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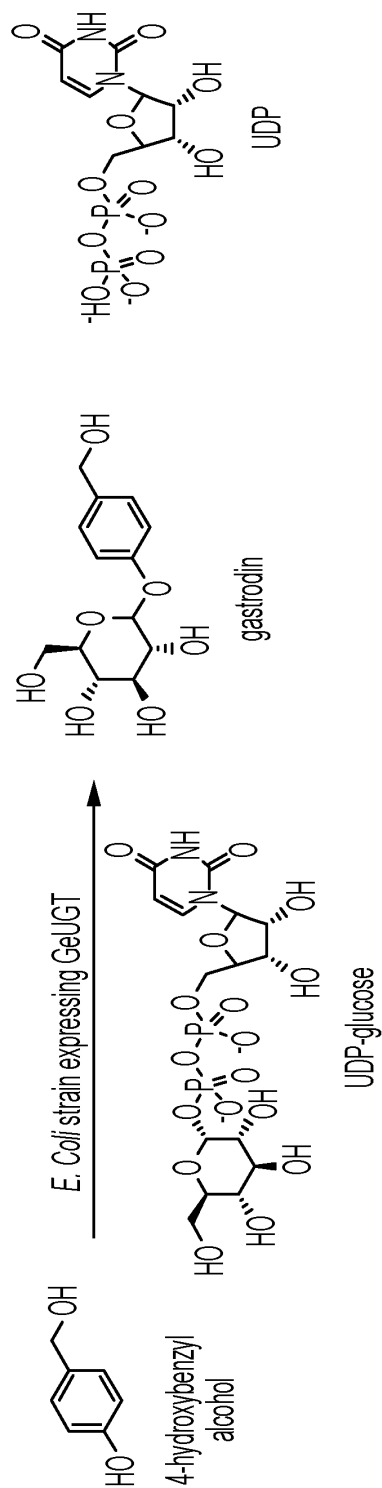


