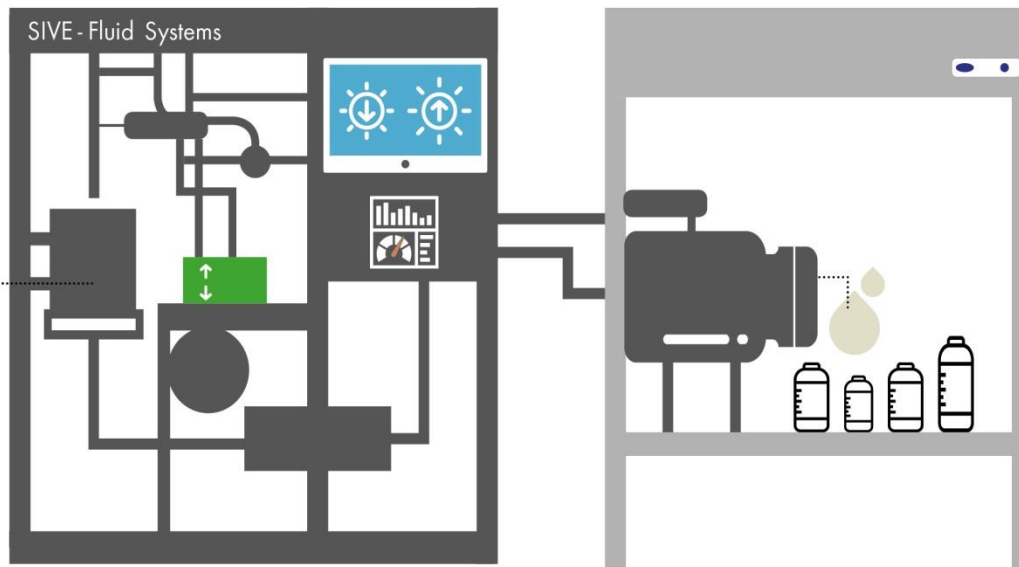
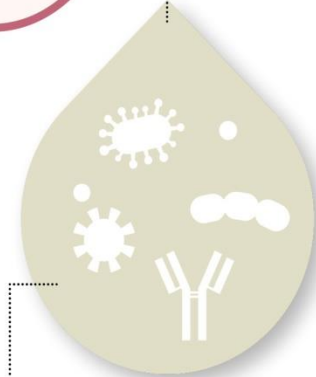




# CALIDAD DE LA LECHE DONADA DURANTE EL PROCESAMIENTO EN UN BANCO DE LECHE HUMANA. INNOVACIÓN EN LOS PROCEDIMIENTOS

**DIANA ESCUDER VIECO**

Dpto. Nutrición, Bromatología y Tecnología de los Alimentos  
Facultad de Veterinaria, UCM



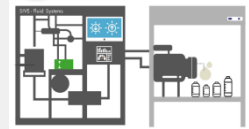
**Dra. Leónides Fernández Álvarez**

**Dra. Carmen Rosa Pallás Alonso**

**Dra. Irene Espinosa Martos**

**Madrid, 2017**

# PASTEURIZADOR HTST PARA LECHE HUMANA



10 L/h

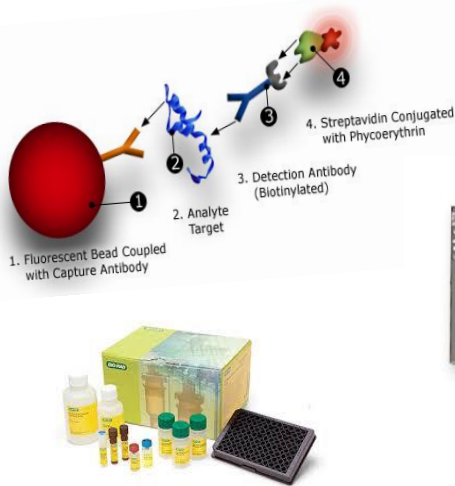
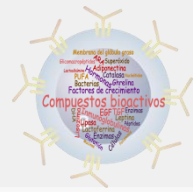


