Electronic Supplementary Information for the manuscript:

# *In Vitro* Toxicity of Carbon Nanotube: a Systematic Review

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**Contents**

**Table S1. Manufacturers of CNTs applied for toxicity *in vitro* tests.**

| Company, Location | Substrate | Dispersion |
|---|---|---|
| Applied Carbon Nano Technology Co. Ltd., Rep of Korea | - | 1 |
| Applied Sciences Inc., USA | 2–4 | 5 |
| Bayer Technology Service GmbH, Germany | - | 6, 7 |
| Bussan Nanotech Research Institute Inc. (XNRI), Japan | - | 8–10 |
| Bucky Inc., USA | - | 11 |
| CarboLex Inc., USA | 12, 13 | 14–16 |
| Carbon Nanotechnologies Inc., USA | 17–19 | 20–29 |
| Carbon Solutions Inc., USA | 30–34 | |
| Cheap Tubes Inc., USA | - | 35–41 |
| Chengdu Organic Chemicals Co. Ltd., China | - | 42 |
| CorMedix Inc. France | - | 43 |
| HeJi Inc. China | - | 44–47 |
| Helix Material Solutions Inc., USA | - | 48 |
| Hodogaya Chemical Co. Ltd., Japan | - | 49 |
| JRC Nanomaterials Repository, EU | - | 50 |
| Mitsui & Co. Ltd., Japan | - | 9, 51, 52 |
| MK Impex Corp., Canada | - | 53 |
| Nanocyl SA., Belgium | - | 54–56 |
| NanoLab Inc., USA | 57–61 | 45, 62, 63 |

| | | |
|---|---|---|
| Nanoledge Inc., Canada | 64 | 65 |
| Nanostructured and Amorphous Material (NanoAmor) Inc., USA | 66, 67 | 68–73 |
| NanoTexLab, USA | - | 74 |
| Nanothinx S.A., Greece | - | 75–80 |
| NEC Corp., Japan | - | 81 |
| Hanwha Nanotech Corp., Korea | - | 82, 83 |
| NASA-JSC, USA | - | 84 |
| IIJIN Diamond Co. Ltd, Korea | - | 23 |
| Shenzhen Nanotech Port Co. Ltd., China | - | 85–91 |
| Showa Denko Materials Co. Ltd., Japan | - | 92–94 |
| Sigma-Aldrich Inc., USA | 95 | 96, 97, 98–105, 106–108 |
| Southwest Nanotechnologies Inc., USA | - | 109 |
| Sun Nanotech Co. Ltd., China | - | 110 |
| Pyrograf Products Inc., USA | - | 111 |
| Tsinghua and Nanfeg Co. Ltd., China | - | 112 |
| Nanjing XFNANO Materials Tech Co. Ltd., China | - | 113–121 |
| Yangtze Nanotechnology Co. Ltd., China | - | 122–124 |

**Table S2. Types of cells used in cytotoxic studies (CNTs as substrate or as dispersion).**

| Cell type | Substrate | Dispersion |
|---|---|---|
| A549 (Human adenocarcinoma) | - | 6, 15, 25, 26, 36, 39, 41, 46, 47, 55, 68, 69, 71, 80, 97, 100, 101, 105, 108, 110, 124, 125, 126, 127–134, 135–138 |
| Adenocarcinoma | - | 7 |
| Alveolar macrophages | - | 79, 80, 126, 139, 140 |
| AsPC-1 (Human pancreatic tumor) | 141 | - |
| Astrocyte cells | 4 | 11, 36, 90 |
| Beas2B (Human bronchial epithelium, normal) | - | 10, 37, 40, 47, 49, 52, 92, 94, 103, 105, 142–144 |
| BxPC (Human pancreatic cancer) | 141 | - |
| Caco (Human colorectal adenocarcinoma) | 59 | 28 |
| Calu (Human non-small-cell lung cancer) | - | 80, 111 |
| CHO-K1 (Hamster ovary) | - | 8, 10 |
| Cortical cultures | 145, 146 | 75 |
| DRGNs (dorsal ganglion neurons) | 146 | 147 |