FIG. 1

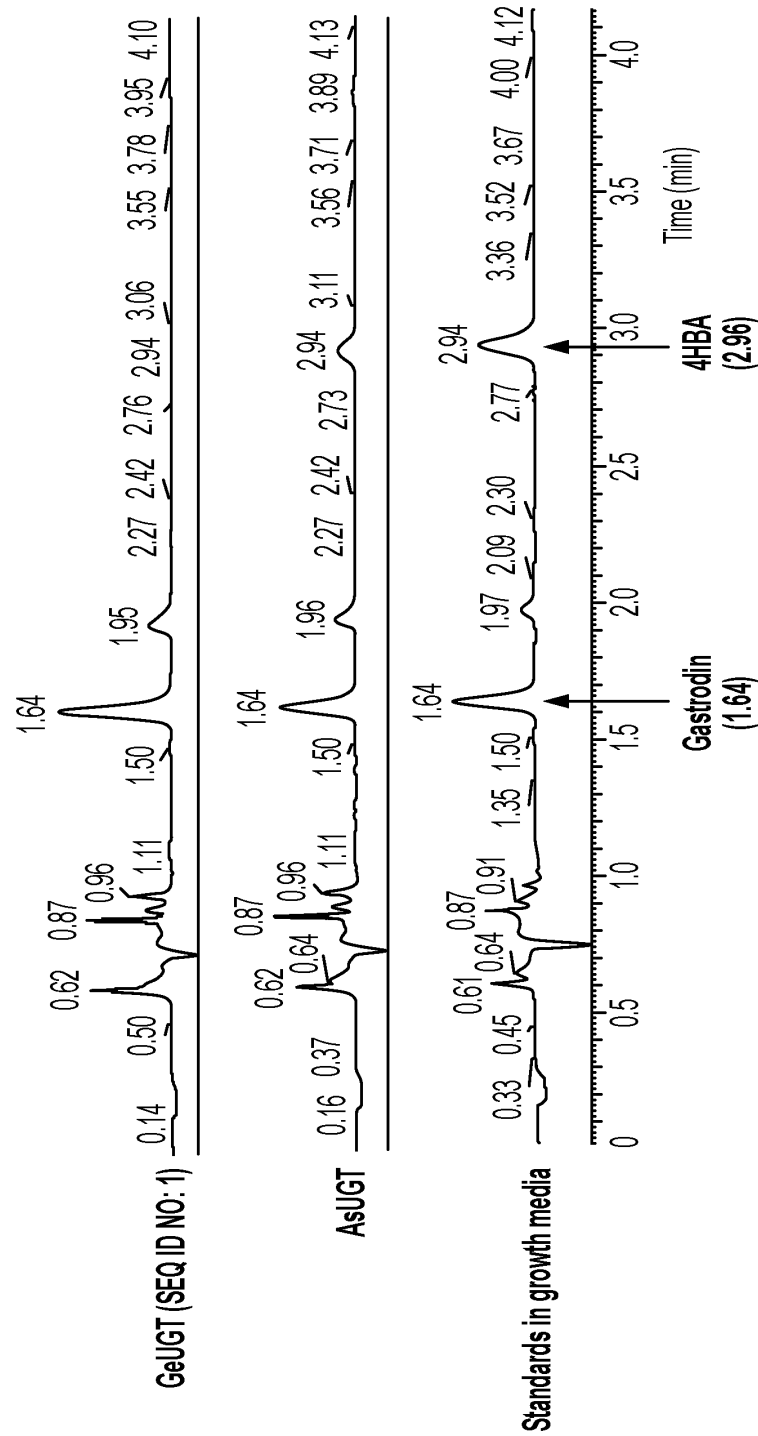


FIG. 2

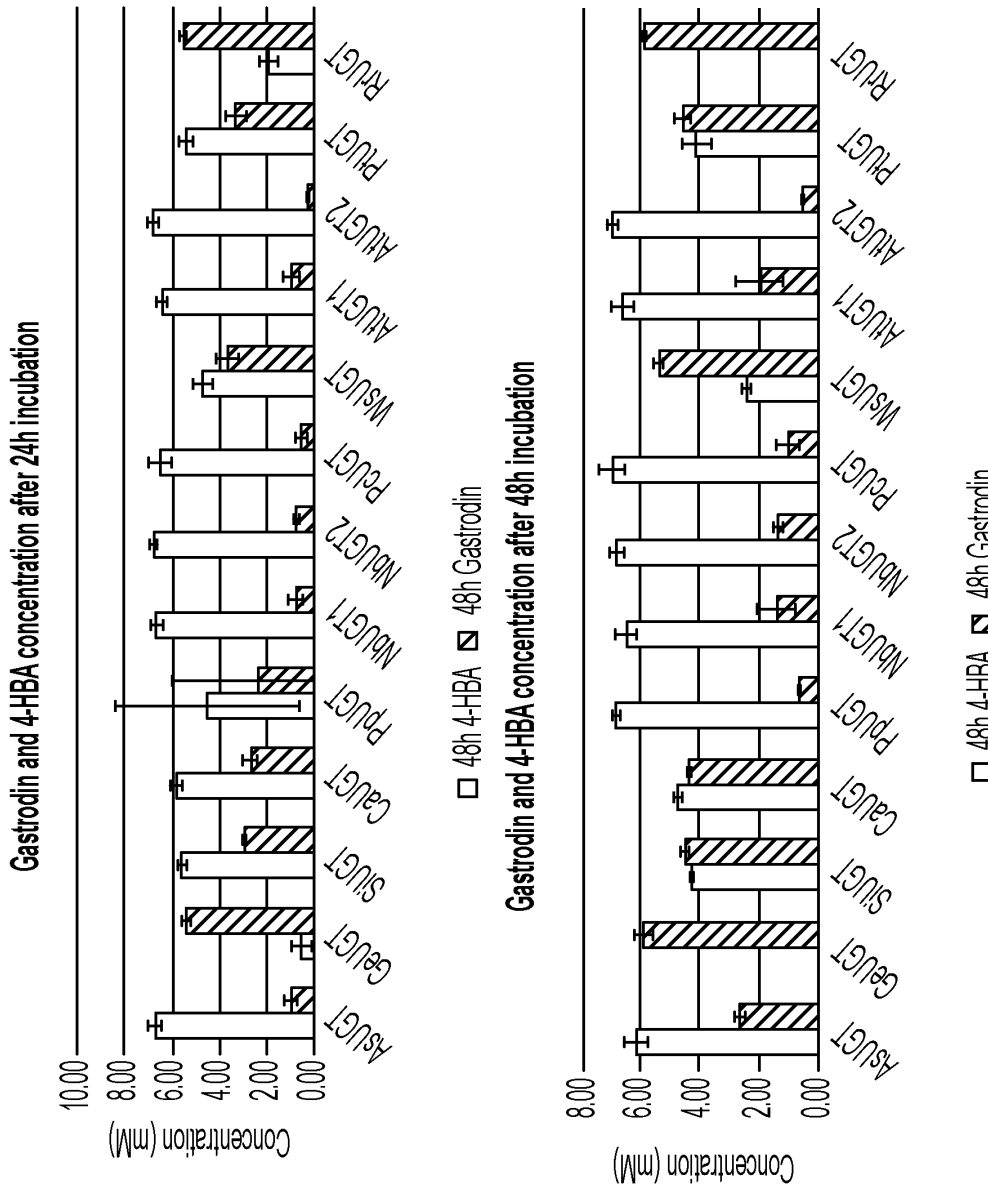


FIG. 3

FIG. 4

SEQ ID NO: 27	Consensus	MXETPAIXXXOTPHATALLPSPGNGHLIPIVEFAKRLVH--XHRFSVTITLPTDGPSSKA	58
SEQ ID NO: 2	GeUGT	-----MEIPSEGRPHIAMVSSPGNGHLIPFAELAKILVN--RHRFTVTITFAASD-NRA	53
SEQ ID NO: 26	AsUGT	-----MEHTPHIAMVTPGNGHLIPIVEFAKRLV--RHNFGVTITPTDGLPKA	49
SEQ ID NO: 4	SiUGT	---METASAPSPSHIAVLPSPGNGHLIPIVEFAKRLH--HHRISTTILMPTDGPLNA	55
SEQ ID NO: 6	CaUGT	-----MDOTPRVALLPSPGNGHLIPIVEFAKRLIL--OHDFSVTITLPTDGPLSKA	49
SEQ ID NO: 8	PpUGT	-MDSNIIKAPLAAATHAVFPTPGNGHLIPFAELAKSLVA--RHGFSVTITLAIISA-SKA	56
SEQ ID NO: 10	NbUGT1	MAETPITAQSEOKPHVLLPTPGNGHLIPIVEFAKRLIH--EHDLSITITLPTNGPISKS	58
SEQ ID NO: 12	NbUGT2	-MAETAIVTKSENPHIVILPSPGNGHLIPIVEFSKRLIS--OHQFSVTILPTDGLISNS	57
SEQ ID NO: 14	PcUGT	-----MEETHALLPTPGNGHLIPIVEFAKRLIOLEHYKFSVTLLPTTGTVSDS	51
SEQ ID NO: 16	WsUGT	MAETPMTATETONTHAALLPSPGNGHLIPIVEFSKRLIL--RHQFSVTILPTDGLISNS	58
SEQ ID NO: 18	AtUGT1	-----MEESKTPHVAIIPSPGNGHLIPIVEFAKRLVH--LHGLTIVTVFIAGEGPSSKA	51
SEQ ID NO: 20	AtUGT2	-----MAEANTPHAIIMPSPGNGHLIPFVELAKRLVQ--HDCFTVTMIISGETSPSKA	51
SEQ ID NO: 22	PtUGT	MESPAAPPTTAPPPHVIIMPSPGNGHLIPFAEFAKRLLP-----RFTTFAVPTSGPPSSS	56
SEQ ID NO: 24	RrUGT	-----MSGTPTHATALLPSPGNGHLIPMAEFAKRLVH--HHNFSITITFVIPTDGPSSA	49