**PATENTADO**

P201531186

PCT\_ES2016\_070594





## Tecnología multiplex (Bio-Rad)



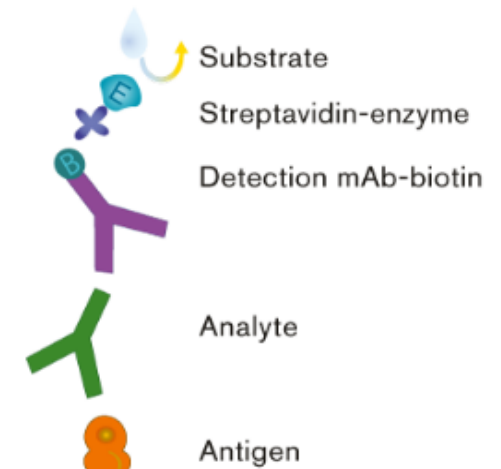
Inmunoglobulinas (Ig A, Ig G, Ig M)

Factores de crecimiento ( $TGF\beta_2$ )

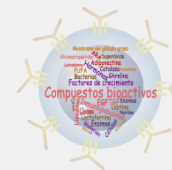
Hormonas (adiponectina, ghrelina, leptina)

## ELISA (Ray Biotech)

Factor de crecimiento epidérmico (EGF)



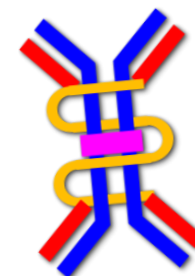
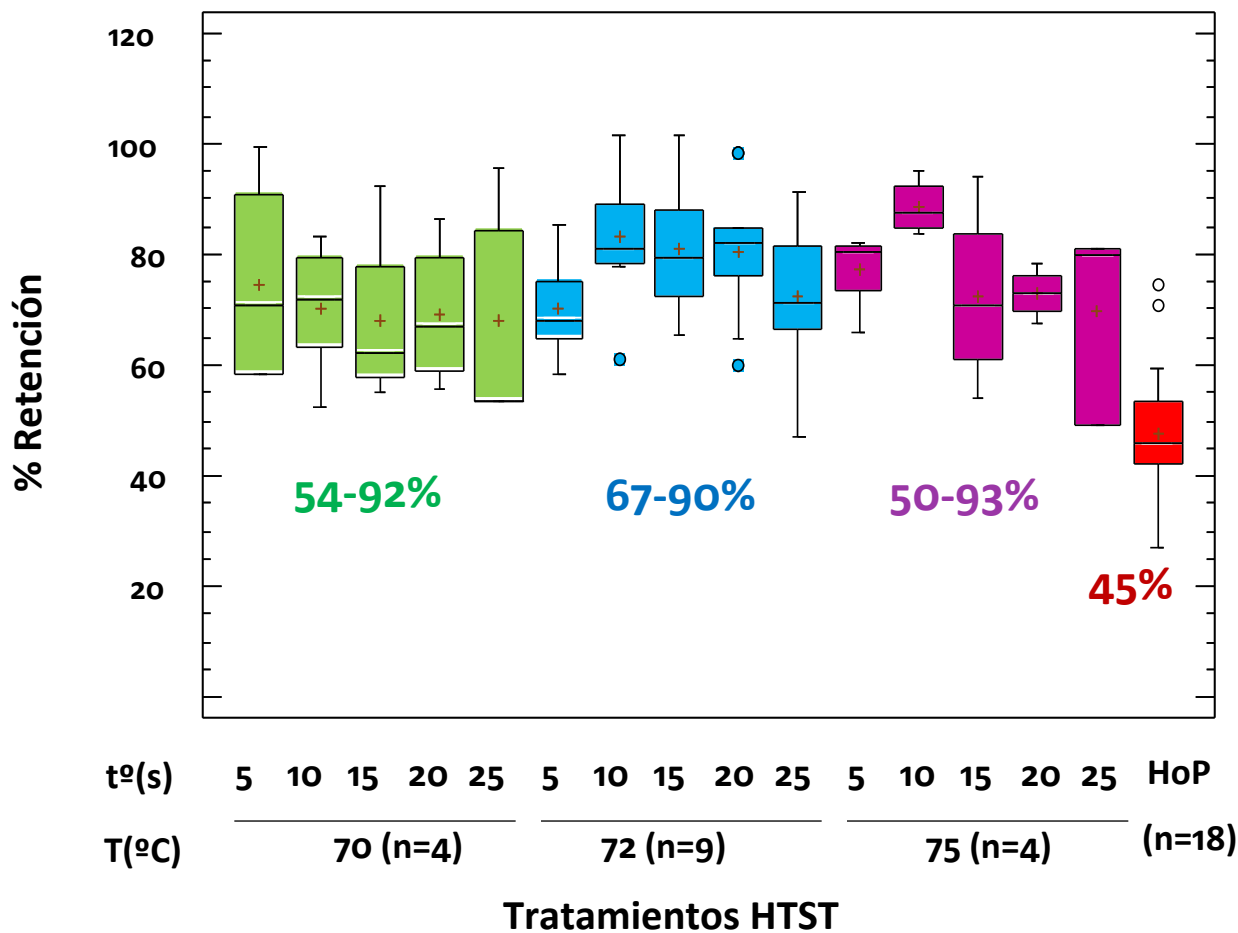
# RESULTADOS: INMUNOGLOBULINAS



