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Unraveling mucin type o-glycosylation signatures of colorectal cancer

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LIST OF ABBREVIATIONS
ENGLISH SUMMARY
NEDERLANDSE SAMENVATTING
CURRICULUM VITAE
PHD PORTFOLIO
LIST OF PUBLICATIONS
ACKNOWLEDGMENTS

Appendices



LIST OF ABBREVIATIONS

ABC	Ammonium bicarbonate
AC	adenocarcinoma
ADCC	antibody- dependent cellular cytotoxicity
ANOVA	Analysis of Variance
AP	alkaline phosphatase
Asn	asparagine
AUC	area under the curve
B3GALT	β 1-3 galactosyltransferase
B3GNT	β 1-3- <i>N</i> -acetylglucosaminyltransferase
B4GALNT	β 1-4 acetylgalactosaminyltransferase
B4GALT	β 1-4 galactosyltransferase
BCA	Bicinchoninic acid
BSM	bovine submaxillary mucin
CaCo-2	Cancer <i>coli-2</i>
CAR	chimeric antigen receptor
CCSD	collision cross section distribution
CDC	complement-dependent cytotoxicity
CDX1	Caudal Type Homeobox 1
CE-ESI-MS	capillary electrophoresis electrospray ionization-mass spectrometry
CID	collision induced dissociation
CIM	clustered image map
CIMP	CpG island methylator phenotype
CIN	chromosomal instability
CMP	cytidine monophosphate
CMS	Consensus molecular subtype
CRC	Colorectal cancer
CRCSC	Colorectal cancer subtyping consortium
CV	coefficient of variation
CyTOF	cytometry by time-of-flight
CZE	capillary zone electrophoresis
DEN	dopant enriched nitrogen

DiSia	di-sialic acid
DMEM	Dulbecco's modified Eagle's medium
DTT	dithiothreitol
EMT	epithelial to mesenchymal transition
ESI	electrospray ionization
ETD	Electron-transfer dissociation
EtOH	ethanol
FA	formic acid
FBS	fetal bovine serum
FFPE	formalin-fixed, paraffin-embedded
Fuc	fucose
FUT	α 1-4 fucosyltransferases
GAG	glycosaminoglycan
Gal	galactose
GalNAc	<i>N</i> -acetylgalactosamine
GalNAcol	reduced reducing end of GalNAc
GALNT	polypeptide- <i>N</i> -acetylgalactosaminyltransferase
GCNT	β 1-6- <i>N</i> -acetylglucosaminyltransferase
GDP	guanidine diphosphate
GI	gastrointestinal
Glc	glucose
GlcNAc	<i>N</i> -acetylglucosamine
GPI	glycosylphosphatidylinositol
GSL	glycosphingolipid
GST	glycosyltransferase
GuHCl	guanidine hydrochloride
HCl	hydrochloric acid
HE	hematoxylin and eosin
HEPES	4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
HILIC	hydrophilic interaction liquid chromatography
ICC	ion charge control
IGS	image guided surgery
IPA	isopropanol

Appendices

IT	ion trap
KOH	potassium hydroxide
KOH	potassium hydroxide
LacNAc	<i>N</i> -Acetyllactosamine
LCM	laser capture microdissection
Le	Lewis
LNI	lymph node invasion
MALDI	matrix assisted laser desorption/ionization
Man	mannose
MeCN	acetonitrile
MeCN	acetonitrile
MeOH	methanol
MGC	mesoporous graphitic carbon
MS	mass spectrometry
MS/MS	tandem mass spectrometry
MSAC	mass spectrometry average composition
MSI	microsatellite instability
N ₂	nitrogen
NaBH ₄	Sodium borohydride
NaCl	sodium chloride
NEC	neuroendocrine carcinoma
NeuAc	<i>N</i> -acetylneuraminic acid
NeuGc	<i>N</i> -glycolylneuraminic acid
NK	Natural killer
NMuMG	mouse mammary gland
PBS	phosphate buffered saline
PCA	principal component analysis
PCMF	post column make-up flow
PCR	polymerase chain reaction
PEN	polyethylene naphthalate
PGC	porous graphitized carbon
PGC-nano-LC-ESI-	porous graphitized carbon nano-liquid chromatography
MS/MS	electrospray mass spectrometry

PNGase F	Peptide - <i>N</i> -Glycosidase F
PP	polypropylene
Pro	proline
psi	pound per square inch
PVDF	Polyvinylidene difluoride
PVP	polyvinylpyrrolidone
qPAC	micro pillar array
RP	reverse phase
rpm	rounds per minute
RT	room temperature
RT	retention time
S/N	signal to noise
SDS	Sodium dodecyl sulfate
Ser	serine
SPE	solid-phase extraction
SPS	smart parameter setting
ST3GAL1	α 2-3 sialyltransferase
ST6GALNAC	α 2-6 sialyltransferase
ST8SIA	α 2-8 sialyltransferases
TACA	tumor-associated carbohydrate antigen
TCGA	The Cancer Genome Atlas
TFA	Trifluoroacetic acid
TGF	Transforming growth factor
Thr	threonine
TMT	tandem mass tag
Tris base	tris(hydroxymethyl)amino-methane
Tyr	tyrosine
UDP	uridine diphosphate
UHPLC	ultra-high performance liquid chromatography
Xyl	xylose