SEQ ID NO: 27	Consensus	QXTFLNSLPSSIDYILLPPVNXDDL-----PSDVRIETRISLTVTRSLPSLRDAXKSIVEX	114
SEQ ID NO: 2	GeUGT	AHTFLSTLPSCISWLTIPPVPLDDI-----PPAATIEIRMSIVSLRSLPAIRSALADLHST	109
SEQ ID NO: 26	AsUGT	QKSFLDALPAGVNYVLLPPVSFDDL-----PADVRIETRICITITRSLPFVRDAVKTLIAT	105
SEQ ID NO: 4	SiUGT	QNTLFSTLPPGIDYILLPTLNFDL-----PPDVKIEIRISLTVTRSLPSLRDAVKSLLER	111
SEQ ID NO: 6	CaUGT	QTTFLAALPAIDYILLPPVNFDDL-----ADDVRIETRISLTVTRSLPSLRDALKSLVDT	105
SEQ ID NO: 8	PpUGT	QSAFLDTLPISIASLSLPAPVPLDI-----PADAATVIVISVADRSLPAIRELLLDIKRS	112
SEQ ID NO: 10	NbUGT1	QNKFLNSLPSTMNYLLPPVNFDDL-----EDDVKIEIRISLTVTRSLSSFRKVFMLIVET	114
SEQ ID NO: 12	NbUGT2	QKJFLNSLPSCMDYHLLPPVNFDDL-----PLDVKIEIRISLTVTRSLSSURDVFKTIVES	113
SEQ ID NO: 14	PcUGT	QLLFLEALPNGISYIALPPINVDL-----SSVVAETRIALTITRSLPAVEDALKSLVSE	106
SEQ ID NO: 16	WsUGT	QKJFLNSLPSSMDYHLLPPVNFDDL-----PLDVKIEIRISLTVTRSLSSIREVFKTIVEE	114
SEQ ID NO: 18	AtUGT1	QRTVIDSLPSSISSVFPVVDIDL-----SSSTRIESRISLTVTRSNPELRKVFDSFVEG	107
SEQ ID NO: 20	AtUGT2	QRSVINSLPSSIASVFLPPADLSV-----PSTARIETRAMLTTRSNPALRELFGLSTK	107
SEQ ID NO: 22	PtUGT	QRDFLSSLPASIDTSLPEVDLSA-----PSDAQIETIMSLMWVRSLSLRDLIASYSAS	112
SEQ ID NO: 24	RrUGT	YQQVLTSLPSSIDHIFLPQVDLIDVVSQSAPHPRIETILISLTVARSLSLRDTLSSLQSS	109

