



SN HXS@UDNITR S6' z "9GDODEND" BTODV&K ORD@BCDOR @D
RHSNVA SED@ENBTRNMV@ST@KODRNTODR SN HMC L NOD DEEDESHU
@SDO@SHUDR MCH@ HR@ENTV&X VISG @ U@FSODRDOLD NE M@ST@K
ODRNTODR@M@ @ OBG GH&NOX NE S@CH&N@KL DCH&H@D " RN SEDOD
HR @ GIFD RENOD ENQ ORD@BCDOR SN HEDN&X @M@ HRN@SD
MIL DONTRAHNF HB&K @ESHU ENL ONT@V@RV VISG BNSK&R@R@ESHUSK
ENQ GEDOHVA TR SN HL COULD SED KED @M@ B@M@COULD SN AD @
ADSDO @SDO@SHUD ENQ SED SD@S DNS NE B@CHU@RBT@Q
CHD@RDRH@M@K@HVA @S@NLATR

ENL L NNVK JMMVM @R 6NLDF@M@SD
ADKNVAHVA SN SED E@L HK 6TNV@ED@D BNS@HUR @K@K@R'
B@J@M@HUR' S@M@HUR' B@CANGXCO@SDR' CO@NSHUR' R@ONN@HUR'
S@ODD@M@HUR' FIK&N@R@EDR' " @V@S@B@X@M@HUR' CO@N@S@B@X@M@HUR'
US@L HM) " OTM@B@K@F@M OTM@B@K@M B@S@B@G@M D@K@F@B @B@C @M@
PTD@B@S@M@ 9GD ECT@R NE SED OK@V@R G@LD U@Q@NTR SED@ODT@SB
ADN@B@S@R /S HR TRDC SN SD@S R@NL @EG CHN@C@D@R' C@H@AD@S@R'
B@C@H@B CHD@RDR' G@DL N@O@N@F@D' C@M@B@K CHN@C@D@R' EDUD@
O@H@R' @M@DL H@K' R@S@O@M@X' ENTF@G @M@ D@S@F' ~
SED F@HVA DOADKNVAHVA SN SED E@L HK ?HVA H@D@Q@ED@D BNS@HUR
B@CANGXCO@SDR' US@L HM) " CO@NSHUR' B@J@M@HUR' S@M@HUR'
B@C@R' YHVA D@Q@ND' YHVA D@Q@ND @M@ R@NF@N@K@fi' /R C@Y@NL D HR
TRDC ENQ SED SD@S DNS NE TH@D@R' N@R@S@N@S@C@S@R' C@D@TL @S@N@C
@S@C@S@R@fi' G@C@S CHD@RDR @M@ K@MVA CHD@RDR /S @R@N O@K@D@LDR
ENTF@G' ENQ @M@ S@Q@S H@D@S@H@N@R' /S HR TR@D@K ENQ H@C@H@F@D@S@M@
C@M@B@K CO@N@K@L R' M@TR@D @M@ UNL H@S@M@ " 6G@Q @B@N@F@B@K@K H@S
HR @ G@X@N@K@ED@L H@B' @V@S@DL D@S@B' B@ED@L N@O@S@D@S@H@D' @V@S@H@K@K
@V@S@H@H@K@L L @S@N@X' " @V@S@H@T@ED@Q@F@D@M@B @M@ @M@K@F@D@R@B@E' ~

ENL L NNVK JMMVM@R MCH@M@F@N@R@D@O@X
ADKNVAHVA SN SED E@L HK +TOG@N@K@E@D@D /S BNS@HUR @K@K@R'
@V@S@B@X@M@HUR' @V@S@C@P@T@D@M@N@DR' B@CANGXCO@SDR' ENTL @C@HUR'
B@J@M@HUR' B@J@M@HUR' F@K@B@S@M@HUR' FIK&N@R@EDR' R@ONN@HUR'
R@O@N@HUR' S@B@O@D@M@HUR' US@L HM) @M@ C@S@M@fi' ~ , C@S@R NE SED
OK@V@R @D C@H@O@S@B' B@Q@L H@M@S@H@D' @R@S@M@F@D@S' H@L CO@LDR
@C@O@D@S@D' S@N@V@B @M@ K@V@S@H@D' /S HR TR@D@K H@M@G@C@S CHD@RDR'
H@H@D@O CHD@RDR' G@DL N@O@N@HUR' @M@DL H@K' C@H@O@D@D@' I@T@M@H@D'
C@X@R@ND@ @M@ C@X@R@ND@X' 6G@Q @B@N@F@B@K@K SED ECT@R
ON@R@R@R@DR @V@S@H@H@K@L L @S@N@X' " @V@S@H@L H@C@N@K@K @V@S@C@H@O@D@D@K@M@
@M@K@F@D@R@B@ESHUS@R@Z' ~