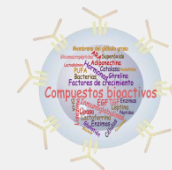
n=18

381,51 - 694,43 mg/L

## Inmunoglobulina A



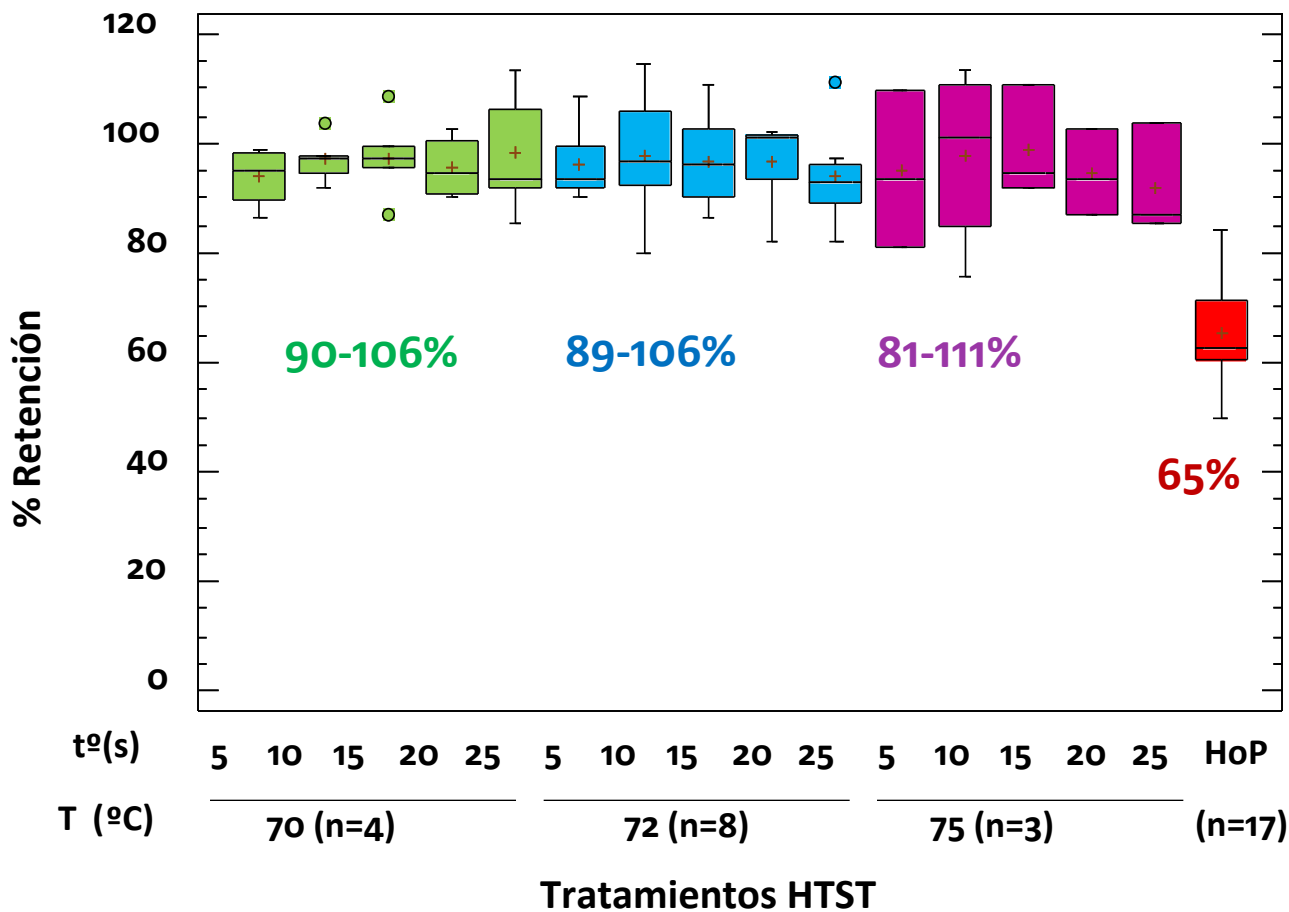
# RESULTADOS: INMUNOGLOBULINAS



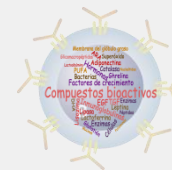