SEQ ID NO: 27	Consensus	KKL-VALVVDLFGTDADFVAIEFGVSPYIFFPSTAMVALSLFLYLPKLDVTSCEFRDLXE	173
SEQ ID NO: 2	GeUGT	TNL-VAVADFFATDAFAAARDGVYYMFPNTLFLSLLELPALDAATGRFODLET	168
SEQ ID NO: 26	AsUGT	TKL-AALVVDLFGTDADFVAIEFGVSPYIFPPTAMCLSLFFHLPKLDQMVSCYRDVPE	164
SEQ ID NO: 4	SiUGT	TPL-AALVVDLFGTDGFEVALEKIPPIFFPSTAMVALSLFLYLPKLDVTSCEYRVAE	170
SEQ ID NO: 6	CaUGT	AKL-AALVVDLFGTDADFVANEKILPPYIFFPSTATAFAFFSLPKLHEMWACEFRDLPG	164
SEQ ID NO: 8	PpUGT	AKL-VAFVADLFGADTAVAAAIGVSPYLFHPSNFOVLSMLSLPRLDAETOGQFRDLHE	171
SEQ ID NO: 10	NbUGT1	KKI-VALVVDLFGTDIDIAKEFNVSPYIFPPTAMCLSLFLYLPKLDVTSCEYREIKG	173
SEQ ID NO: 12	NbUGT2	KKV-VAFVVDLFGTDADFVAIDENVSPYIFFPSTAMVALSLFLYLPKLDVTSCEYRDLPD	172
SEQ ID NO: 14	PcUGT	KKV-VALVVDLFGTDGFEVAKAGISPYIFFPPTAANLSLFLHMSLDKRITCEYRDMDE	165
SEQ ID NO: 16	WsUGT	KKI-VALVVDLFGTDADFVAIDKVSPIFFPSTAMALCLFCYIHKLDENVSCYEYRDMSE	173
SEQ ID NO: 18	AtUGT1	GRIPALVVDLFGTDADFVAEFHVPPYIFPPTANVLSFFLHPKLDVTSCEFFRELTE	167
SEQ ID NO: 20	AtUGT2	KSLPAVLVDMEGADADFVDEHVSPIFYASNANVLSFFLHPKLDKTVSCFFRYLTE	167
SEQ ID NO: 22	PtUGT	GRRVAALVVDLFGTDALDVALEIGIRPFIFFPSTAMTSLFFLHLEKLDVTSCEFAELSD	172
SEQ ID NO: 24	RrUGT	KNL-VSLVVDLFGTDADFPAIELGISPYIFFPSTAMTSLFLYMPQLDKSVTCEFRHMTD	168
SEQ ID NO: 27	Consensus	PVRIPGCPPIHGKDILDVPQDRKNDAYKWLHHXKRYXMAEGIVNSFKLELEPGAIAKAL-	232
SEQ ID NO: 2	GeUGT	PLRLSGCVPPIPGSDILTPLLNRSSEYRMLHHARLYROAOGILVNSFAALEPGTKSL-	227
SEQ ID NO: 26	AsUGT	PLQIPGCIPIHGKDFLDPAQDRKNDAYKCLLHOAKRYRLAEGIMWNTFNDLEPGPLKAL-	223
SEQ ID NO: 4	SiUGT	KLIPGCTPIDGRDILDPLQDRKNDAYKWLHHTKRYRMAEGILNSFKLELEPGAIEAL-	229
SEQ ID NO: 6	CaUGT	PIRVPGCVPIHGRDILDPAQDRKNDAYKWLHHARRYSLAEGIVNSFKDLEPGPLKAL-	223
SEQ ID NO: 8	PpUGT	PVRLPGCIPITGAELIHPLODRTEVYRVMVHGEKYRDAEGIVNTFEELEPWASEFFY	231
SEQ ID NO: 10	NbUGT1	PVRLPGCVPIEAKELDDPIQDRKNDAYKWLHHTKRYMAEGIVNSFKLELEPGAINDL-	232
SEQ ID NO: 12	NbUGT2	PIQIPGCIPIYGKDILDVPQDRKNEAYKWLHHSKRYGMAEGIVANSFKLEGGAIKAL-	231
SEQ ID NO: 14	PcUGT	PVKIPGCIPIHGKDILDPLQDRNDAYKWLHHSRYKLAEGIVNTFEDLEPEAIKAL-	224
SEQ ID NO: 16	WsUGT	PVOITGCIPIHGKDILDVPQDRKNEAYKWLHHSKRYRMAEGIVANSFKLEGGAIKAL-	232
SEQ ID NO: 18	AtUGT1	PLMLPGCVPVAGKDFLDPAQDRKDNDAYKWLHHTKRYKEAEGILVNTFFLEPNAIKAL-	226
SEQ ID NO: 20	AtUGT2	PLKIPGCVPIITGKDFLDVTQDRNDNDAYKLLHNTKRYKEAGILVNSFVDESNAIKAL-	226
SEQ ID NO: 22	PtUGT	PVOIPGCIPIHGKDILDVPQDRKNDAYKWLHHSKRYKLAEGIVNSFEGLEGGPREL-	231
SEQ ID NO: 24	RrUGT	LVRIPGCVPIRGSDILFPVQDRIDEAYKWLHHSNRYPMAEGVIENSFMELEHGALKYL-	227