| | | |
|---|---|---|
| Dendritic cells | - | 87 |
| L929<br>(Fibroblast mouse) | 57, 67, 148, 149 | - |
| Glioma | - | 150 |
| H1299<br>(Human non-small cell lung carcinoma) | - | 118, 125 |
| H19-7<br>(Immortalized rat hippocampal cells) | 151 | - |
| H466<br>(Human small cell lung cancer) | - | 111 |
| H596<br>(Human lung adenosquamous carcinoma) | - | 111 |
| H9C2<br>(Rat hear cells) | - | 20 |
| HaCAT<br>(Human immortalized keratinocyte) | - | 125 |
| HAEC<br>(Human aortic endothelial cells) | - | 51, 74 |
| HA-SMCs<br>(Human aortic Smooth muscle) | 59 | 120 |
| HBEC-3KT<br>(Infecting primary human bronchial epithelial cell) | 152 | - |
| HEK<br>(Human epidermal keratinocytes) | - | 84, 153–155 |
| HEK 293<br>(Human embryonic kidney) | 156 | 21, 108, 157–159 |

| | | |
|---|---|---|
| HeLa (Adenocarcinoma) | - | 16, 86, 109, 125, 160 |
| Hep3B (Human hepatocellular carcinoma) | - | 16, 133, 161 |
| HepG2 (Human hepatocellular carcinoma) | - | 40, 108, 113, 138, 159, 161, 162 |
| hESCs (Human embryonic stem cells) | 19, 95 | - |
| Hippocampal neurons | 17, 30, 33, 64, 66, 163, 164 | - |
| HL-60 (Promyelocytic cell line) | 59, 61 | - |
| hMDMs (Human monocyte-derived macrophages) | 156 | 27, 38, 165–167 |
| hMSCs (Human mesenchymal stem cells) | 34 | 1, 54, 73, 78, 89, 168 |
| HT 29 (Human colorectal adenocarcinoma) | - | 169 |
| HUH7 (Human liver carcinoma) | 170 | - |
| Human Lymph Node Endothelial Cell | - | 81 |
| Human Brain Microvascular Endothelial Cells (HBMEC) | - | 72 |
| Human chondrocytes | 3 | - |
| Human fibroblasts | 59, 171 | 105, 159, 172, 173 |
| Human osteoblasts | 2–4, 58, 171, 174 | 5 |

| | | |
|---|---|---|
| HUVEC (Human umbilical vein endothelial cells) | - | 42, 16, 65, 69, 106, 114–116, 119, 121, 126, 162, 172, 175–179 |
| J774 (Mouse BALB/C monocyte macrophage) | - | 8, 110, 165, 180 |
| Jurkat (Human T lymphocyte cells) | 156 | 6, 70, 102 |
| K-562 (Myelogenous leukemia cell) | 61 | - |
| Liver normal cell | - | 181 |
| Lung epithelial cells | - | 10, 26, 35, 50, 52, 79, 82, 104, 168, 182, 183 |
| Lymphocytes | - | 44, 62, 63, 83 |
| MCF7 (Human breast cancer) | 59 | 77, 98, 136, 153, 184 |
| Mesothelioma | - | 9, 92, 94, 99, 122, 142, 143, 185 |
| Mononucler cell | - | 186 |
| Mouse ESCs | - | 112 |
| Mouse fibroblasts | 4, 152, 187 | - |
| NSCs (neural stem cells) | 18, 32 | - |
| Neuroblastoma | - | 92, 140, 160 |
| NG108-15 (Neuroblastoma x glioma hybrid) | 12, 13 | - |

| | | |
|---|---|---|
| NIH3T3 (Mouse embryonic fibroblasts) | 60, 64 | 14, 53, 88, 188, 189 |
| NRVMs (Neonatal rat ventricular myocytes) | 156 | - |
| Osteosarcoma | - | 173 |
| Ovine Bladder Smooth Muscle | 3 | - |
| P407 (Human normal epithelium) | - | 108, 133 |
| Panc (Hypertriploid human cell line) | 141 | 161 |
| PC12 (Rat pheochromocytoma) | - | 14, 147, 190 |
| Pheochromocytoma | 4 | - |
| Primary Glial cells | - | 43, 123 |
| Primary Immune cells | - | 24, 191 |
| Primary Neurons | - | 70, 123 |
| R264.7 (Mouse macrophages) | - | 22, 55, 56, 77, 80, 91, 107 |
| Rat or mice macrophages | - | 68 |
| Rat osteoblasts | 31 | - |
| Red Blood Cells | - | 14 |

| | | |
|---|---|---|
| RLE-6TN (Rat lung epithelial-T-antigen negative) cell) | - | 37 |
| Schwann cells | 146 | - |
| SH-SY5Y (Human neuroblastoma) | 156 | 76 |
| Skin fibroblasts | 3, 67, 146 | 23, 45, 96, 192, 193 |
| Splenocytes | - | 70 |
| SNU182 (Human hepatocellular carcinoma) | 170 | - |
| THP-1 (Human monocytic cell) | - | 37, 92, 117, 194, 195 |
| U-937 (Human macrophages) | 61 | 97 |

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