n=17

13,59 – 46,84 mg/L

## Inmunoglobulina G



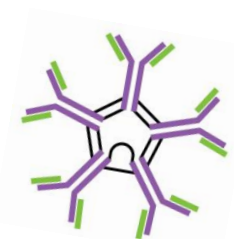
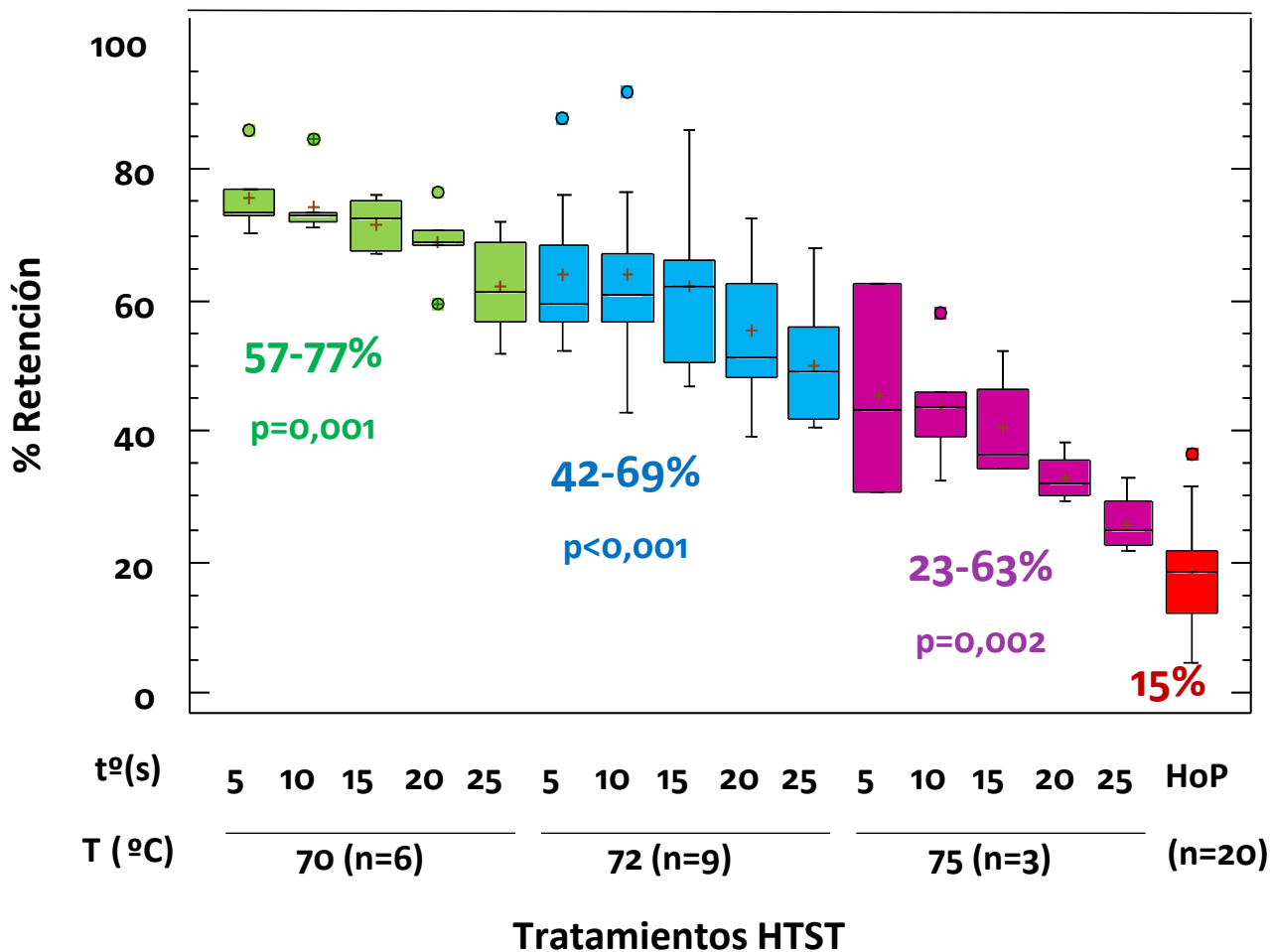
# RESULTADOS: INMUNOGLOBULINAS