FIG. 4
CONTINUED

SEQ ID NO: 27	Consensus	QEEEPGKPPVYPVGP LIQMD S-GSKV-EESECLKWL DXQPRGSVLYVSGSGG TISH EQL	290
SEQ ID NO: 2	GeUGT	SONSLRPPVYPVGMVQSPKGTSL-----CLAWLDRQPEGSVL FVSGSGG TTRTQL	282
SEQ ID NO: 26	AsUGT	QEE DQKPPVYPIGLIRADS-SSKV-DCECLKWLDDQPRGSVLFIFSGSGG AVSHNQF	281
SEQ ID NO: 4	SiUGT	QEKEDRKPPVYPIGL IOTGP-KPEVDFSCVCLKWLDEQPRGSVLYVSGSGG TISHDEM	288
SEQ ID NO: 6	CaUGT	QEOEPGKPPVYPVGP LIQMG S-GEKRGEEPECLKWLDDQPSGSVLYISGSGG TISHNOL	282
SEQ ID NO: 8	PpUGT	KKAGPEWPPVYPVGPVIOAEGSGVGL-SGSECLAWLDDQPKGSVIFVSGSAGTISTEQT	290
SEQ ID NO: 10	NbUGT1	HEEKPKPPVYAVGPIIHMDV-SSKA-EELECLKWLDEQPCNSVLYISGSGG TISH EQL	290
SEQ ID NO: 12	NbUGT2	QEEEPGKPPVYPVGP LIQMD S-GSNV-DGSGCLTWLDEQPIGSVLYISGSGG TISH EQL	289
SEQ ID NO: 14	PcUGT	HEEH-GVPPLFPVGP LTOKVLSSNGAEESDCCLKWLNDQPLGSVLFVSGSGG TITTEEQF	283
SEQ ID NO: 16	WsUGT	QEEEPGKPPVYPVGP LIQMD S-GNKV-DESDCLTWLDEQPRGSVLYISGSGG TISHQOV	290
SEQ ID NO: 18	AtUGT1	QEPGLDKPPVYPVGP LIQMGKQEAQTESECLKWLNDQPLGSVLYVSGSGG TITCEQL	286
SEQ ID NO: 20	AtUGT2	QEPAPDKPPVYPVGP LIQMTSSSNVNIEDKFCLSWLDNQPEGSVLYISGSGG TITCEQF	286
SEQ ID NO: 22	PtUGT	LHPEPGKPPVYPVGP LIQAGSCEKGAARPECLKWLDDQPRGSVLFVNFSGSGG TISTEQO	291
SEQ ID NO: 24	RrUGT	QTVQSGKPPVYAVGPIIKMDY--DVDDSGSKII EWLDDQDPVGSVLFVSGSGG TISYEQM	285
SEQ ID NO: 27	Consensus	IELALGLEMSEQRFLWVVRSPNDGIANATYFNVQSS TDP LAF LPEGFLERTKGRGLVWPS	350
SEQ ID NO: 2	GeUGT	GELALGLEASKQRFLWVRSPCDEDSSTYFTAQTKDDPILFLPEGFVDRTRDVG LWPS	342
SEQ ID NO: 26	AsUGT	IELALGLEMSEQRFLWVVRSPNDKIANATYFSIONNDALAYLPEGFLERTKGRCLLVPS	341
SEQ ID NO: 4	SiUGT	VELALGLEMSEQRFLWVARCPNDTTANATYFNIQSSNDPLAYLPDGF LERTKGRGLVWPT	348
SEQ ID NO: 6	CaUGT	VELAFGLEMSEQRFLWVVRSPNDGVANATYFTVNSONDPLAFMPEGFLDRIKGRGLVPS	342
SEQ ID NO: 8	PpUGT	TELATGLEMSGQRFLWVRKPNDBGSSARYFTSGVSEDPYEF L PKGFLDRIKGTGMIVSS	350
SEQ ID NO: 10	NbUGT1	IELAMGLEMSEQRFLWVIRCNDRIANATYFNIQSSSNPFDSL PKGFLERTKGGGLWPN	350
SEQ ID NO: 12	NbUGT2	IEVASGLEMSEQRFLWVIRCDDTVANATYFNVQDS TNP LDF LPKGFLERTKSLGLWPN	349
SEQ ID NO: 14	PcUGT	IELATGLELSEQRFLWVVRSPN-KVAVAAAYFN-QLDODPFPFLPEGY LDRVKGRGLWAD	341
SEQ ID NO: 16	WsUGT	IELASGLEMSEQRFLWVIRCNDRIANATYFSVQDS TNP LDF LPKGFLERTKGLGLWPN	350
SEQ ID NO: 18	AtUGT1	NELALGLADSEQRFLWVIRSPS-GIANSYFDSHSQDPLTFLPPGF LERTKKRGFVIFP	345
SEQ ID NO: 20	AtUGT2	NELAIGLAESGKRFLWVIRSPS-EIVSSYFNPHSETDPFSLPIGFLDRTKKGLWVPS	345
SEQ ID NO: 22	PtUGT	NELAGVLAHSOQRFLWVVRPPNDGIANATYFSVDGEIDPLKLLPEGFL EOTAGRGVLVPM	351
SEQ ID NO: 24	RrUGT	TELAHGLESSQQRFLWVVRSPN-QIPNSTYFSVQSKDPLAYLPEGFLNRTEGRGLVVSN	344