9GD NAIDESHU NE SED COORDNS RSTCX HR SN H@M@D@S@H@S@D
S@Q@L ANK@S@B @ESHUSK NE C@Q@K@L H@V@T@D BNS@H@M@HVA @PTD@NTR
B@T@C@D D@M@B@S@R NE O@D@B@O@D NE " ECT@R NE
@M@ C@Y@NL D NE RN S@S@S

H@S@B@M@AD B@N@V@E@D@D@C SN AD @ ADSDO@SDO@M@S@H@D @M@ AD @
R@T@A@D@B@S@N@O@E@T@O@S@E@D@R@S@T@C@H@D@R

EXPERIMENTAL WORK

Materials: (K@N@C E@N@L G@D@K@S@X UNK@M@D@D@O D@R@O@S@N@V@B A@K@V@D'
R@K@O@M@D' D@O@D@M@Q@E S@T@D@R' L H@C@N@E@D@S@H@E@F@D' H@N@S@N@V@B M@Q@L @K
R@K@H@D' R@S@O@S@N@H@M@F@D '81' ~

Collection of Plant materials: 9GD ECT@R NE 6G@K@K@N@S@T@R
DL AK@B@' C@Y@NL D NE ?HVA H@D@Q@N@E@H@M@H@D @M@ SED O@D@B@O@D NE
6T@M@B@ F@M@S@T@L V@D@D B@N@K@O@S@C E@N@L K@B@K@L @Q@D@S 9GD
L @S@O@K@R V@D@D S@N@O@N@T@F@G@X B@O@N@D@C V@S@G V@S@Q@ @M@ R@C@D
C@O@B@C' ~

Preparation of plant extract

C@S@R NE V@D@D R@O@C@Q@S@C E@N@L H@R R@D@C@R
' K@S@E@D S@E@D@D O@K@V@S@L @S@O@K@R V@D@D S@E@M@B@T@S H@S@N R@L @K@O@H@E@D@R
@M@ R@C@D C@O@B@C @M@ O@T@K@D@O@M@D@C SN ONV@C@D@Q V@S@G @
L D@B@G@N@B@K@ F@O@M@D@Q 9GD ONV@C@D@R V@D@D S@E@M@ D@M@B@S@E@C
H@C@H@E@T@K@K V@S@G C@H@S@K@O@C V@S@Q@ AX R@M@B@D@S D@M@B@S@H@M@
@C@O@C@E@S@T@R@M@ S@E@M@B@N@E@D@M@B@S@E@C AX @H@C@C@Q@H@M@ " 9GD @P@T@D@NTR
D@M@B@E@S@R NE S@E@R@D O@K@V@S@L @S@O@K@R V@D@D S@E@M@ R@N@O@D@C H@M@
R@O@C@E@S@D @H@S@H@G@S@B@N@S@H@D@R

Thrombolytic activity

M@U@S@N S@Q@L ANK@S@B @ESHUSK V@R B@N@M@T@B@E@C AX S@R@S@H@V@ SED
B@N@S@K@R@R @ESHUSK NE S@E@R@D @P@T@D@NTR D@M@B@E@S@R @F@H@M@S SED
R@B@M@C@C R@S@O@S@N@H@M@F@D' S@S@O@S@N@H@M@F@D '81' ~ @R@B@M@C@C B@N@S
K@R@R @F@D@S HR TRDC @R@ ONR@S@H@D B@N@S@N@K @M@ H@N@S@N@V@B M@Q@L @K
R@K@H@D @R@N@D@F @S@H@D B@N@S@N@K

Streptokinase (SK)

9N SED ENL L D@B@K@K @J@H@E@A@D K@N@O@G@H@Y@D@C 81 U@K@ NE F@Z' ~
//'/// /: " Ž L K H@N@S@N@V@B M@Q@L @K R@K@H@D V@R @C@C@D@C @M@
L H@M@D@C O@Q@N@O@D@K' 9G@R R@T@O@D@N@H@M@V@R S@E@M@T@R@D@C @R@ R@S@N@J
E@N@L V@G@B@f@// μKV @R@T@R@D@C ENQ SED R@S@T@C@X' ~

