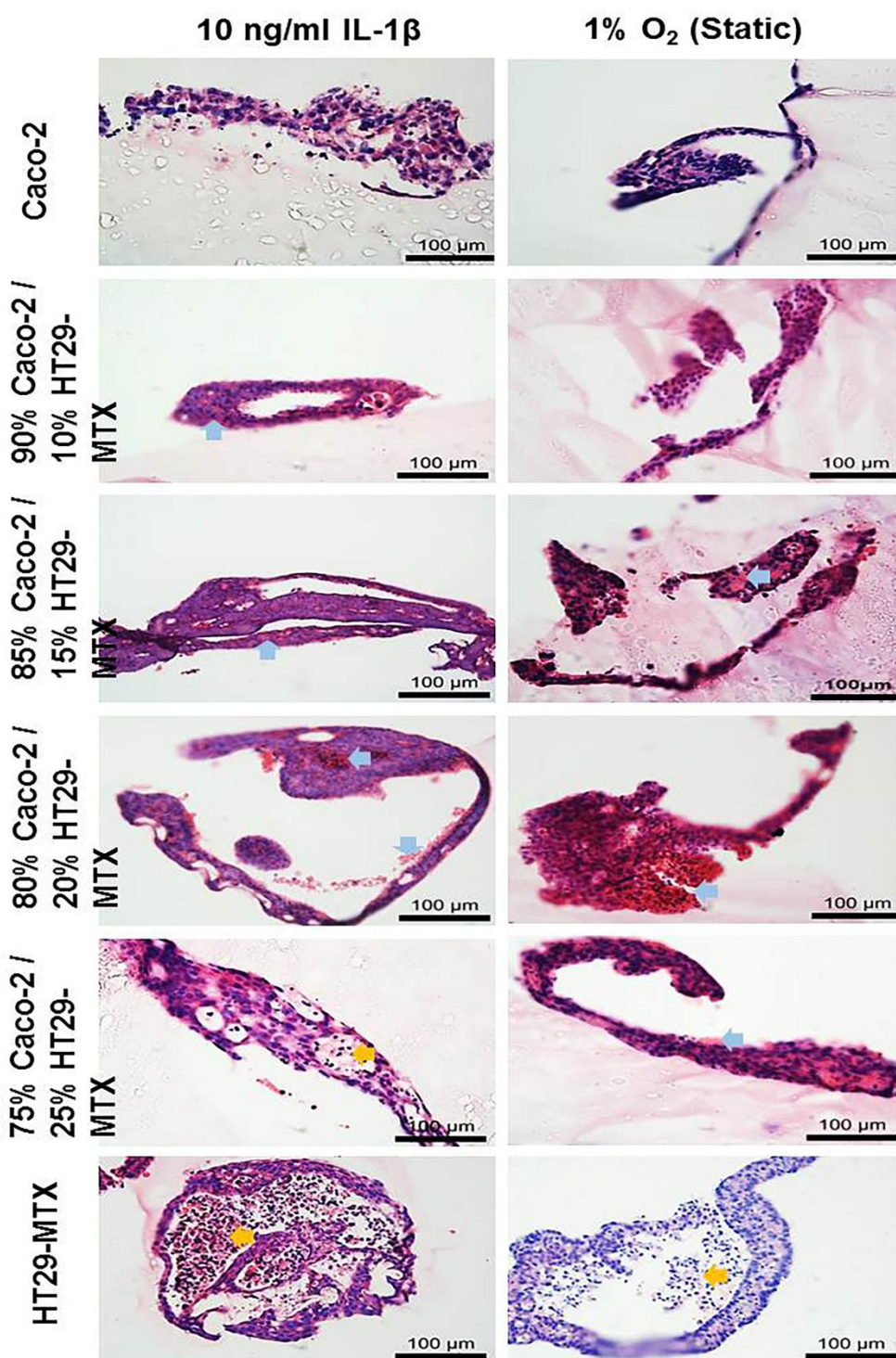


# **Long-term in vitro 3D hydrogel co-culture model of inflammatory bowel disease.