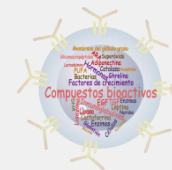
n=20

9,22 - 47,46 mg/L

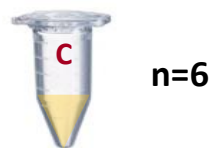
## Inmunoglobulina M



# RESULTADOS: FACTORES DE CRECIMIENTO

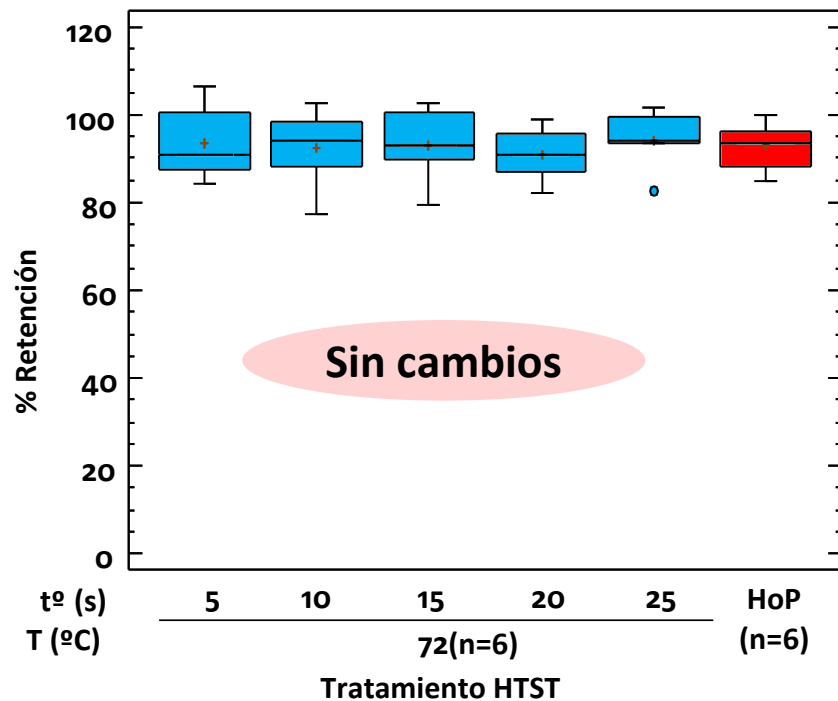


## Factor de crecimiento epidérmico



n=6

3,24 – 3,99 µg/L

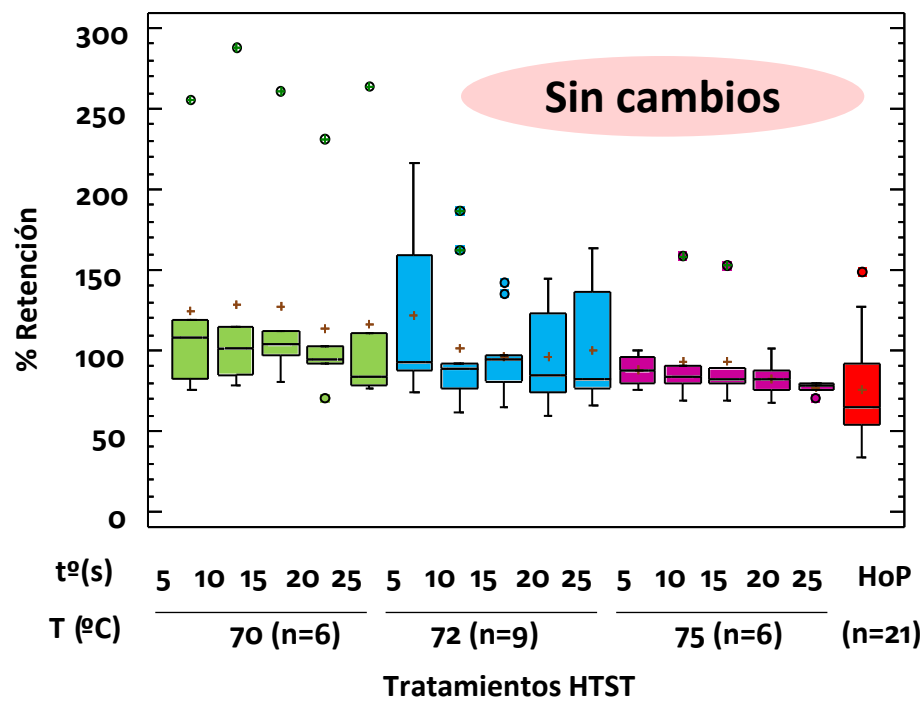


## Factor de crecimiento transformante $\beta_2$

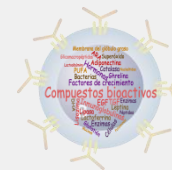


n=21

1,20 – 2,45 µg/L