Sample preparation

f@// L F NE SED B@T@C@D D@M@B@E@S@R V@D@D R@T@O@D@M@D@C H@M@F@V L K NE
H@N@S@N@V@B M@Q@L @K R@K@H@D' 9GD R@T@O@D@N@H@M@ V@R K@E@S ENQ @M@
N@L@D@Q@M@F@G@S @M@ C@D@B@M@D@C SN @D@L N@L@D SED R@N@T@A@D R@T@O@D@M@S@S@S
ON@S@H@M@V@G@B@G V@R S@E@M@M@H@S@D@D@C S@E@N@T@F@G @E@H@S@D@O@C@O@D@Q f@//
μK E@N@L SED B@O@Q@R@N@T@S@H@M@V@R N@S@H@M@D@C V@R S@E@M@T@R@D@C ENQ SED
D@J@K@T@S@H@M@V@R B@N@S@K@R@R@R@ESHUSK' ~

Thrombolytic study

< G@N@D AK@N@C V@R C@C@V@M@E@N@L @ G@D@K@S@X G@L @M@UNK@M@D@D@O
V@S@E@N@T@S @M@ GH&NOX NE N@O@K B@N@S@E@D@O@S@H@D N@O@V@S@H@N@F@T@K@V@S
S@E@D@O@X @M@ S@E@M@ S@E@N@V@E@D@O@D@C H@M@ C@H@E@D@O@N@S O@D@V@D@H@G@E@C
R@S@O@K@D D@O@D@M@Q@E S@T@D@R' / Ž L K S@T@D' @M@ H@B@T@A@E@D@C @S@E! Z)

ENQ I Ž LHMISDR ' ESDQ BNS ENQ @SNM SED RDTL V@R
BNL OKOSKX ODL NUDC VISNTS CHSTCAHVA SED BNS @VC D@BG
STAD @UHVA BNS V@R @F@HM/V DHF CDC SN CDSQ LHM SED BNS
VDHFGS '< fi'' 9N D@BG DOODMONE STAD BNS@HMVA OOD,
VDHF CDC BNS fi// µKNE SEDRD @PTDNTR BTCD DMS@BSR @VC
CHEDONS OONONSHNR NE LHMISDR BNS@HMVA SEDRD BTCD
DMS@BSR V DOD @CCDC SN SED DOODMONE STADR BNS@HMVA SED
BNS ' R@ ONRSHD BNS@NK fi// µKNE 81 @VC @R@ NIF@SHD
BNS@NK fi// µKNE HNSNMB NIQ @KRAHND V DOD @CCDC SN SED
STADR RDO@OSKX SN SED BNS BNS@HMVA STADR ' IK SED STADR
V DOD SEM HUBTA@SDC @S Ł! Z) ENQ #/ LHMISDR ' ESDQ
HUBTA@SNM SED ODK@FDC BTH@ V@R ODL NUDC BNL OKOSKX @VC
SED STADR V DOD @F@HM V DHF CDC '< Ł' SN NARDQD SED
CHEDONED HM V DHF GS @ESQ BNS CHCTOSNMF~ * HEDONEDR
NAS@NDC HM V DHF GS S@JDMADEND @VC @ESQ BNS KXRR V@R
DWOODRDC @ROD@DMS@FD NE BNS KXRR!~

~ NE BNS KXRR & 'VS NE ODK@FDC BNS BNSV S' \ fi//

& '< 7l <) ^ \ fi//

< fi & V DHF GS NE DL OSX DOODMONE

< fi & V DHF GS NE DOODMONE VISG BNS

<) & < fi , < fi

< Ł & V DHF GS NE DOODMONE @ESQ KXRR

< 7 & < Ł , < fi

RESULTS

M SED OODRONS RSTCX 8SDOSUHM@RD HR TRDC @R R@M@CC
SQNL ANKXSB @F DMS 9ED @LDC@FD BNS KXRR AX RSDOSUHM@RD HR
Ž" Ž~ '1 PTDNTR BTCD DMS@BSR NE 6TMB@FQ@MSTL "?HMVA DO
NEEHH@ND @VC 6GXK@VSTRD LAKB@ @S fi/ L Fi L KENN@DMS@SNM
G@LD DV@AISDC Ł! 1 fi" " Ł/7Ł~ " Ł! Ł fi" NE BNS KXRR
@BSH@K OROD@SHDX 'S@KD fi"
, NTQ LHMISDR NE U@QHVA OONONSHNR V DOD OOD@DC AX
TRMVA SED SEOD @PTDNTR BTCD DMS@BSR , ODL SED @ANUD
ODRISR 'S@KD fi" IS HR NARDQDC S@S SED 3 fi @S fi\$fi\$fi @SN NE

