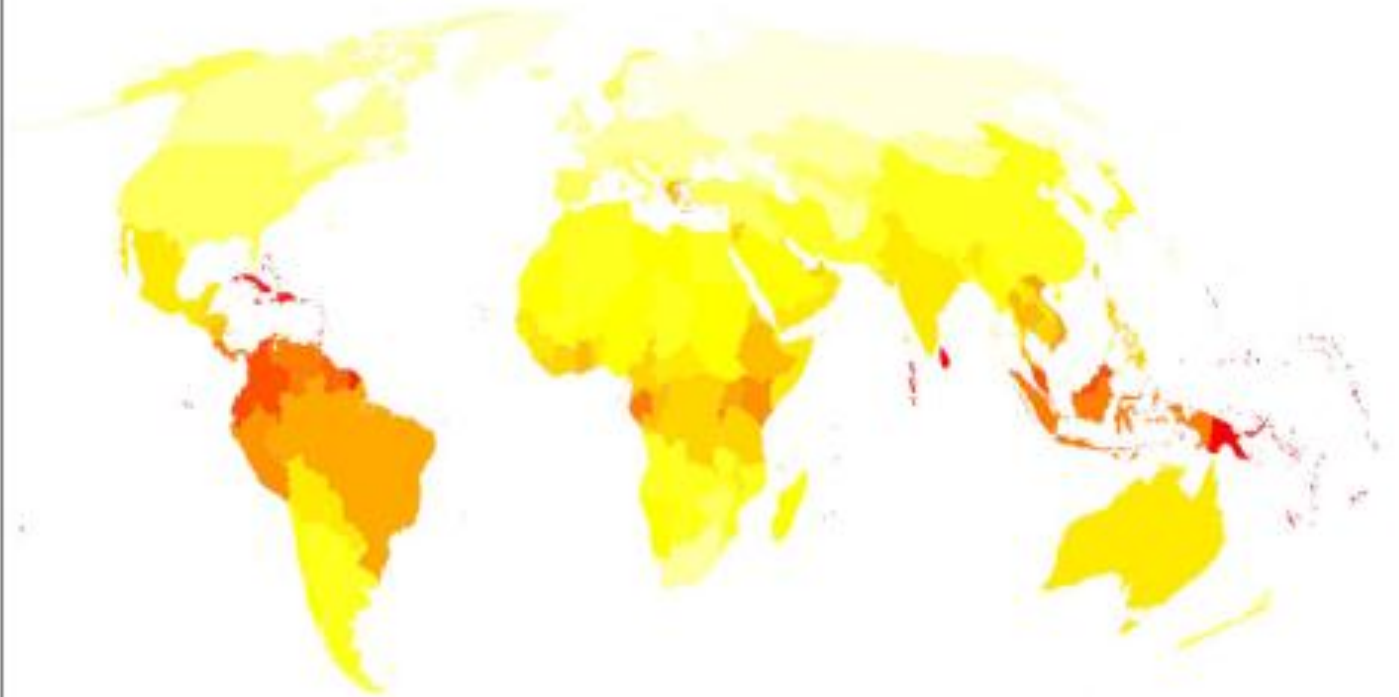
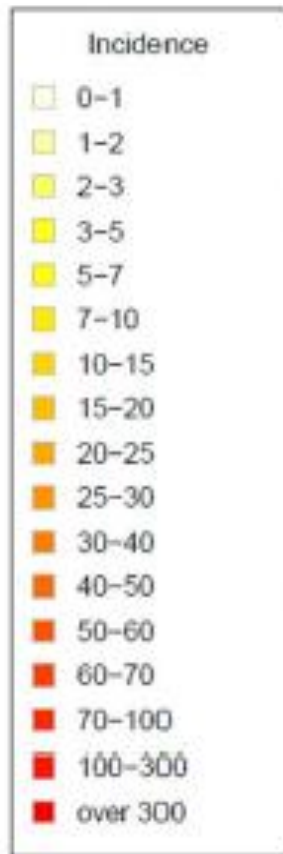


# LEPTOSPIROSIS: SEEKING THE UNKNOWN RESERVOIR

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Michèle JOHN (DASS-NC)  
Cyrille GOARANT (IPNC)



# Estimated annual cases of leptospirosis worldwide



According to WHO, highest incidence and mortality rates are found in: Caribbean, Oceania and Southeast Asia



