

!" #&/
4;O <548G=>3> 70AB>AC20==O ;V:0@AL:>3> 70A>1C

"
(LAMITRIL)

!,:04:

4VNG0 @5G>28=0: ;0<>B@8468= (lamotrigine);

B01;5B:8 ?> 25 <3:

1 B01;5B:0

4>?>28=8: F5;N;>70 :@8AB0;VG=0, ;0:B>78 <=>3V4@0B, =0B@VN :@>E<0;L3;V:>;OB (B8?),
?>2V4>=, <03=VN AB50@0B;

B01;5B:8 ?> 100 <3:

1 B01;5B:0

4>?>28=8: F5;N;>70 :@8AB0;VG=0, ;0:B>78 <=>3V4@0B, =0B@VN :@>E<0;L3;V:>;OB (B8?),
?>2V4>=, <03=VN AB50@0B, 10@2=8: 6>2B89 70EV4 FCF (110);

B01;5B:8 ?> 150 <3:

1 B01;5B:0

4>?>28=8: F5;N;>70 :@8AB0;VG=0, ;0:B>78 <=>3V4@0B, =0B@VN :@>E<0;L3;V:>;OB (B8?),
?>2V4>=, <03=VN AB50@0B, 10@2=8: 70;V70 >:A84 6>2B89 (172).

V:0@AL:0 D>@<0. "01;5B:8.

A=>2=V DV78:>-EVABV:

"01;5B:8 25 <3: B01;5B:8 1V;>3> 01> <0965 1V;>3> :>;L>@C 2 D>@< « 25» 7 >4=>3> 1>:C V 7 @8A:>N 7
V=H>3>.

"01;5B:8 100 <3: B01;5B:8 A2VB;>@>652>3> :>;L>@C (4>?CAB8@0=652V 2:@0?;5==O) C D>@< « 100»
7 >4=>3> 1>:C V 7 @8A:>N 7 V=H>3>.

"01;5B:8 150 <3: B01;5B:8 <0965 1V;>3> 01> ;54L 6>2BC20B>3> :>;L>@C (4>?CAB8:>@8G=52V
2:@0?;5==O) C D>@< « 150» 7 >4=>3> 1>:C V 7 @8A:>N 7 V=H>3>.

\$0@<0:>B5@0?52B8G=0 3@C?0.

@>B85?V;5?B8G=V 70A>18. 0<>B@8468=. >4 "% N03A X09.

\$0@<0:>;>3VG=V 2;0AB82>ABV.

\$0@<0:>48=0

0<>B@8468= F5 ?@>B8AC4><=89 ?@5?0@0B, <5E0=V7< 4VW O:>3> ?>2O70=89 V7 1;>:C20==O<
?>B5=V70;70;56=8E =0B@VT28E :0=0;V2 ?@5A8=0?B8G=8E <5<1@0= =59@>=V2 C D07V ?>2V;L=>W
V=0:B820FVW B0 ?@83=VG5==O< =04;8H:>2>3> 282V;L=5==O 3;CB0<0BC (0:8A;>B8, O:0 2V4V3@0T
7=0G=C @>;L C @>728B:C 5?V;5?B8G=>3> =0?04C).

\$0@<0:>:V=5B8:0.

VA;O ?5@>@0;L=>3> ?@89>B0 ?>2=VABN 01A>@1CTBLAO 7V H;C=:>2>:-8H:>2>3> B@0:BC. 0:A8
<0;L=0 :>=F5=B@0FVO C ?;072V 4>AO30TBLAO ?@81;87=> G5@57 2,5 3>48=8.

0<>B@8468= 0:B82=> <5B01>;V7CTBLAO, 3>;>2=8< <5B01>;VB< T N-3;N:>@>=V4. # A5@54=L>4
=0?V2282545==O C 4>@>A;8E AB0=>28BL 29 3>48=. 0 7 A5G5N. # 4VB59 ?5@V>4 =0?V2282545==O
<5=H89, =V6 C 4>@>A;8E.

;V=VG=V E0@0:B5@8AB8:8.

>:070==O.

?V;5?AVO.

>@>A;V B0 4VB8 2V:< 2V4 12 @>:V2:

<=>B5@0?VO B0 4>40B:>20 B5@0?VO 5?V;5?AVW, 7>:@5<0 ?0@FV0;L=8E B0 35=5@0;V7>20=8E
=0?04V2, 2;;NG0NG8 B>=V:>:;>=VG=V =0?048, 0 B0:>6 0A>FV9>20=8E V7 A8=4@><< 5==>:A0-
0AB>.