' KL NPS@K SED SEQL ANKSER VNOI RH H@CX AX @BSU@SNI SED
OK@RL HMF DM@BSU@SNOH@SN OK@RL HMF GHG SEDM@K RDR SED BKS
6NL DF @M@SD ODDR ENN@HMF @V@NB@NVR G@UD ADN@E@K
DEEDBR HMB@CHU@RBT@Q CHD@RDR*) @SEGHM@M@ PTDC@DSM
SD@S DNS G@UD RENVM SN LNCTK@SD D@NS@K@K EDK
HACHN@K@SB CONSDHM 'S6 " T,6 " DVODRRNM@S SED EDKTK@Q
LN@BTK@Q @M@ FDND K@UDR H@CH@S@M SED@ HACHN@K@SB
@BSU@S^fi#* ; IS@L HM) VGHG HR OODR@S HM SED ECTIS NE
" @COD@R SN KVDQ OK@RL @ HACHN@FDM
K@UDR '1G@V fi##Z%< @M@L D@SDD fV//Z** 9GR ECTIS @RN
ENN@S@M@CT@S@M@V GHG HR @ M@S@Q@K SEQL ANK@SB @FDNS H@G@IS@R
D@S@D@O@K@S@K@S @FF@DF @S@M@M@Q@H@C@M@F@D@N@C@S@M@M@M@ IS @RN
AK@B@J@R D@C@E@D@S@R@F@D@R NE SEQL ATR ENQ @S@M@M@X H@G@IS@M@
O@NS@C@H@C@H@E@C@D H@N@L D@C@D '6* /fV~ - H@F@D@B@N@S@H@R@F@H@F@D@N@R@
R@N@F@N@R@M@M@ O@C@C@N@R@V GHG H@G@IS@ @C@B@C@N@M@B @B@C H@C@T@B@C

fifi` 8G@M CDK67" @L TM@ 6` 'fV fV' ' O' 3 DC` 6@VR 7DR I \$
fiž! , fiž! #
fifi` 8@L 103 "' L 0\$0@K8` 'fV/Ł` 4@ST@K00CTBS@CK@ND`
fiž`\$fi#ž, Ł//
fiŁ` 8TA@RG JTL @Q - "' M@M 8` 'fV/fi' ' /5 87 INTO@K NE
OG@Q @BX @VC AHNFIB@KRB@NDR #fifil , fifi"
fił` +J@ 8` 8GDDK 8` ' RGTNRG 6" @X@ *` 8@BGCDU > @VC
8V@ONK8` 'fV fifi' O' O' 6G@Q 8BHfifil ž , fi" Ł
fiž` 3 N@YDL , NRDM 83" 3 NGH: " 7@M 3 8` 'fV/fi' '
M@M@SHM@KINTO@KNE 6G@Q @BNFMIR` fiŁ!/ , Łfiž
fiž` ?!@ 3: " 9@G@ (+ ' M@M@ 1TL @Q 4" RŁ @K 3C. "
3 NG@L L @C ' " 8N@DK7` 'fV/fiž` M@M@SHM@KONTO@KNE
7DR@CGHM/6G@Q @BX @VC (H@RB@NDR fi\$fi, #
fił` . @L H@TY@L @M3 C": SNL 1" 8TK@V@ 03` 'fV/fi' ' M@
7DR O 6G@Q` ž \$fižfi, fiž!
fi" ` +L @MDO 6" 6@NN (" 8DDM@ 3 6" /C@ 3` 'fV/fifi" (KNC
9@VETR #fifiv , fił"
fi#` , @VBNR 3 (" < DNRDNM 6@M3 *", DMM+ " * @D' 6"
; HBNQ3 * : " 1DK 3 (" +CKD 3 9` 'fV//! ' O @MDO@EDL`
fi! \$8fił , 8Łfi
fV` 3 C ' @H *` 4@G@ 9` 'fV/fifi' M@M@SHM@K) TOONS
6G@Q @EDTSB@KONTO@K fi\$Ł fi, Łfi, Łfi
fifi` 4T@G@ 9+` ' L L IS' O' 7NTENF@KR (*` 9@M; . " * TJD
))` 'fV/Ł` 9@QLA 7DR fififi\$fiž# , fiž ž
fifi` 1NN 1"' L L IS' " 9@M; " * TJD) " 7NTENF@KR (~ 'fV/fi'
9@QLA 7DR fV/Ł` Ł` ! , Ł#!
fiŁ` 3 @QV< " 3 BI@U@MFG *` 3 B) @SGX' 2' (H@ 7" 7H@C 1"
) G@M " " ADM@M 2` 'fV/fiž` 62NB 5 4+` fV/fifi"
D' fił Łž! ž GSS\$, CNFNC , fV fiŁ! fił INTO@KONND/ fił Ł
ž! ž