FIG. 4
CONTINUED

SEQ ID NO: 27	Consensus	WAPQAIIAHGSTGGFLTHCGWNSTLESVHGVPIAWPLVYAEQKMAVMLVEDLKVALR	410
SEQ ID NO: 2	GeUGT	WAPQIEVIAHRATGGFLSHCGWNSTLESVHGVPPIAWPLFAEQFMNAVMLVEEARVAMR	402
SEQ ID NO: 26	AsUGT	WAPQTEILSHGSTGGFLTHCGWNSTLESVVGVPPIAWPLVYAEQKMAVMLTEGLKVALR	401
SEQ ID NO: 4	SlUGT	WAPQAHIGHGESTGFLTHCGWNSTLESVVGVPPIAWPLVYAEQKMAVMLHEDVRVALR	408
SEQ ID NO: 6	CaUGT	WAPQAKIIGHSTGGFLTHCGWNSTLESVVEGPIAWPLVYAEQKMAVMLAEDLKVASR	402
SEQ ID NO: 8	PpUGT	WAPQOVVIGHPSTGGFLSHCGWNSTLESVHGVPMTWPLFAEQKMAVMLVEGVGVALS	410
SEQ ID NO: 10	NbUGT1	WAPQAIIASHGSTGGFLTHCGWNSTLESVHGVPIAWPLVYAEQKMAVMLNEELKVALR	410
SEQ ID NO: 12	NbUGT2	WAPQAIIAHGSTGGFLTHCGWNSTLESVHGVPIAWPLVYAEQKMAVMLAEDLKVALR	409
SEQ ID NO: 14	PcUGT	WAPQAKIINHGSTGGFLTHCGWNSTLESVVGVPPIAWPLVYAEQRTNAVMLSEGLKVALR	401
SEQ ID NO: 16	WsUGT	WAPQAIIAHGSTGGFLTHCGWNSTLESVHGVPIAWPLVYAEQKMAVMLSEGLKVALR	410
SEQ ID NO: 18	AtUGT1	WAPQAIIAHGSTGGFLTHCGWNSTLESVVGVPPIAWPLVYAEQKMAVMLSEGLKVALR	405
SEQ ID NO: 20	AtUGT2	WAPQOIIAHGSTGGFLTHCGWNSTLESVVGVPPIAWPLVYAEQKMAVMLSEGLKVALR	405
SEQ ID NO: 22	PtUGT	WAPQIDVLSHSTGGFLTHCGWNSTLESVHGVPLITWPLVYAEQKMAVMLTEGLRVGLR	411
SEQ ID NO: 24	RrUGT	WAPQAIIASHGSTGGFLTHCGWNSTLESVHGVPIAWPLVYAEQKMAVMLVEDVKAALR	404
SEQ ID NO: 27	Consensus	PKAG-ENGIVGREETARVVKGLMEGEGKGVRSMRXLKDAAKVLSDDGSSSTKALAEIA	469
SEQ ID NO: 2	GeUGT	PKKADAAAADVRAETSRVAAALMEGEGKALRRRAQOLKEAHAALREGSSYEALGLVA	462
SEQ ID NO: 26	AsUGT	PKAG-ENGLIGRVEIANAVKGLMEGEGKFRSTMKDLKDAASRALSDGSSSTKALAEIA	460
SEQ ID NO: 4	SlUGT	PKAG-ENGIVGRDETAKTVKGLVEGEGKEIRSMRDLKDAAKVLSVNGSSSTKILAEIA	467
SEQ ID NO: 6	CaUGT	PKAD-ENGIVGRVEIANMKRIMEGEGKGLSRMKELKDAAKVLSODGSSSTKALAOVA	461
SEQ ID NO: 8	PpUGT	LEAG-EDGYKSEETARVVKGLMEGEGKVMRHKARELEAAARTLAQGGASYEALNEVA	469
SEQ ID NO: 10	NbUGT1	LETS-ENGIVGREETAOWREIMEGEGKGVRSMRDLKDAAKVLENGSSSTKALAEIA	469
SEQ ID NO: 12	NbUGT2	PKAN-ENGLMGRLETAQVVKGLMEGEGKGVTRMRDLKDAAKVLSODGSSSTKALAEIA	468
SEQ ID NO: 14	PcUGT	PKSVGENGLIDRVEIARVVKGLFVGEETQICSMRDLKDAAKVLENGSSSRKSLIEIA	461
SEQ ID NO: 16	WsUGT	PKVNEENGIVGRLEIAKWKGLMEGEGKGVRSMRDLKDAAKVLSDDGSSSTKALAEIA	470
SEQ ID NO: 18	AtUGT1	PRAG-DDGLVRRREEVAVVKGLMEGEGKGVRNKMKEACRVLDKDGSTKALSLVA	464
SEQ ID NO: 20	AtUGT2	THAG-EDGLVRRREEVAVVKGLMEGEGKAGIKNVKELKEGVVRLGDDGLSSKSFGEVL	464
SEQ ID NO: 22	PtUGT	PSVG-KDGIIRGDEIARVIGELMEGEGKIRSMQELKRAASAVLSKDGSSSTRALEEVA	470
SEQ ID NO: 24	RrUGT	PAGV-GERVVERSETTAVVKALMEGEGKGKVRNKMKEAARAVSDDGASTTALADIA	463