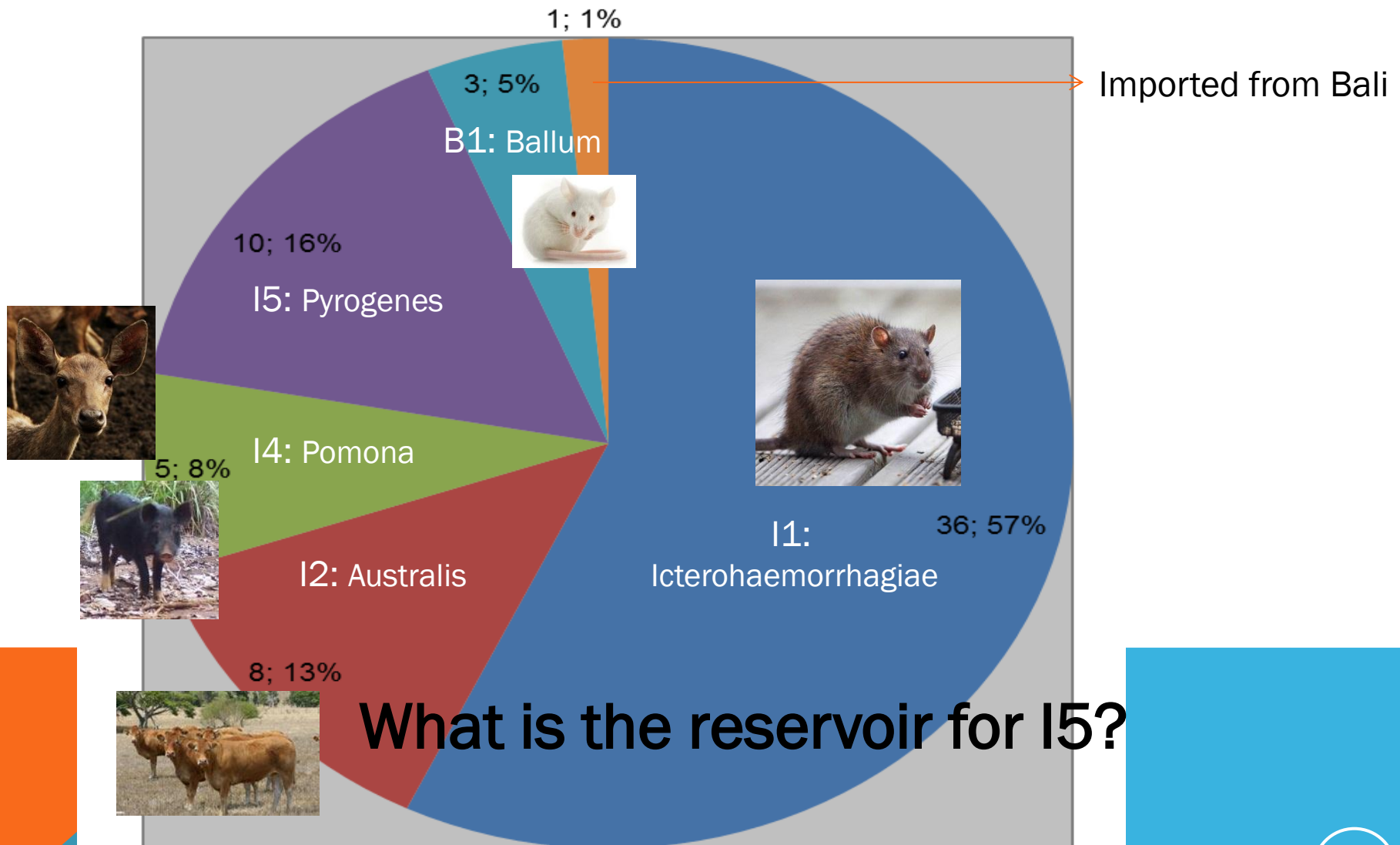
## Reservoirs of *Leptospira*

- Sustained renal carriage
- Without clinical symptoms



Maintenance of the pathogen

# GENOTYPE DISTRIBUTION IN HUMAN CASES, NEW CALEDONIA 2013



Majority of serological survey



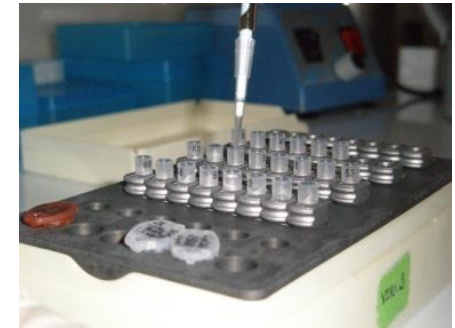
Molecular tools used for urines and/or kidneys

