
P125. BISPHENOL A LEADS TO NECROPTOSIS IN SH-SY5Y NEUROBLASTOMA CELLS

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Bisphenol-A is a extensively used phenolic chemical in the production of polycarbonate plastic and epoxy resins. BPA could strip from water pipes, food and beverage containers, eyeglasses lenses, dental monomers. In this way general population is continually and unavoidably exposed to BPA from several sources.

We have previously reported that low dose BPA induce cell death in SH-SY5Y cells. In this study we aimed to examine necroptotic effects of BPA in SH-SY5Y cells. SH-SY5Y cells were seeded at 300.000 cells per well in 6-well plates and cultured in DMEM at 37°C with 5% CO₂ and treated with 1 nM of BPA and 50 µM Necrostatin 1(RIPK1 inhibitor) dissolved in DMSO. After 48 hours, samples were pooled then washed with PBS. A 100 µL aliquot of cells from each sample was centrifuged at 12000 g, +4 °C for 2 minutes and resuspended in 100 µL annexin binding buffer added to 5 µL Annexin V. Then, samples were centrifuged and resuspended again in 100 µL of the same buffer and added with 1 µL PI at room temperature protected from light and analysed at Tali® Image-Based Cytometer. Our results suggest that 1 nM BPA leads to necrosis in SH-SY5Y cells at 48 hours. Necrostatin-1 is also used to indicate whether BPA induced necrosis in neuroblastoma cells is programmed. Treatment with Nec-1 significantly switched necrotic cell death to apoptotic. Consequently BPA induces RIPK-1 dependent necroptosis of SH-SY5Y cells and has a important role in the initiation of necrosis.

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