VB8 2V:< 2V4 2 4> 12 @>:V2:
4>40B:>20 B5@0?VO 5?V;5?AVW, 7>:@<0 ?0@FV0;L=8E B0 35=5@0;V7>20=8E =0?04V2,
2;;NG0NG8 B>=V:>-;=>VG=V =0?048, 0 B0:>6 0A>FV9>20=8E V7 A8=4@><< 5==>:A0-0AB>
(;V:C20==O @>7?>G8=0NBL V7 4>40B:>2>W B5@0?VW. VA;O 4>AO3=5==O :>=B@>;N =0?04V2
?@89>< 4>?><);
<>=>B5@0?VO B8?>28E <0;8E 5?V;5?B8G=8E =0?04V2.
V?>;O@=V @>7;048.
>@>A;V 2V:< 18 @>:V2 V AB0@H5:
4;O 70?>1V30==O 28?04:0< 5<>FV9=8E ?>@CH5=L (45?@5AVO,<0=VO, 3V?><0=VO, 7@8E =0
1V?>;O@=V @>7;048.

@>B8?>:070==O.
0 ?@>B8?>:070=89 E2>@8< V7 ?V428I5=>N GCB;82VABN 4> ;0<>B@8468=C 01> 4> 1C4L-O:>3> :>
=5=B0 ?@5?0@0BC.

70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9.
C;> 2AB0=>2;5=>, I> C@848=48D>AD>3;N:C@>=V;B@0=AD5@070 F5 D5@<5=B, O:89 2V4?>2V40T 70
<5B01>;V7< ;0<>B@8468=C. 5<0T 4>:07V2 B>3>, I> ;0<>B@8468= <>65 A?@8G8=8B8 ;V=VG=> 7=0G8
?@83=VG5==O >:8A=8E D5@<5=BV2 ?5GV=:8, I> 15@CBL CG0ABL C <5B01>;V71V2, V <0;>9
<>2V@=>, I> <>65 28=8:=CB8 270T<>4VO
?;82 V=H8E ;V:0@AL:8E 70A>1V2 =0 ?5GV=:>2V D5@<5=B8

V:0@AL:V 70A>18, O:V 7=0G=> ?@83=VGCNBL ?5GV=:>2V D5@ <5=B8	V:0@AL:V 70A>18, O:V 7=0G=> V=4C:CNBL ?5GV=:>2V D5@<5=B8	V:0@AL:V 70A>18, O:V =5 ?@83=VGCNBL B0 =5 V=4C:CNBL ?5GV=:>2V D5@<5=B8
0;L?@>0B	0@10<075?V= \$5=VB>W= @8= \$5=>10@1VB0; 8D0 >?V=02V@/@8B>=02V@ B070=>2V@/@8B>=02V@* ><1V=0FVO 5B8=V;5AB@04V>;/;52>=>@35AB@5;**	VBV9 C?@>?V>= ;0=70?V= :A:0@1075?V= \$5;10<0B 010?5=B8= 525B8@0F5B0< @53010;V= ">?V@0<0B >=V70 @8?V?@07>;