# RESULTADOS: HORMONAS ESTIMULADORAS DEL APETITO



## Adiponectina



n=24

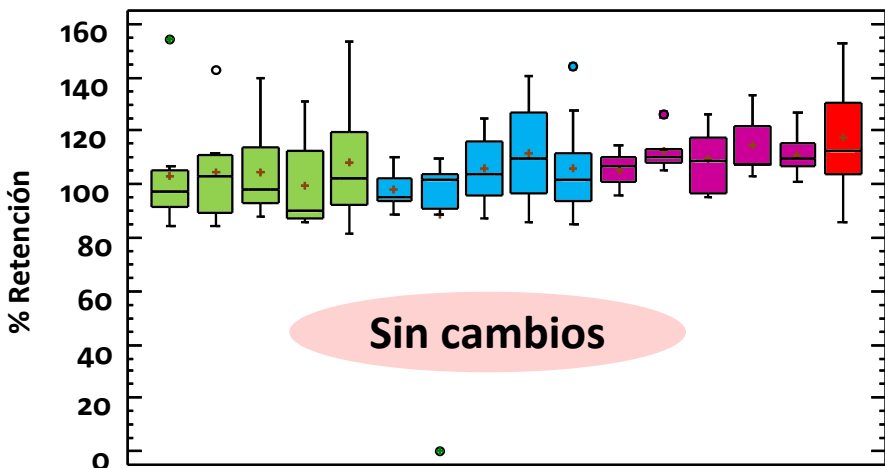
6,41 – 9,27 µg/L

## Ghrelina



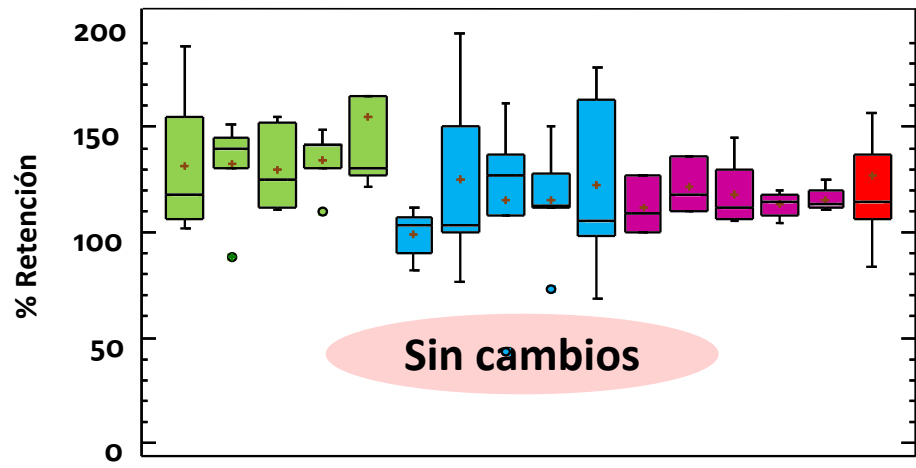
n=16

14,52 – 39,06 ng/L



tº(s)	5	10	15	20	25	5	10	15	20	25	5	10	15	20	25	HoP
T (ºC)	70 (n=8)					72 (n=9)					75 (n=7)					(n=24)

Tratamientos HTST

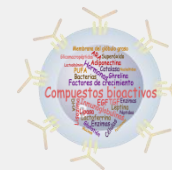


tº(s)	5	10	15	20	25	5	10	15	20	25	5	10	15	20	25	HoP
T (ºC)	70 (n=6)					72 (n=5)					75 (n=4)					(n=15)

