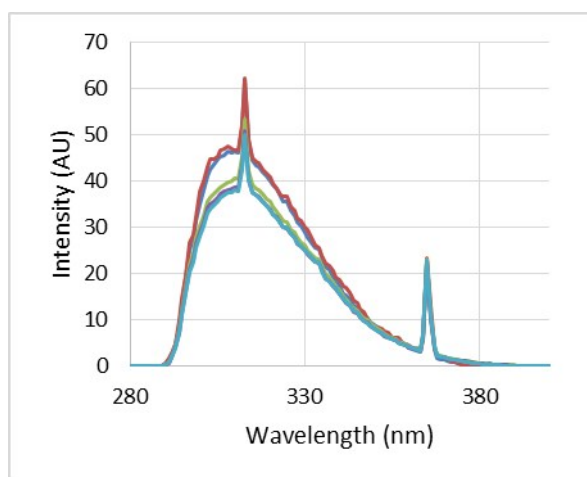


## Supporting Information

Figure S1 and Table S4



**Figure S1.** Emission spectra of the lamp used to provide UVB radiation (Spectroline XX15F/B lamp, peak at 312 nm). The different colours correspond to the measurements performed in the different days.

**Table S4.** Summary of main biological processes/pathways and respective transcripts affected by the several TiO<sub>2</sub> materials. ↑: up-regulated; ↓: down-regulated.

TiO <sub>2</sub>	<i>PROCESS / PATHWAY: Transcripts</i>	
	No-UV	UV
all	<i>CELL ADHESION MOLECULES - CAMs</i>	
	↑GlgI; ↑NCAM	↑fascilin ii
TiO <sub>2</sub>	<i>NEUROTRANSMISSION</i>	
	<i>DOPAMINERGIC SYNAPSE</i>	<i>GLUTAMATERGIC SYNAPSE</i>

	↑kinesin heavy chain	↑iGlu subunit
	<b>CELLULAR RESPONSE TO ROS</b> ↓PRDX5	<b>pancreatic secretion, protein digestion &amp; absorption</b> ↑serine proteinase; ↑fibrinolytic enzyme
	<b>HISTONE H4 ACETYLATION</b> ↓SCP	<b>PROTEOLYSIS</b> ↑serine proteinase; ↑ela1; ↑Casp4; ↑fibrinolytic enz.
	-	<b>LYSOSOME</b> : ↑Ctsb
<b>Bulk TiO<sub>2</sub></b>	<b>DNA DAMAGE (nucleotide excision repair)</b> ↑Ercc4	-
	<b>ENERGY METABOLISM</b>	
	↓ G6PI; ↓PGM; ↓PGD; ↓ACO2	↑GMDS; ↑LPH; ↑GAPDH; ↑PEPCK
	<b>NUCLEOTIDE METABOLISM</b> ↓TXNRD2; ↓DPD; ↓RRM1	<b>RESPONSE TO OXIDATIVE STRESS</b> ↑PRDX 6; ↑PHGPx; ↑NDUFS2
<b>NM 103</b>	<b>DNA REPAIR</b> ↓exonuclease 1; ↓RPS27L; ↓Psm4; ↓UBE2N	<b>Ca SIGNALING</b> ↑ Ca-transporting ATPases
	<b>APOPTOTIC SIGNALLING PATHWAY</b> ↓HTRA2; ↓RPS27L; ↓cullin 2; ↓MBD4	-
	<b>TRANSCRIPTION and TRANSLATION</b> ↑Maf1 homolog; ↓DDX39; ↓U2AF1; ↓PSMG2	-
	<b>ENERGY METABOLISM</b>	
	↓ G6PI; ↓PGM; ↓PGD; ↓ACO2	↑GMDS; ↑LPH; ↑GAPDH; ↑PEPCK
	<b>NUCLEOTIDE METABOLISM</b> ↓TXNRD2; ↓DPD; ↓RRM1	<b>RESPONSE TO OXIDATIVE STRESS</b> ↑PRDX 6; ↑PHGPx; ↑NDUFS2
<b>NM 104</b>	<b>DNA REPAIR</b> ↓exonuclease 1; ↓RPS27L; ↓Psm4; ↓UBE2N	<b>Ca SIGNALING</b> ↑ Ca-transporting ATPases
	<b>APOPTOTIC SIGNALLING PATHWAY</b> ↓HTRA2; ↓RPS27L; ↓cullin 2; ↓MBD4	<b>DNA DAMAGE CHECKPOINT</b> ↓CHEK1; ↓RFWD3
	<b>SENSORY PERCEPTION</b> ↑cadherin 23;	<b>REPRODUCTION:</b> ↓IGF2BP; ↓HMG-CoA

	↑myosin vii	reductase; ↓CHEK1; ↓serine threonine kinase
	<b>ENERGY METABOLISM</b>	
	↓ G6PI; ↓PGM; ↓PGD; ↓ACO2	↑GMDS; ↑LPH; ↑GAPDH; ↑PEPCK
	<b>NUCLEOTIDE METABOLISM</b> ↓TXNRD2; ↓DPD; ↓RRM1	<b>RESPONSE TO OXIDATIVE STRESS</b> ↑PRDX 6; ↑PHGPx; ↑NDUFS2
	<b>DNA REPAIR</b> ↓exonuclease 1; ↓RPS27L; ↓Psm4; ↓UBE2N	<b>Ca SIGNALING</b> ↑ Ca-transporting ATPases
<b>NM 105</b>	<b>APOPTOTIC SIGNALLING PATHWAY</b> ↓HTRA2; ↓RPS27L; ↓cullin 2; ↓MBD4	<b>SUPEROXIDE ANION GENERATION</b> ↑SOD; ↑CYBB
	<b>DEVELOPMENTAL PROCESSES</b> ↓lysozyme; ↓PRMT1; ↓histone; ↓E2	-
	<b>Ca SIGNALING</b> ↓ Ca transporting ATPases	-
	<b>GYCEROLIPID METABOLISM</b> ↑glycerol kinase; ↑GPAT3; ↑AGPAT9	-