* 482. @>74V; «!>AV1 70AB>AC20==O B0 4>78»
** =HV ?5@>@0;L=V :>=B@0F5?B828 B0 3>@<>=>70=8
<>6CBL 0=0;>3VG=> 2?;820B8 =0 D0@<0>:V=5B8G=V 2;0AB82>ABV ;0<>B@8468=C (482. @>74V; «!>AV1
70AB>AC20==O B0 4>78» B0 @>74V; «A>1;82>ABV 70AB>AC20==O»)).
70T<>4VO 7 ?@>B85?V;5?B8G=8<8 ?@5?0@0B0<8.
0;L?@>0B, O:89 30;L=V70FVN ;0<>B@8468=C, 7=86CT <5B01>;V7< ;0<>B@8468=C V 71V;LHCT
A5@54=V9 ?5@V>4 =0 ?V268BBO ?@81;87=> 2 420 @078.
5O:V ?@>B85?V;5?B8G=V ?@5?0@0B8 (B0:V O: D5=VB>W=, :0@10<075?V=, D5=>10@1VB0; V ?@8=),
I> V=4C:CNBL ?5GV=:>2V D5@<5=B8, V=4C:CNBL <5B01>;V7< 3;N:C@>=V70FVW ;0<>B@8468=C B0
?@8A:>@NNBL <5B01>;V7< ;0<>B@8468=C.
?>2V4><;5==O ?@> ?>1VG=V O28I0 7 1>:C F5=B@0;L=>W =5@2>2>W A8AB5<8, I> 2;;NG0;8 70?0
<>@>G5==O, 0B0:AVN, 48?;>?VN, ?>@C V =C4>BC, C ?0FVT=BV2, O:V >B@8 7=8:0NBL ?@8 7
<5=H5==V 4>78 :0@10<075?V=C. >4V1=89 5D5:B 1C;> 28O2;5=> ?@8 4>A;V465==V ;0<>B@8468=C B0
>:A:0@1075?V=C 1 200 <3, 1C;> 28O2;5=>, I> >:A:0@1075?V= =5 7
E>4V 4>A;V465=L 70 CG0ABN 74>@>28E 4>@>A;8E 4>1@>2>;LFV2, O:V ?@89<0;8 4>7C ;0
<>B@8468=C 200 <3 B0 4>7C >:A0:0@1075?V=C 1 200 <3, 1C;> 28O2;5=>, I> >:A0:0@1075?V= =5 7
E>4V 4>A;V465=L 70 CG0ABN 74>@>28E 4>1@>2>;LFV2 1C;> 28O2;5=>, I> ACAC20==O D5;10<0BC
C 4>7V 1200 <3 2 @078 =0 4>1C V ;0<>B@8468=C C 4>7V 100 <3 2 @078 =0 4>1C ?@>BO3><
10 4=V2 =5 <0;> ;V=VG=> 7=0GCI>3> 2?;82C =0 D0@<0>:V=5B8:C >AB0==L>3>.
V4?>2V4=> 4> 40=8E @5B@>A?5:B82=>3> 0=0;V7C ?;07<>28E @V2=V2 C ?0FVT=BV2, O:V
70AB>A>2C20;8 ;0<>B@8468= V7 01> 157 3010?5=B8=C, 1C;> 28O2;5=>, I> 3010?5=B8= =5 7
>B5=FV9=0 <548:0<5=B>7=0 270T<>4VO < B0 ;0<>B@8468=>< 1C;0 282G5=0 H;OE>< >FV=N20==O
@V2=O :>=F5=B@0FV9 >1>E ?@5?0@0BV2 C A8@>20BFV :@>2V ?V4 G0A ?;0F51>:>=B@>;L>20=8E
;;V=VG=8E 4>A;V465=L. 0 F8<8 40=8<8, @5G>28=8 =5 7