Tratamientos HTST



# RESULTADOS: HORMONA INHIBIDORA DEL APETITO

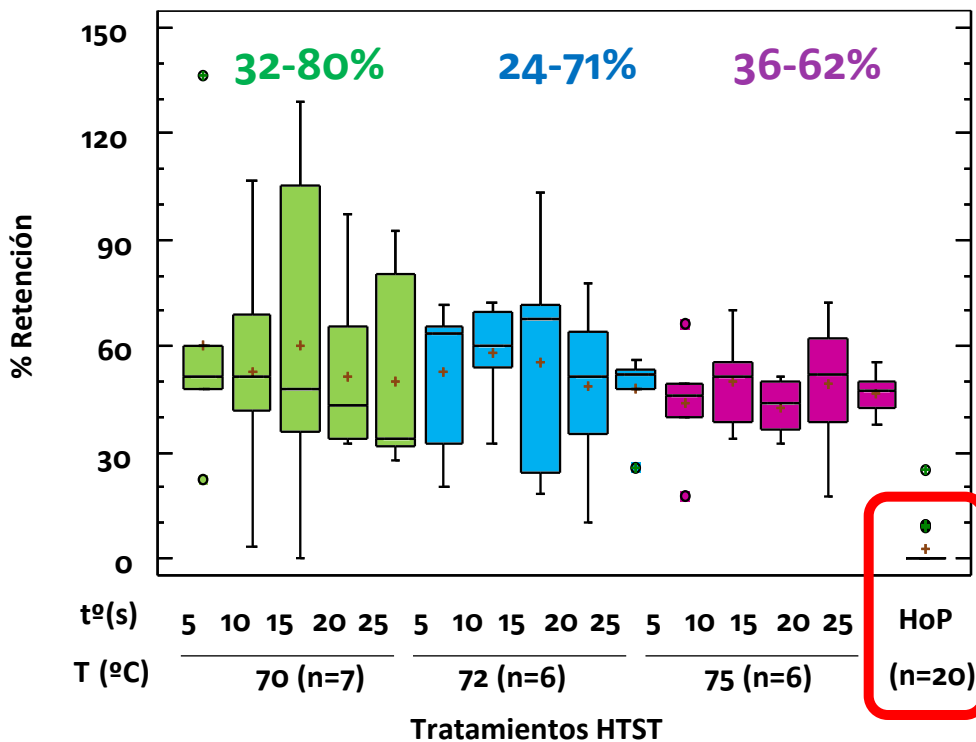


## Leptina

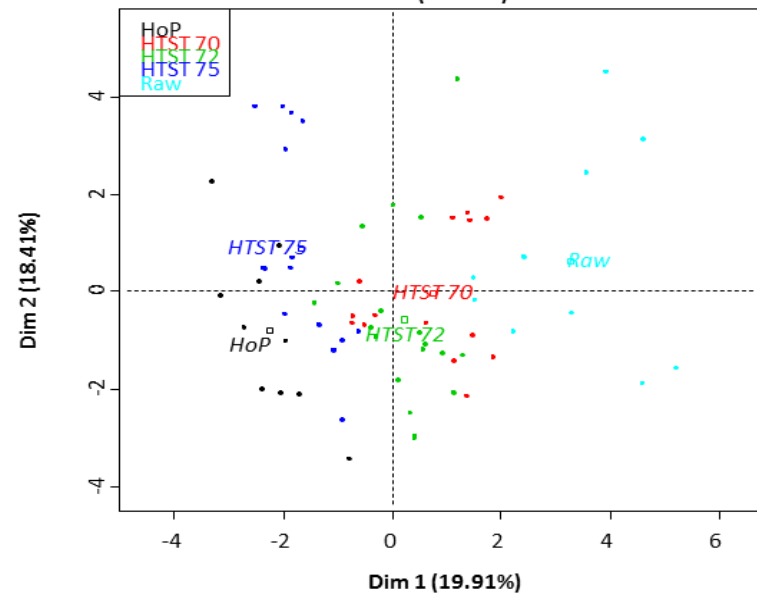
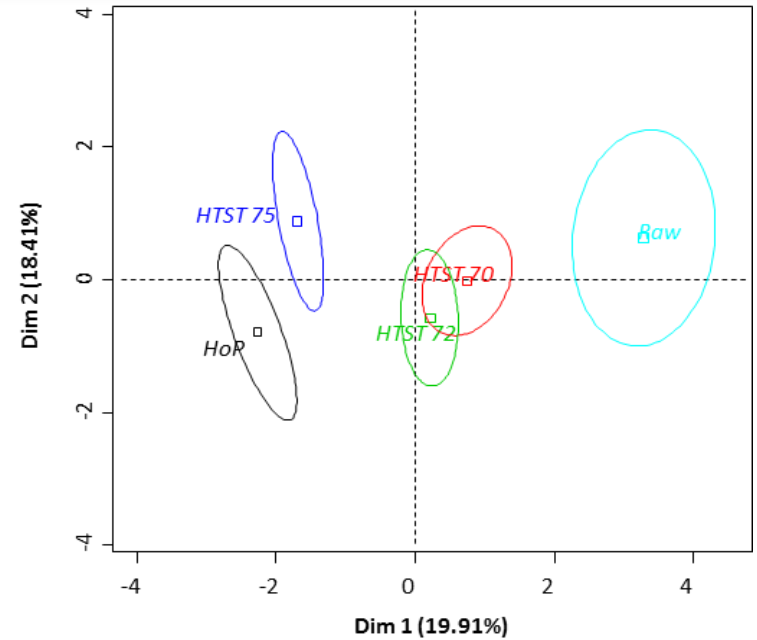