FIG. 4
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489
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KKWKSXXVSXXOXXHVAPO
DMWKEKSAGAGAAAAPQ
CKWENKISST
GRWKSNTCI
GKWQAKICT
NKKWASAVA
SKMRNVLON
TKLKNKVLIN
SKWKSKTWSE
TKMKRSVO
LKKZHHKKELEQNGNH
LKKWTHORDINQETSH
KIWESKV
QKWRSSMKH

Consensus
GeUGT
AsUGT
SlUGT
CaUGT
PoUGT
NbUGT1
NbUGT2
PcUGT
WsUGT
AtUGT1
AtUGT2
PtUGT
RrUGT

SEQ ID NO: 27
SEQ ID NO: 2
SEQ ID NO: 26
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SEQ ID NO: 8
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SEQ ID NO: 12
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SEQ ID NO: 24

FIG. 4
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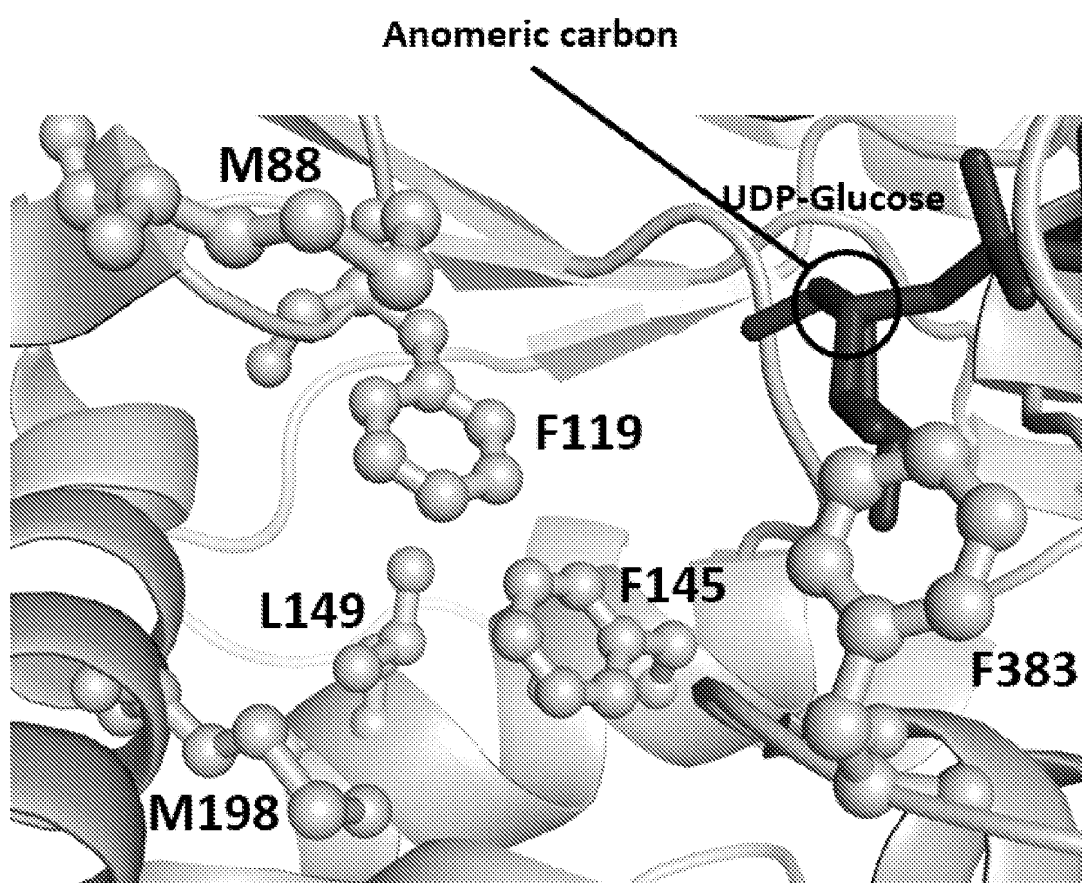


