C1-1107

First Invasive Isolate of *N.meningitidis* (Nme) Showing Decreased Susceptibility to Ciprofloxacin (DSC) in Argentina (ARG)

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Emergence of *N. meningitidis* with Decreased Susceptibility to Ciprofloxacin (DSC)

	QRDR mutations *gyrA* gene
France (1999)	Asp95→Gly
Australia (2000)	Asp95→Asn
Spain (2003)	Thr91→Ile

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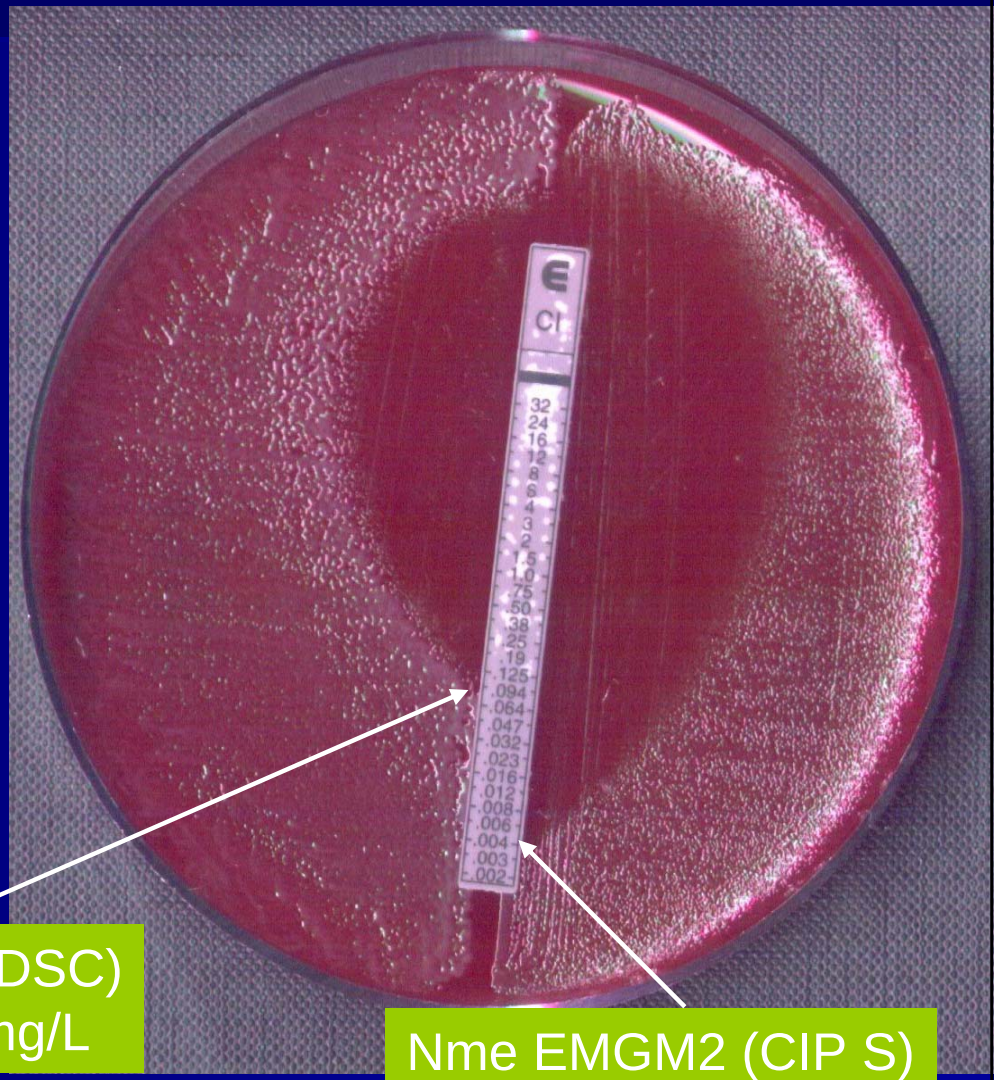
"National Surveillance Programme for Serogroup and Antimicrobial Resistance in *N. meningitidis*"

- National Reference Laboratory (1993 to date)
  - CIP MIC_{90} : 0.008 mg/L
  - Range: ≤ 0.001-0.015 mg/L

- 2002:
  First Nme with DSC in Argentina

Nme M5191
CIP MIC 0.12 mg/L



Objective

To report and characterize the first *N. meningitidis* isolate with Decreased Susceptibility to Ciprofloxacin (DSC) in Argentina

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Nme M5191: CIP MIC 0.12 mg/L

CASE REPORT

- CSF, 63-y.o woman
- Diabetes and chronical urinary tract infections
- She had been treated with several courses of antibiotics, including FQ
- Treatment: Ceftriaxone
- Throat swabs were not available
- Chemoprophylaxis in close contacts: Rifampin

Nme M5191: CIP MIC 0.12 mg/L

- Serogrup - serotype/serosubtype:
  (slide aglutination and latex)

Y:NT:P1.5

- MIC in µg/ml: Agar dilution (NCCLS)

PEN 0.03	AMP 0.06
CRO 0.001	RFA 0.008
CMP 0.5	TET 0.12

NAL 64 (R)

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Nme M5191: CIP MIC 0.12 mg/L

- Amplification and DNA sequencing of QRDR
  1) *gyr* A
  2) *par* C
  3) *gyr* B and *par* E

↓

NO MUTATIONS WERE DETECTED

Nme M5191: CIP MIC 0.12 mg/L

- MIC CIP and NAL with and without 6.25 µg/ml of Reserpin

30 times

256 times

	CIM (µg/ml)			
	CIP	**CIP + RES**	**NAL**	**NAL + RES**
M5191 (DSC)	0.12	0.004	64	0.25
EMGM-2*	0.004	0.004	0.5	0.25
EMGM-10*	0.004	0.004	0.5	0.25
EMGM-13*	0.004	0.004	0.5	0.25

* CIP susceptible Nme control strains (Inst. Carlos III, Spain)

Nme M5191: CIP MIC 0.12 µg/ml

- The isolate was sent to the “Reference Laboratory for Neisseria” , Instituto de Salud Carlos III, Madrid, Spain, for the molecular chracterization of the mechanism involved in DSC

1) It was confirmed the absence of mutations in QRDR of *gyr*A, *par*C, *gyr*B and *par*E genes

2) Deletion of more than 100 bp in *mtr*R gene of MTR-CDE efflux system

* Dr. Julio Vazquez (unpublished data)

Evaluation of Nalidixic acid (30 µg) and CIP (5 µg) disks to detect DSC in Nme

Nme	CIP		NAL	
	MIC µg/ml	Zones mm	MIC µg/ml	Zones mm
M5191 (DSC)	0.12	**31**	64	**7**
EMGM-2 *	0.004	42	0.5	**33**
EMGM-10 *	0.004	42	0.5	**34**
EMGM-13 *	0.004	38	0.5	**34**

NAL disk
30 µg

* CIP susceptible Nme control strains (Inst. Carlos III, Spain)

Summary

(*i*) We describe the emergence of Nme with DSC in Argentina

(*ii*) This is the first time for a clinical Nme isolate that, a mechanism NO RELATED to mutation in the QRDR of *DNA gyrase* or *topoisomerase IV* genes is associated with DSC

(*iii*) An efflux mechanism could be implicated

(*iv*) The nalidixic acid disk (30 µg) was a good detector of DSC in Nme 5191