**

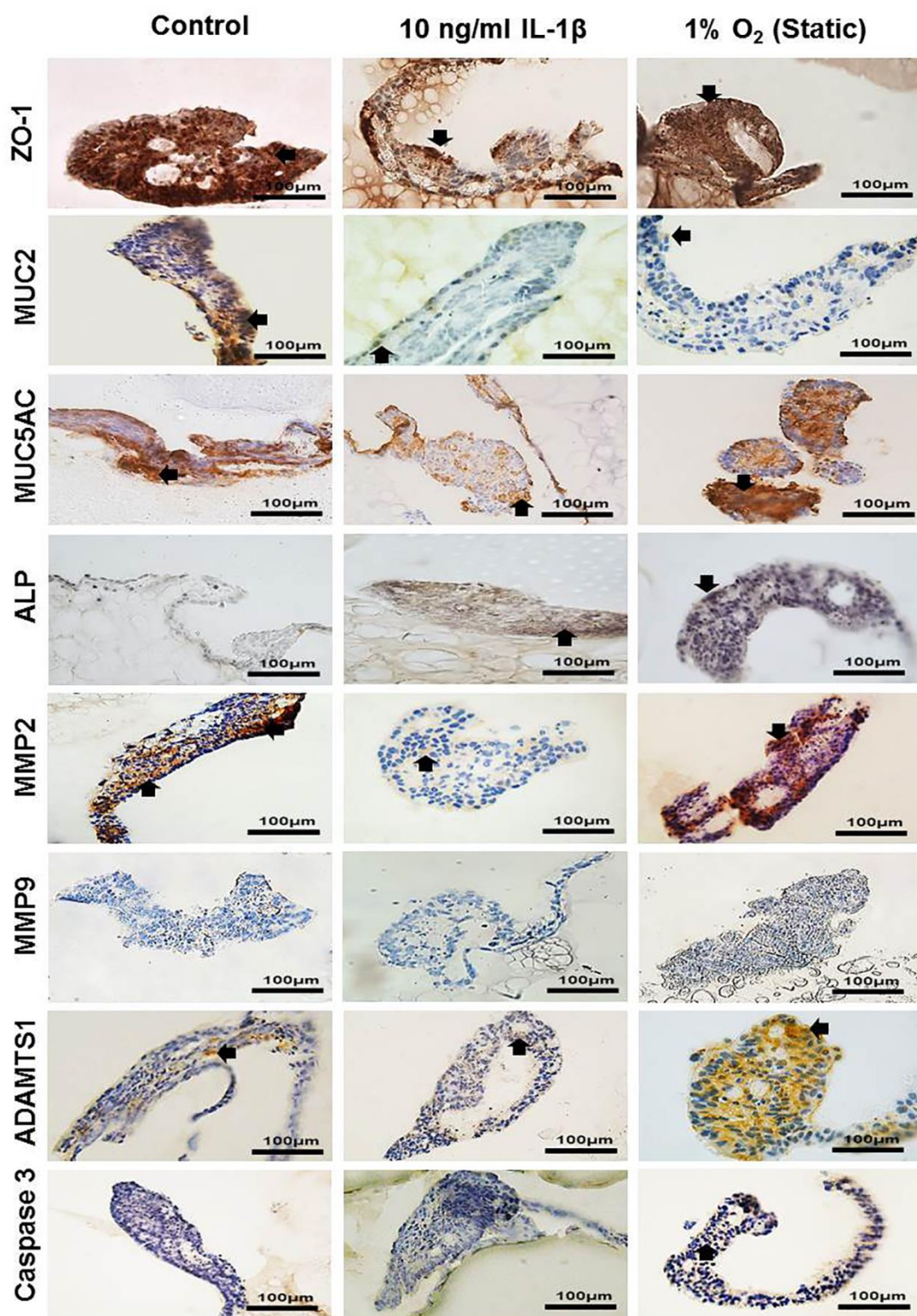
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Supplementary Figures