!BV9:0 :=F5=B@0FVO ;0<>B@8468=C C ?;072V =5 7AC20==V 7 ?@53010;V=< (200 <3 3 @078 =0
4>1C). \$0@<0>:V=5B8G=>W 270T<>4VW
">?V@0<0B =5 2?;820T =0 ?;07<>2C :=F5=B@0FVN ;0<>B@8468=C. 0AB>AC20==O ;0<>B@8468=C =0
15 % 71V;LHCT :=F5=B@0FVN B>?V@0<0BC.
0 40=8<8 4>A;V465==O, 70AB>AC20==O 7>=VA0
(150-500 <3/4>1C) ?@>BO3>< 35 4=V2 4;O ;V:C20==O 5?V;5?AVW =5<0;> ACBBT2>3> 2?;82C =0 D0@
<0>:V=5B8:C ;0<>B@8468=C.
%>G0 >?8A0=V 28?04:8 7=F5=B@0FVW V=H8E ?@>B85?V;5?B8G=8E ?@5?0@0BV2 C ?;072V,
:=B@>;L=V 4>A;V465==O ?>:070;8, I> ;0<>B@8468= =5 2?;820T =0 :=F5=B@0FVN 2 ?;072V
AC?CB=VE ?@>B85?V;5?B8G=8E 70A>1V2. 57C;LB0B8 4>A;V465=L *in vitro* 70A2V4G8;8, I> ;0
<>B@8468= =5 28BVA=OT V=HV ?@>B85?V;5?B8G=V ?@5?0@0B8 7 WE=VE 7207:V2 7 1V;;&8.
70T<>4VO 7 V=H8<8 ?A8E>B@>?=8<8 @5G>28=0<8.
@8 >4=>G0A=>2 3 3;N:=<0BC ;VBN, I> 70AB>A>2C202AO 2 @078 =0 45=L ?@>BO3>< 6 4=V2 20
?0FVT=B0<8, D0@<0>:V=5B8:0 ;VBN =5 7
030B>@07>2V ?5@>@0;L=V 4>78 1C?@>?V>=C =5 <0;8 AB0B8AB8G=> 7=0G8<>3> 2?;82C =0 D0@
<0>:V=5B8:C ;0<>B@8468=C 2 E>4V 4>A;V465=L 70 CG0ABN 12 ?0FVT=V2, ;8H5 ?@8725;8 4>
A;01:>3> ?V428I5==O @V2=O 3;N:C@>=V4C ;0<>B@8468=C.
E>4V 4>A;V465==O 70 CG0ABN 74>@>28E 4>@>A;8E 4>1@>2>;LHV2 15 <3 >;0=70?V=C 7<5=HC20;8
?;>IC ?V4 :@82>N <:=F5=B@0FVO-G0A» B0 !_{max} ;0<>B@8468=C 2 A5@54=L>2V4=>. "0:89 28A>:89
5D5:B C :;V=VG=V9 ?@0:B8FV 7CAB@VG0TBLAO @V4>: 200 <3 ;0<>B@8468=C =5 2?;820T =0 D0@
<0>:V=5B8:C >;0=70?V=C.
030B>@07>2V ?5@>@0;L=V 4>78 ;0<>B@8468=C 400 <3 =0 4>1C =5 A?@8G8=O;8 :;V=VG=>
7=0GCI>3> 2?;82C =0 D0@<0>:V=5B8:C @8A?5@84>=C ?@8 ?@89>2>W 4>78 2 <3 C E>4V 4>A;V465=L
70 CG0ABN 14 74>@>28E 4>@>A;8E 4>1@>2>;LHV2. @8 ACAC20==V 2 <3 @8A?5@84>=C 7 ;0
<>B@8468=>< C 12 7 14 4>1@>2>;LHV2 ?>2V4><;O;>AO ?@> 28=8:=5==O A>;82>ABV ?>@V2=O=> 7
1 =0 20 4>1@>2>;LHV2 ?@8 70AB>AC20==V ;8H5 @8A?5@84>=C. 5 28O2;5=> 6>4=>3> 28?04:C
A>;82>ABV ?@8 70AB>AC20==V BV;L:8 ;0<>B@8468=C.
E>4V :;V=VG=>3> 4>A;V465==O 70 CG0ABV 18 4>@>A;8E ?0FVT=V2 7 1V?>;O@=8< @>7;04><,
O:V>B@8
30 <3/45=L ?@>BO3>< 7 4=V2 B0 70AB>A>20=> I5 ?@>BO3>< 7 4=V2. 030;>< A?>AB5@V30;>AL
?@81;87=> 10 % 7<5=H5==O !_{max} B0 AUC ;0<>B@8468=C. 5 >GV:CTBLAO, I> 5D5:B B0:8E 7
:A?5@8<5=B8 *in vitro* ?>:070;8, I> =0 D>@3> <5B01>;VBC ;0<>B@8468=C, 2-N-3;N:C@>=V4C, ;8H5 ;C 2 :
@>A><0E ?5GV=:8 ;N48=8 <>6=0 287=0G8B8, I> ;0<>B@8468= =5 7<5=HCT :;V@5=A ?@5?0@0BV2,
O:V <5B01>;V7CNBLAO, 3>;>2=8< G8=><, 70 4>?><>3>N CYP2D6. 57C;LB0B8 *in vitro* 5:A?5@8
<5=V2 B0:>6 40NBL <>6;82VABL AB25@46C20B8, I> =0 :;V@5=A ;0<>B@8468=C =02@04 G8
<>6CBL 2?;8=CB8 :;>70?V=, D5=5;78=, @8A?5@84>=, A5@B@0;V= 01> B@07>4>=.
70T<>4VO 7 3>@<>=0;L=8<8 :=B@0F5?B820<8.
?;82 3>@<>=0;L=8E :=B@0F5?B82V2 =0 D0@<0>:V=5B8:C ;0<>B@8468=C.
E>4V 4>A;V465==O 70 CG0ABN 16 6V=>:-4>1@>2>;LHV2, O:V ?@89<0;8 B01;5B:C ;0<>B@8468=C 7
:><1V=0FVTN 5B8=V;5AB@04V>; 30 =>@35AB@5; 150 2V47=0G5=> 71V;LH5==O 282545==O ;0
<>B@8468=C ?@81;87=> 2 2 @078, I>, C A2>N G5@3C, A?@8G8=8;> 7<5=H5==O ?;>IV ?V4 :@82>N
<:=F5=B@0FVO-G0A» B0 !_{max} ;0<>B@8468=C 2 A5@54=L>2V4=>. :=F5=B@0FVO ;0<>B@8468=C 2
A8@>20BFV :@>2V ?>ABC?>2> 7@>AB0;0 ?@>BO3>< B86=52>W ?5@5@28, 4>AO30NG8 2 A5@54=L>
C 2 @078 28I>W :=F5=B@0FVW 1;86G5 4> :V=FO B86=52>W ?5@5@28, =V6 ?@8 ACAC20==V
?@5?0@0BV2 (482. @>74V; «!>AV1 70AB>AC20==O B0 4>78» B0 @>74V; «A>1;82>ABV
70AB>AC20==O»).