Identification of **renal carriers** of the bacteria

### 3 approaches:

- Prospective
- Retrospective
- Around human cases

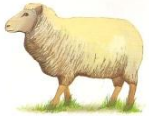

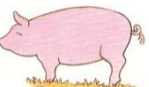




} With Health authority



# RESULTS



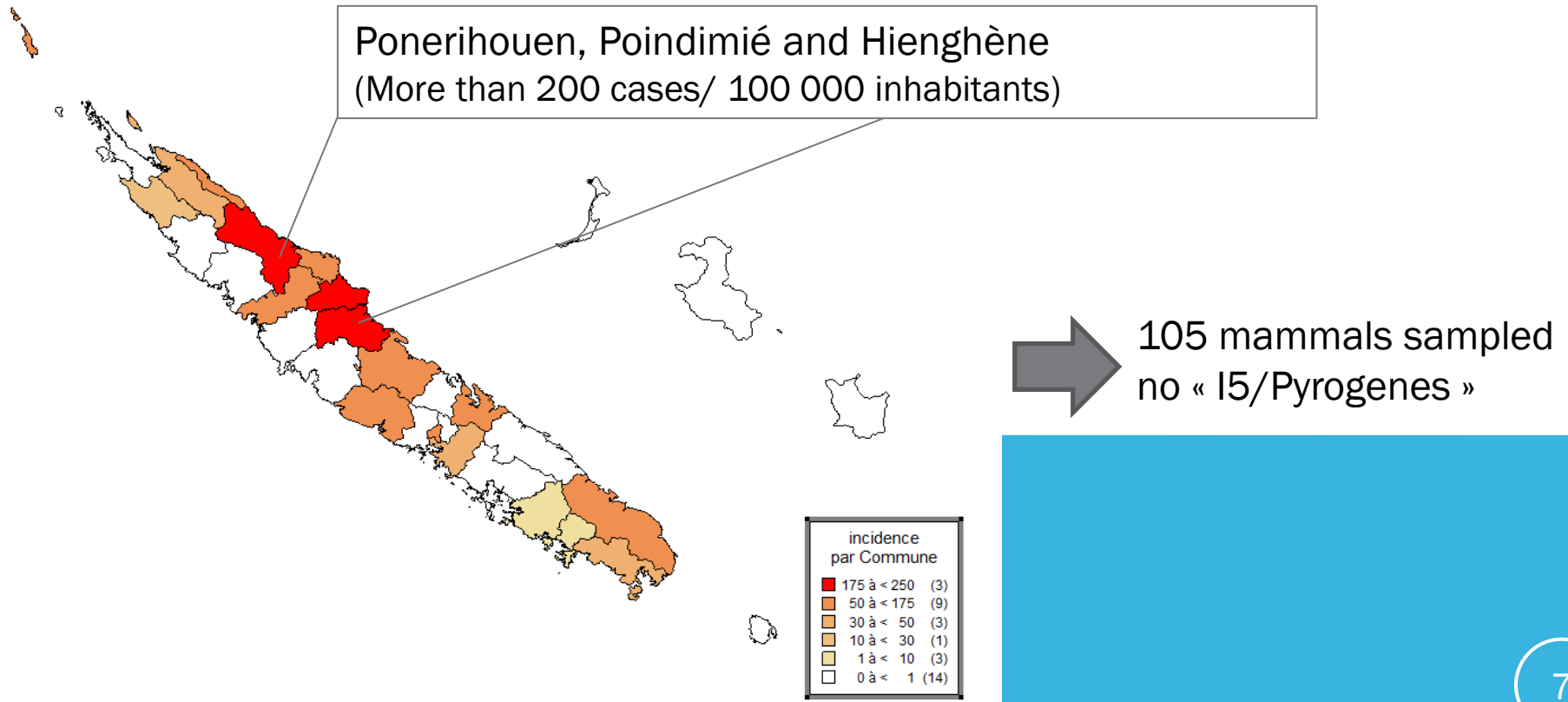
## PROSPECTIVE APPROACH

	Sample size	Positive	Negative	Prevalence (%)	95% CI	Genotypes
	5	0	5	0		
	109	24	85	<b>22.02</b>	[14.2-29.7]	(2 B1, <b>13 B2</b> , 3 I4, 6 I1) Hardjo-bovis
	150	8	142	<b>5.3</b>	[1.7-8.9]	( <b>5 I4</b> , 3 I1) Pomono
	22	0	7	0		
	11	0	11	0		
	91	4	87	<b>4.4</b>	[0.2-8.6]	(2 I1 et 2 I4)
	86	2	84	<b>2.3</b>	[0-5.4]	(1 I2, 1 I1)

# RETROSPECTIVE APPROACH

## Leptospirosis: notifiable disease

Investigation of high incidence areas for «I5» (2010-2012)



## SURVEILLANCE OF I5/PYROGENES HUMAN CASES

Investigation of animals around patient homes

1 case investigated since the beginning of 2013:

Tribe habitant

Samples from: farmed pigs, horses and dogs

Deer, pig and megabats from hunting

➔ Animal or environmental contamination during hunting?



# DISCUSSION/ PERSPECTIVES

## Prospective approach

Sampling efforts must be continued

15 maintained by isolated populations?

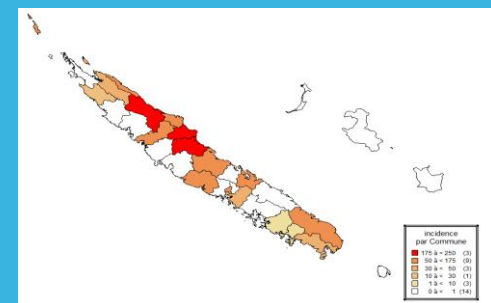
Chiroptera should be investigated

➔ Frequent interactions with humans (consumption)



## Retrospective approach

15 « Hotspot » identification ➔ Target sampling



# Surveillance of « I5 » human cases

Maintenance of surveillance efforts

Sampling in potential contamination area

(ex: hunting places, yam field...)

→ Improve field survey

I5 reservoir identification is a public health issue

80% cases in tribe inhabitants

→ study of human perceptions and practices: a KAP study?

# ACKNOWLEDGMENT

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