

From Desert to Lab: Evaluating Camel Urine's Antibacterial Efficacy Against Carbapenem-Resistant Gram-Negative Bacilli

RESSMI Amina^{1*}, RAQRAQ Habiba¹, ANIBA Rafik¹, DIHMANE Asmaa¹, SORAA Nabila², BARGUIGUA Abouddihaj¹,

¹Laboratory of Biotechnology and Sustainable Development of Natural Resources, Life Sciences Department, Polydisciplinary Faculty, Sultan Moulay Slimane University, Beni Mellal 23023, Morocco.

²Laboratory of Microbiology, University Hospital Mohamed VI, Faculty of Medicine and Pharmacy, Cadi Ayyad University, Marrakech 40030, Morocco.

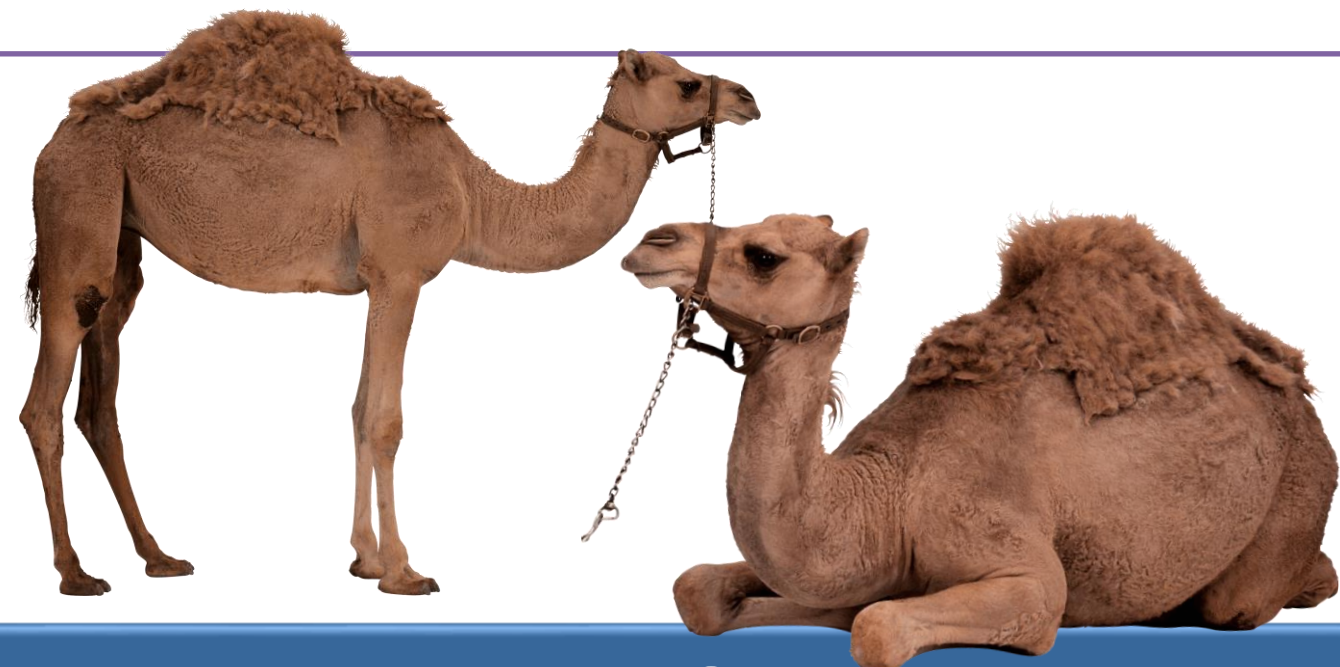
INTRODUCTION & AIM

Antimicrobial resistance

7 millions deaths/year
10 million deaths --- 2050
100 trillion dollars \$

Alternative agents/ therapeutic approaches

Camel's urine



METHOD

Morocco

* Aseptic techniques
* Sterile bottles

1 Collection of urine samples

2 Transportation to the laboratory

* Ice boxes
* Cold accumulators

3 Isolation of bacteria

4 Chemical analysis

* Identification
* Antibiogramm

5 Treatment of samples

* Agar well diffusion method

6 In vitro assesment of CU against MDR bacteria

RESULTS & DISCUSSION

1- Chemical analysis of camel's urine:

Variables	Na+/K+/Cl ⁻ (mmol/l)	Ketones	Glucose	Proteins (mg/dl)	pH	Feeding on Desert plants
Female	(730/400/750) ± (1.3/0.95/1.02)	-	-	++++1000 ± 0.0	9,0	Yes
Male	(330/400/650) ± (0.4/0.2/21)	-	-	+50 ± 0.0	6,0	Yes
Female Control	(400/370/460) ± (0.9/1.57/2.0)	-	-	+100 ± 0.0	8,0	No
Male Control	(247/350/500) ± (0.75/2.9/1.66)	-	-	+30 ± 0.0	6,0	No

2- Antimicrobial susceptibility testing:

Antibacterial activity of Camel's urine

Bacteria	G- ESBL	G- R colistin (mcr-1)	G- / NDM	G- /OXA 48	G- / VIM	G- ESBL/ CPE	E. coli ATCC	Feeding on Desert plants
Female	+++	++	+++	+++	+++	+++	+	Yes
Male	-	-	-	-	-	-	+	Yes
Female Control	-	-	-	-	-	-	-	No
Male Control	-	-	-	-	-	-	-	No

CPE: Carbapenemases producing Enterobacteriaceae / ESBL: Extended Spectrum Beta lactamases/ ATCC: American Type Culture Collection

CONCLUSION

Female camel's urine >>>> male camel's urine.



FUTURE WORK / REFERENCES

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