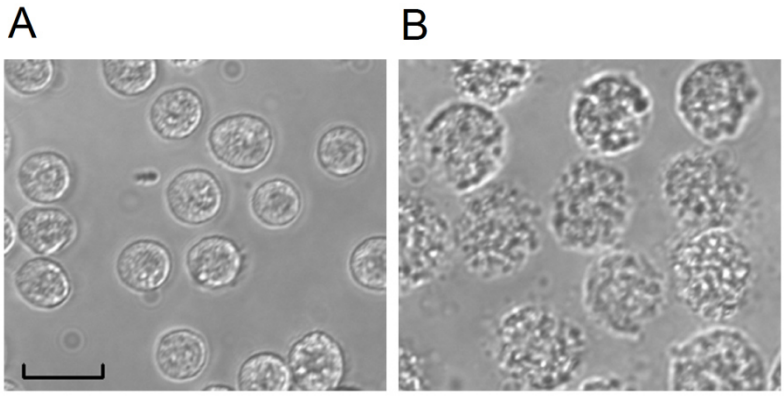
Supplementary Material

Mast Cell Changes the Phenotype of Microglia via Histamine and ATP

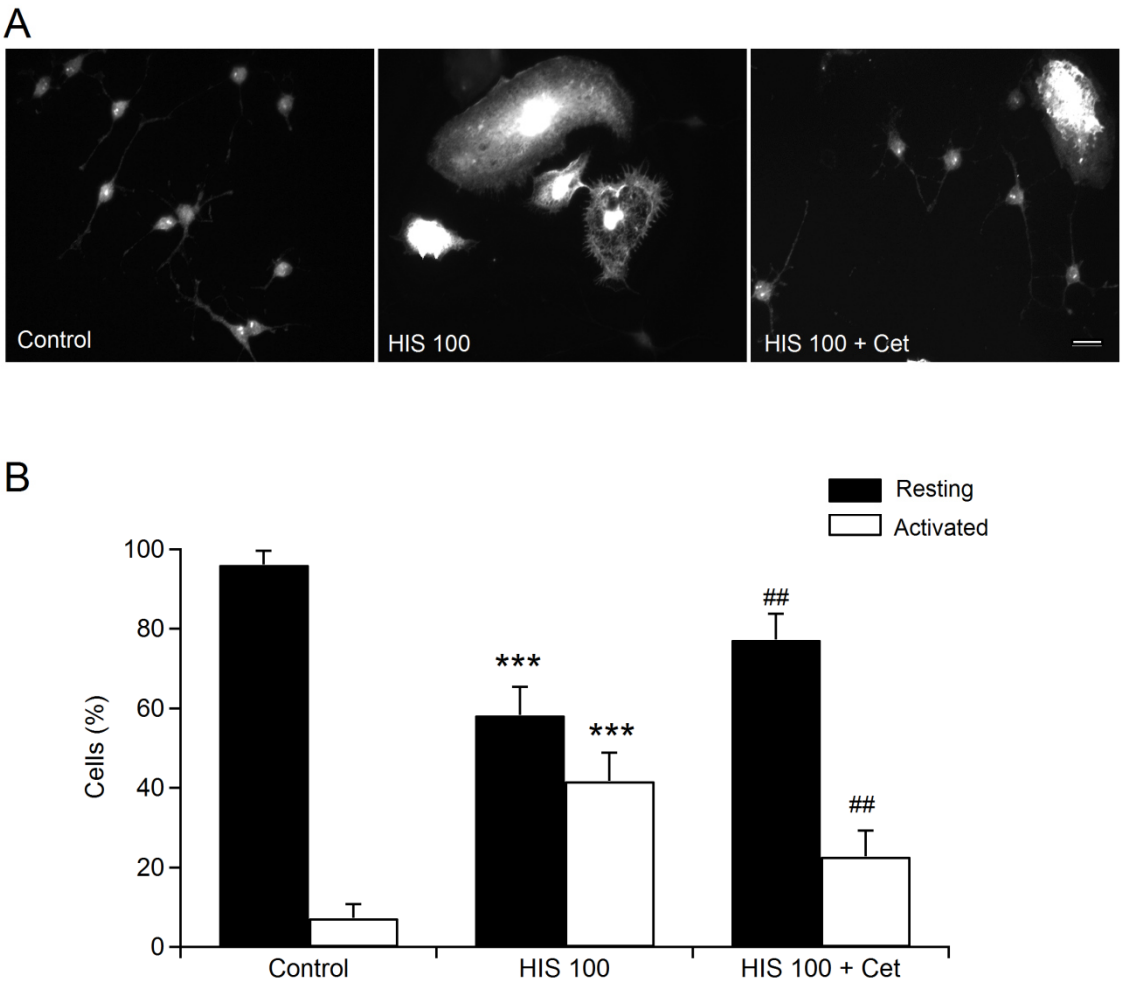
María Pilar Ramírez-Ponce[a] Alejandro Sola-García[a] Santiago Balseiro-Gómez[a,b]
María Dolores Maldonado[c] Jorge Acosta[a] Eva Alés[a] Juan Antonio Flores[a,c]

[a]Departamento de Fisiología Médica y Biofísica, Facultad de Medicina, Universidad de Sevilla, Sevilla, Spain, [b]Department of Neuroscience, Yale School of Medicine, New Haven, CT, USA, [c]Departamento de Bioquímica Médica y Biología Molecular e Inmunología, Facultad de Medicina, Universidad de Sevilla, Sevilla, Spain



Supplementary Figure 1. Representative images of cultured mast cells.

A) after incubation for 1h at 37ºC and B) 53ºC. Scale bar 10 µm.



Supplementary Figure 2. Histamine-induced phenotypic change: from resting to activated morphology. A) Typical morphology of cells observed in a non-tripsinized culture of microglia in control conditions (Control) (where most cells showed a ramified phenotype), after incubation with histamine 100 μM (HIS 100) and incubation with histamine 100 μM in the presence of the H1R antagonist, cetirizine (HIS 100 + Cet) for 48 h. B) Percentage of resting and activated cells in control, HIS 100 and HIS 100 + Cet. Statistically significant from control cells (***$p<0.001$). Statistically significant from histamine-treated cells ($^{\#\#}p<0.01$), using the Mann-Whitney Rank Sum test.

Supplementary Table 1. Cytosolic calcium signals values in microglia under treatment with HRs antagonists

Treatments	$[Ca^{2+}]_I$ Peak (F360/F380)	AUC
Histamine (n = 66)	0.35 ± 0.01	3.40 ± 0.23
Histamine + Ceterizine (n = 74)	No response	No response
Histamine + Ranitidine(n = 32)	0.38 ± 0.02	3.68 ± 0.28
Histamine + Carcinine (n = 28)	0.38 ± 0.02	3.68 ± 0.32
Histamine + A943931 (n = 44)	0.34 ± 0.01	3.65 ± 0.24