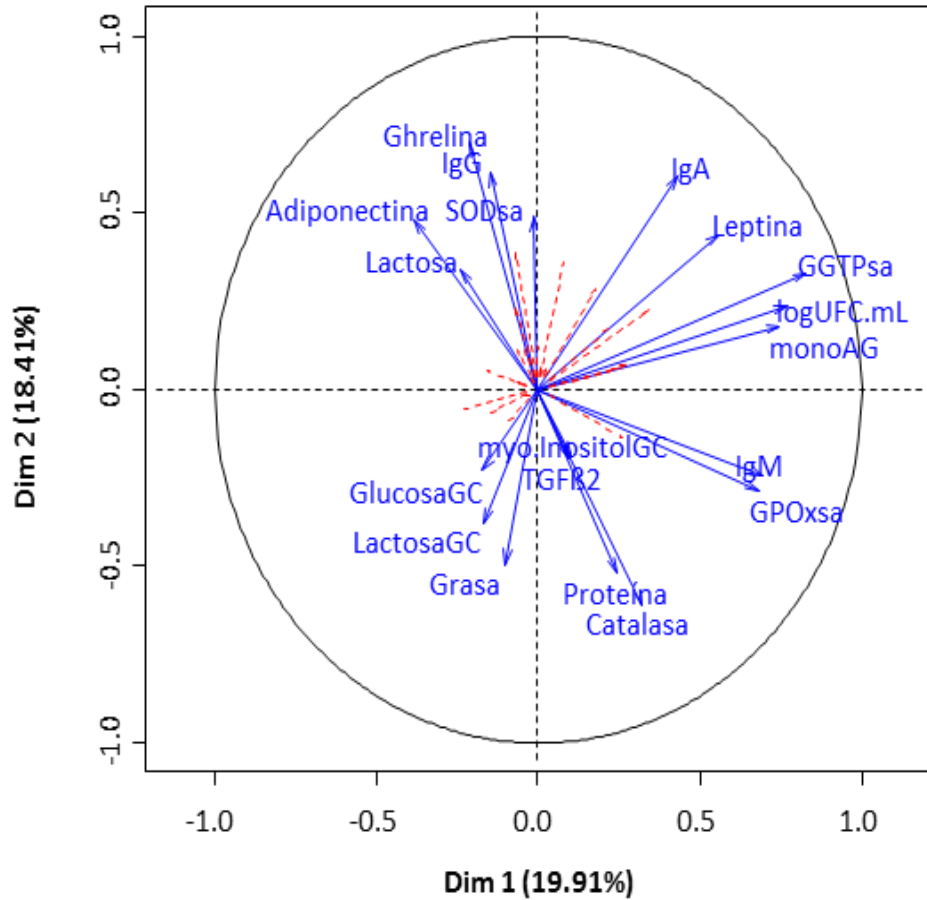


n=20

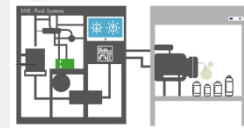
79,05 – 184,50 ng/L



# ANÁLISIS MULTIVARIADO



# APLICABILIDAD PRÁCTICA



BANCO REGIONAL  
DE LECHE MATERNA  
**ALADINA-MGU**  
Hospital 12 de Octubre

