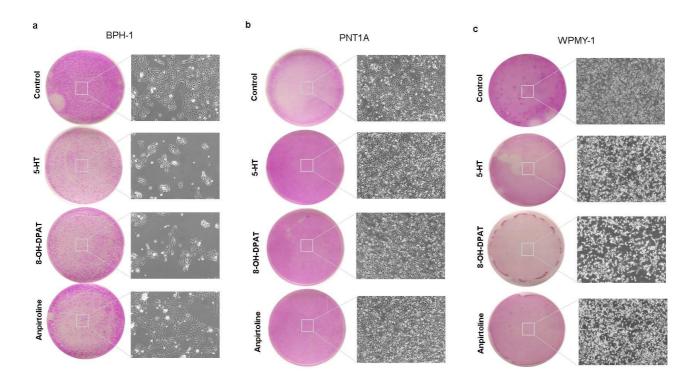
## Serotonin regulates prostate growth through androgen receptor modulation

Emanuel Carvalho-Dias<sup>1,2,3\*</sup>, Alice Miranda<sup>1,2</sup>, Olga Martinho<sup>1,2</sup>, Paulo Mota<sup>1,2,3</sup>, Ângela Costa<sup>1,2</sup>, Cristina Nogueira-Silva<sup>1,2,4</sup>, Rute S Moura<sup>1,2</sup>, Natalia Alenina<sup>5</sup>, Michael Bader<sup>5</sup>, Riccardo Autorino<sup>1,2</sup>, Estêvão Lima<sup>1,2,3</sup>, Jorge Correia-Pinto<sup>1,2,6</sup>.

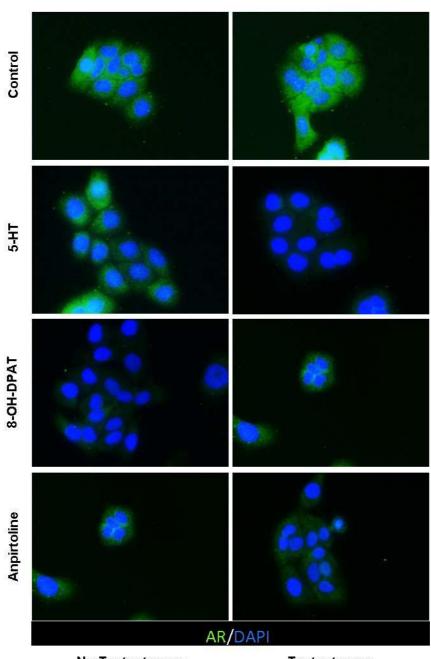
## **Supplementary Figure 1**



**Supplementary Figure 1.** Effect of 5-HT, *5-Htr1a* specific agonist and *5-Htr1b* specific agonist on cell viability and morphology of human prostatic cells treated with testosterone. Effect of 5-HT, *5-Htr1a* specific agonist and *5-Htr1b* specific agonist on cell viability and morphology after 72 hours of treatment in BPH-1 (a), PNT1A (b) and WPMY-1 cells (c). Representative example of three independent experiments, 1 field of Microscope, 400X.

## **Supplementary Figure 2**



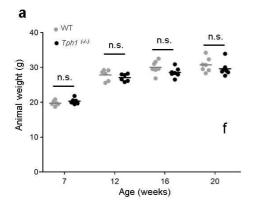


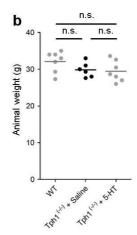
No Testosterone

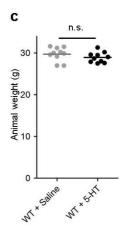
Testosterone

**Supplementary Figure 2.** Effect of 5-HT, *5-Htr1a* specific agonist and *5-Htr1b* specific agonist on AR expression in BPH-1 cells. Immunofluorescence analysis of AR expression after 5-HT, 8-OH-DPAT and Anpirtoline treatment in medium conditions without and with testosterone supplementation. AR, androgen receptor; 5-HT, serotonin.

## **Supplementary Figure 3**







**Supplementary Figure 3.** Genetic deletion of Tph1 and 5-HT treatment does not affect animal weight. **(a)** Weight of wild-type and  $Tph1^{-/-}$  mice at different ages. **(b)** Weight of wild-type,  $Tph1^{-/-}$  treated with Saline and  $Tph1^{-/-}$  mice treated with 5-HT during 10 consecutive days **(c)** Weight of wild-type treated with Saline and wild-type mice treated with 5-HT during 10 consecutive days. n.s., non-significant.