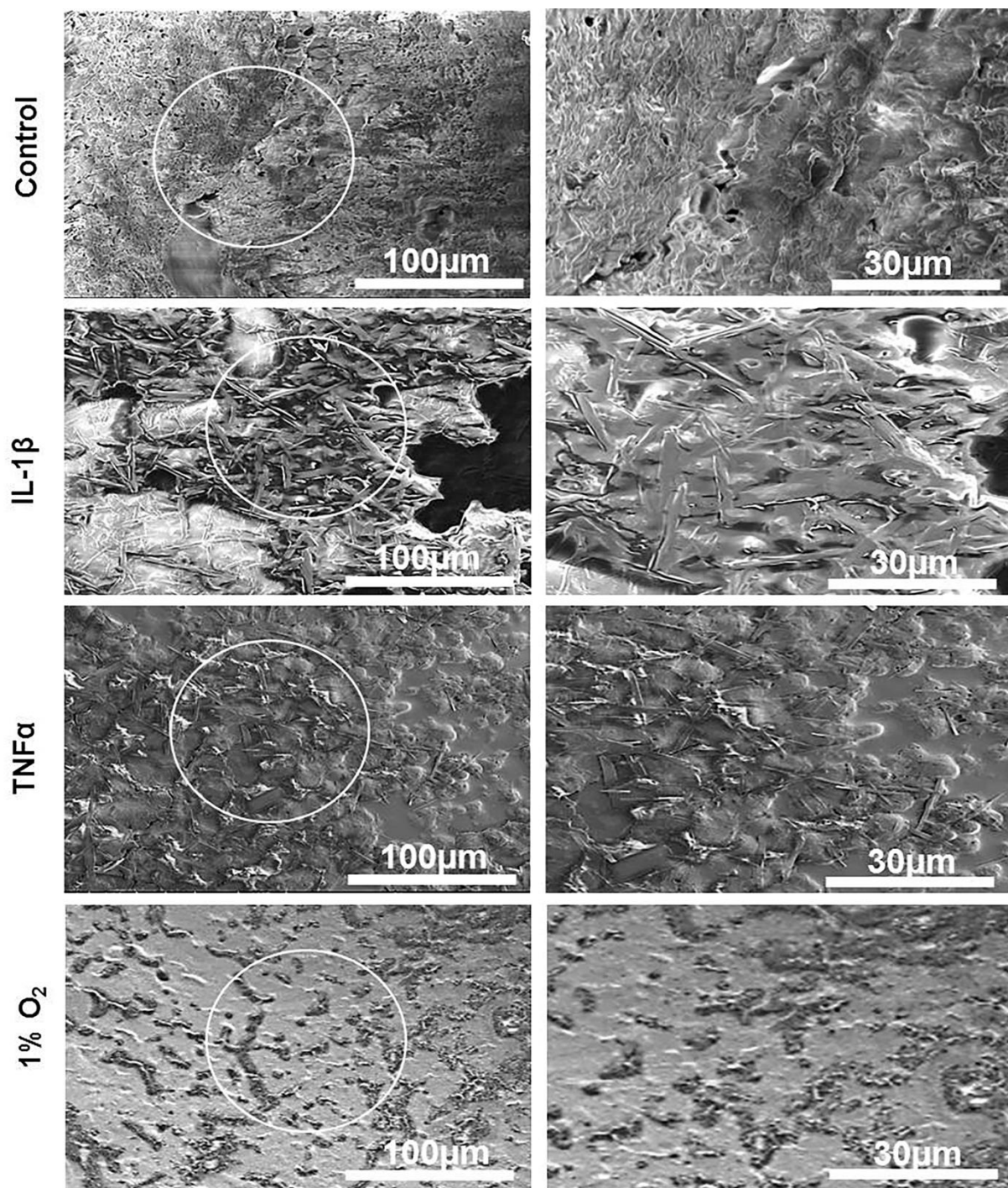


**Supplementary Fig. 1. Morphology of monocultures and co-cultures of Caco-2 and HT29-MTX cells at different percentages layered on L-pNIPAM hydrogel scaffolds under dynamic culture conditions for 6 weeks and then treated with 10ng/ml IL-1 $\beta$  for 1 week under dynamic culture conditions or hypoxic at 1% O<sub>2</sub> for 1 week under static culture conditions stained with H&E, blue arrows indicate debris cells, yellow arrows indicate dead cells. Scale bar = 100 $\mu$ m**





**Supplementary Fig. 2.** Immunopositivity (brown) of co-culture Caco-2 and HT29-MTX cells at percentages of 75% Caco-2 / 25% HT29-MTX layered on L-pNIPAM hydrogel scaffolds following 7 weeks as control or for 6 weeks and then treated with 10ng/ml IL-1 $\beta$  for 1 week under dynamic culture conditions or hypoxic at 1% O $_2$  for 1 week under static culture conditions. Cell nuclei were stained with haematoxylin (blue). black arrows showing positively stained cells. Scale bar = 100 $\mu$ m



**Supplementary Fig. 3. Scanning electron micrographs of long term co-culture Caco-2 and HT29-MTX cells at percentages 75% Caco-2 / 25% HT29-MTX cells layered on L-pNIPAM hydrogel scaffolds under dynamic culture conditions following 12 weeks as control or for 11 weeks and then treated with 10ng/ml IL-1 $\beta$  or 10ng/ml TNF $\alpha$  for 1 week under dynamic culture conditions or hypoxic at 1% O $_2$  for 1 week under static culture conditions. Scale bar =100 $\mu$ m, 30 $\mu$ m.**