FIG. 5A

SUBSTITUTE SHEET (RULE 26)

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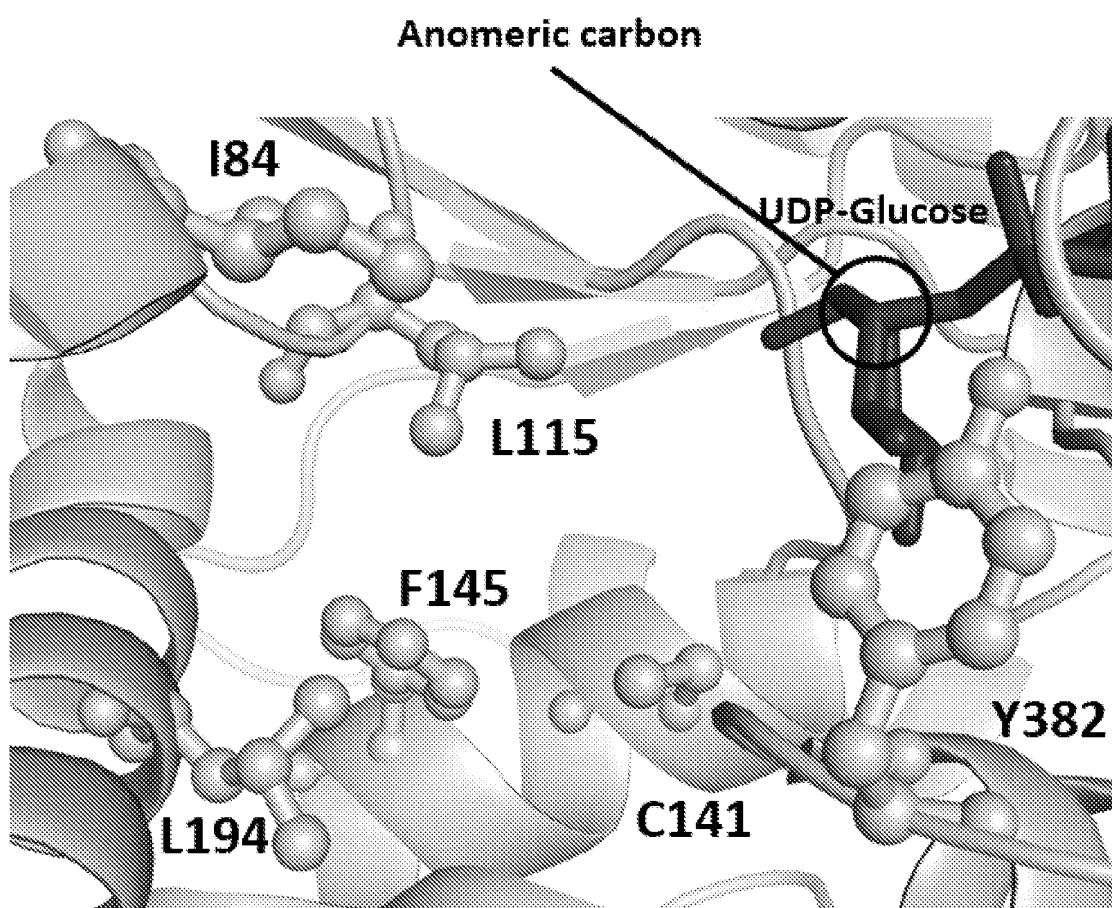


FIG. 5B

SUBSTITUTE SHEET (RULE 26)