



Casal, Nicolau<sup>1,2</sup>, Manteca, Xavier<sup>2</sup>, Fàbrega, Emma<sup>1</sup>

<sup>1</sup>IRTA, Veïnat de Sies s/n 17121 Monells, Catalunya, <sup>2</sup>UAB, Veterinary Faculty, 08193 Bellaterra, Catalunya



International conference on pig welfare:  
Improving pig welfare –  
what are the ways forward?



## INTRODUCTION

Plants have been used since ancient times in medicine and in veterinary science as palliative or preventive treatments (e.g. astringent, sedative, anti-inflammatory, antiparasitic, blood stimulant, antiseptic, etc.). **Maypop** and **Valerian** have **sedative properties**.

Otherwise, **hair cortisol** analysis is thought to be a good non-invasive procedure to detect **chronic stress** since cortisol is incorporated and stored inside growing hair.



## MATERIAL AND METHODS

- Herbal compost\* (HC) → Maypop (*Passiflora incarnata*)  
→ Valerian (*Valeriana officinalis*)

\*Sedafit ESC, Phytosynthèse, Saint-Bonnet de Rochefort, France

- HC added to the food (powder, 200mg/1Kg). Ad libitum



- 56 males, 8 groups → 4 with herbal compost  
→ 4 without herbal compost

- 7 animals/pen → 2 m<sup>2</sup>/pig

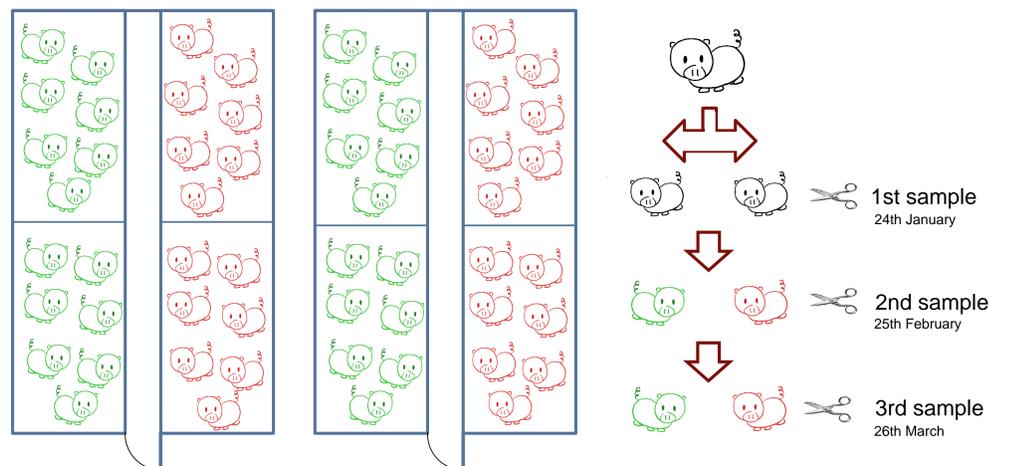
- Hair cortisol from lumbar region

- 24<sup>th</sup> January (day before adding HC)
- 25<sup>th</sup> February (1 month administration)
- 26<sup>th</sup> March (2 months administration)

- Saliva for cortisol analysis and hair comparison

## AIM

Determine whether phytoteraphy could be used to reduce stress in growing pigs

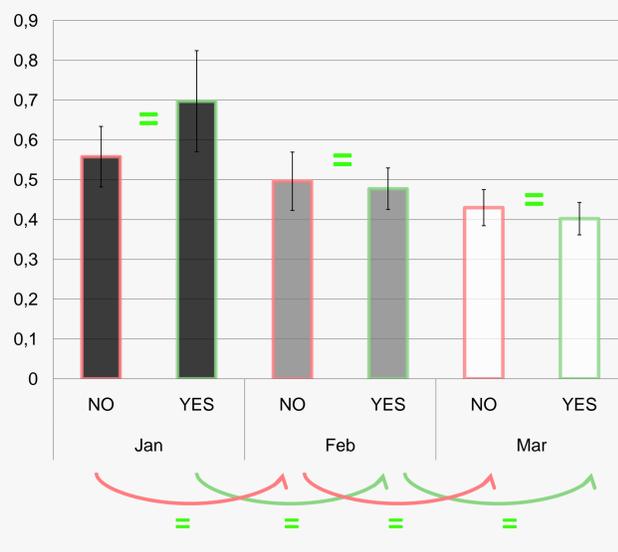


## RESULTS

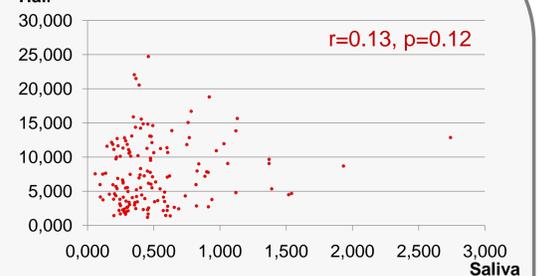
**Cortisol/Hair**



**Cortisol/Saliva**



**Saliva vs Hair**



Significant differences in hair cortisol levels were found between pigs supplemented with and without phytoteraphy after two months of administration, but no differences were detected in saliva levels. Hair and saliva cortisol levels were not correlated, probably because the levels in saliva can be detected after a few minutes, but it accumulates over days in hair.

Legend:  
□ No HC  
□ Yes HC  
■ January  
■ February  
■ March

## CONCLUSIONS

Valerian and maypop may decrease stress in growing pigs as assessed by hair cortisol if administered over a long period of time. However, further research is required to confirm these preliminary results