Nanoparticle-based combination drug delivery systems for effective cancer treatment

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Appendix

List of abbreviations
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List of abbreviations

ANOVA	Analysis of variance
BSA	Bovine serum albumin
$CaCl_2$ $2H_2O$	Calcium chloride dihydrate
CAFs	Cancer-associated fibroblasts
CaF_2	Calcium fluoride
CLSM	Confocal laser scanning microscopy
Cer	Ceramide
cSCC	Cutaneous squamous cell carcinoma
CXCL12	C-X-C motif chemokine 12
DAPI	4',6-Diamidino-2-phenylindole
DHA	Docosahexaenoic acid
DLS	Dynamic light scattering
DMSO	Dimethyl sulfoxide
DMEM	Dulbecco's modified eagle medium
DMF	Dimethylformamide
DOX	Doxorubicin
Doxil	Liposomal doxorubicin
ECM	Extracellular matrix,
EGF	Epidermal growth factor
EGFR	Epidermal growth factor receptor
ELISA	Enzyme-linked immunosorbent assay
EMT	Epithelial–mesenchymal transition
Em	Emission
ERα	Estrogen receptor alpha
ERBB2	Epidermal growth factor 2
ERK5	Extracellular-regulated protein kinase 5
Erα	Estrogen receptor alpha

Ex	Exitation
FA	Fatty acids
FA	Folic acid
FBS	Fetal bovine serum
FCS	Fetal calf serum
FDA	Food and Drug Administration
FITC	Fluorescein isothiocyanate
FTM	Full-thickness model
GBM	Glioblastoma multiforme
Gd^{3+}	Gadolinium
HAI	Histological Alteration Index.
H_2O	Water
H&E	Hematoxylin and eosin
HMGA2	High-mobility group AT-hook 2
HSE	Human skin equivalent
IC50	Half maximal inhibitory concentration
ICD	Immunogenic cell death
IFNs	Interferons
IFN-γ	Interferon gamma
IRFs	Interferon regulatory factors
LAS X	Leica Application Suite X
LD	Light/dark
LPS	Lipopolysaccharide
LUMC	Leiden University Medical Center
Man MPs	Mannose-modified macrophage-derived microparticles
ManNP	Mannosylated cationic nano hydrogel particles
Met	Metformin
MGL	Macrophage galactose-specific C-type lectin

MMP	Matrix metalloproteinase
MSCs	Mesenchymal stem cells
MSV	Multistage nanovectors
MSNs	Mesoporous silica nanoparticles
MTS	3- (4,5-Dimethylthiazol-2-yl)-5- (3-carboxymethophenyl)-2- (4-sulfophenyl)-2H-tetrazolium
MTX	Methotrexate
MWCNTs	Multi-walled carbon nanotubes
Nd^{3+}	Neodymium
NH_4F	Ammonium fluoride
NIR	Near-infrared
NPs	Nanoparticles
NSCLC	Non-small-cell lung cancer
PA	Palmitic acid
PBS	Phosphate-muffered saline
PDI	Polydispersity index
PEG	Polyethylene glycol
PEI	Polyethylenimine
PFA	Paraformaldehyde
PGA	Polyglycolic acid
PHA	PEG-histidine-modified alginate
PI3K	Phosphatidylinositol 3 kinase
PIGF	Placental growth factor
PLGA	Poly (lactic-co-glycolic acid)
PLA	Polylactic acid
PS	Polystyrene
PV	Perivascular
PVA	Polyvinyl alcohol
RENPs	Rare-earth doped nanoparticles

RES	Reticuloendothelial system
RIPA	Radioimmunoprecipitation assay
RKIP	Raf kinase inhibitor protein
RT	Room temperature
SD	Standard deviation
SEM	Standard error of the mean
SF	Serum-free
SKCM	Specifically cutaneous melanoma
SM	Sphingomyelin
SOX10	SRY (sex determining region Y)-related HMG-box 10
SR-B1	Scavenger receptor B type 1
STAT	Signal transducer and activator of transcription proteins
TAMM	TAM membrane
TEM	Transmission electron microscope
TiO_2	Titanium dioxide
TME	Tumor microenvironment
TLR	Toll-like receptors
UCNPs	Upconversion NPs
UPLS-MS	Ultraperformance liquid chromatography-tandem mass spectrometry
W_1/O	Water-in-oil
$W_1/O/W_2$	Water-in-oil-in-water
XRD	X-ray Diffractogram
Y^{3+}	Ytterbium
λem	Emission maximum
λex	Exitation maximum

List of publications

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Curriculum Vitae

Yuanyuan He was born on September 8, 1990, in Henan Province, China. In 2011, she was admitted to Henan University of Science and Technology, where she pursued a major in Animal Medicine. She successfully obtained a Bachelor's degree in Agriculture in 2015. Following this, she embarked on her master's degree in Embryo Engineering at the Key Laboratory of Animal Biotechnology (Ministry of Agriculture) at Northwest A&F University. During her master's program, she worked under the guidance of Fusheng Quan. Her research interests primarily lie in the field of reproductive physiology and germ cell signaling mechanisms. Her work encompasses various areas, such as comparing follicular development and culture systems, exploring the hormonal effects on ovarian cell function, and investigating the regulation of granulosa cell function by the WT1 gene.

In 2018, she commenced her Ph.D. research at Leiden University Medical Center in the Netherlands. She had the privilege of being supervised by esteemed professionals, namely Prof. Mark A. van Buchem, Dr. Luis J. Cruz, and Dr. Christina Eich. Throughout her doctoral studies, Yuanyuan focused on tumor immunology, delving into critical aspects such as immunomodulation of the tumor microenvironment, tumor immunochemotherapy, and the targeted delivery of nanomedicines.

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