

Supplementary Table 1: Keywords for microgravity and the different cancer and omics types to define commands for the literature search.

cancer type	microgravity	omics type
("brain cancer" OR "brain tumor" OR "brain neoplasms")	("microgravity" OR "random positioning machine" OR	("transcriptomics" OR "transcriptome" OR
("breast cancer" OR "breast carcinoma" OR "mammary carcinoma")	"clinostat" OR "parabolic flight" OR "weightlessness" OR	"genetics" OR "gene expression" OR "gene regulation" OR "mRNA expression" OR
(endometrial cancer), (uterus cancer), (cervix cancer), (cervical cancer), (ovary cancer), (ovary carcinoma), (ovarian cancer)	"spaceflight" OR "space flight" OR "zero gravity"), (microgravity),	"microarray" OR "gene array" OR "RNA-Seq" OR "RNA-protein-interaction" OR "SAGE"), (transcriptome)
("colon cancer" OR "colon carcinoma" OR "colon tumor" OR "colon neoplasms" OR "intestine tumor" OR "intestinal tumor" OR "colorectal cancer" OR "colorectal tumor" OR "colorectal carcinoma")	(weightlessness)	("epigenomics" OR "epigenome" OR "histone modification" OR "histone" OR "histone acetylation" OR "450K" OR "epic" OR "DNA methylation" OR "bisulfite" OR "ChIP-Seq" OR "methylome)
("gastric cancer" OR "gastric carcinoma" OR "gastric tumor" OR "stomach neoplasms" OR "stomach tumor" OR "stomach cancer" OR "stomach carcinoma")		("genomics" OR "genome" OR "genome sequencing" OR "next generation sequencing" OR "NGS" OR "DNA sequencing" OR "whole genome sequencing" OR "full genome sequencing" OR "functional genomic screening" OR "GWAS" OR "exome sequencing" OR "gene mapping" OR "DNA library" OR "genomic library"),
("leukemia")		(genome), (gene) ("metabolomics" OR "metabonomics" OR "metabolome" OR "metabonome" OR "metabolic pathway" OR "enzyme activity" OR "metabolite"

	OR "metabolic" OR "flow rate" OR "NMR" OR "mass spectrometry"),
	(metabolome)
("lung cancer" OR "lung carcinoma" OR "lung tumor" OR "lung neoplasms"),	("phenomics" OR "morphology changes" OR "phenome" OR "phenotype changes" OR "phenotypic changes" OR "high-throughput phenotyping" OR "phenotype microarray")
("lymphoma" OR "Hodgkin" OR "non-Hodgkin"),	
(lymphoma)	("proteomics" OR "proteome" OR "protein composition" OR "protein function" OR "immunoassay" OR "antibody staining" OR "mass spectrometry" OR "ELISA" OR "Western Blot" OR "SDS-PAGE" OR "immunofluorescence"),
(myeloma" OR "multiple myeloma"),	(protein),
(myeloma)	(proteome),
("pancreas carcinoma" OR "pancreas cancer" OR "pancreas tumor" OR "pancreas")	
("neoplasms" OR "pancreatic carcinoma" OR "pancreatic cancer" OR "pancreatic tumor" OR "pancreatic neoplasms")	
("prostate cancer" OR "prostate carcinoma" OR "prostate tumor")	(secretome)
(prostate)	
("sarcoma")	
("thyroid cancer" OR "thyroid carcinoma" OR "thyroid tumor" OR "thyroid neoplasms")	(cytokine)
(thyroid)	

("liver cancer" OR "liver carcinoma" OR "liver tumor" OR "liver neoplasms" OR "hepatocellular cancer" OR "hepatocellular carcinoma" OR "hepatocellular tumor" OR "hepatocellular neoplasms")