?;82 ;0<>B@8468=C =0 D0@<0>:V=5B8:C 3>@<>=0;L=8E :=B@0F5?B82V2.
0 40=8<8 4>A;V465=L, C 16 6V=>:-4>1@>2>;LHV2 =5770 ;0<>B@8468=C 300 <3 =5 2?;820;0 =0 D0@
<0>:V=5B8:C 5B8=V;5AB@04V>;C, O:89 T G0AB8=>N :<1V=>20=>W B01;5B:8 ?5@>@0;L=>3>
:=B@0F5?B82C. !?>AB5@V30;>AL ?>ABV9=5 =525;8:5 71V;LH5==O 282545==O ;52>=>@35AB@5;C,
I>, C A2>N G5@3C, A?@8G8=O;> 7<5=H5==O ?;>IV ?V4 :@82>N <:=F5=B@0FVO-G0A» B0 !_{max}
;52>=>@35AB@5;C 2 A5@54=L>2V4=>. 8 A8@>20B:>2>3> @V2=O D>;V:C;>AB83> 3>@<>=C,
;NB5W=V7CNG>3> 3>@<>=C B0 5AB@04V>;C ?@>BO3>< 4>A;V465==O ?>:070;> ?@83=VG5==O
OTG=8:>2>W 3>@<>=0;L=>W 0:B82=>ABV 2 45O:8E 6V=>:, E>G0 2835AB5@>=C 2 A8@>20BFV
:@>2V 28O28;8, I> =5<0T =VO:8E 3>@<>=0;L=8E A82C;OFVW C 6>4=>W V7 16 6V=>:.. ?;82 720B:>28E

D>;V:C;>AB83> B0 ;NB5W=V7CNG>3> 3>@<=>V2 B0 =57=0G=>3> 71V;LH5==O 282545==O
;52>=>35AB@5;C =0 0:B82=VABL OTG=8:>2>W >2C;OFVW =52V4<89 (482. @>74V; «A>1;82>ABV
70AB>AC20==O»). ?;82 ;0<>B@8468=C 2 4>1>2V9 4>7V ?>=04 300 <3 =5 4>A;V46C202AO. >A;V465==O
V=H8E 3>@<=>0;L=8E :>=B@0F5?B82V2 B0:>6 =5 ?@>2>48;8AL.
70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8.
E>4V 4>A;V465=L 70 CG0ABN 10 G>;>2V:V2-4>1@>2>;LFV2, O:V ?@89<0;8 @8D04 =0?V2@>7?04C ;0
<>B@8468=C 2=0A;V4>: V=4C:FVW ?5GV=:>28E D5@<5=BV2, 2V4?>2V40;L=8E 70 3;N:C@>=V70FVN.
;O ?0FVT=BV2, O:V >B@8<5=4>20=>3> 4;O ;V:C20==O ;0<>B@8468=>< V 2V4?>2V4=8<8 V=4C:B>@0
<8 3;N:C@>=V70FVW (482. @>74V; «A>1;82>ABV 70AB>AC20==O»).
0 40=8<8 4>A;V465=L 70 CG0ABN 74>@>28E 4>1@>2>;LFV2, ;>?V=02V@/@8B>=02V@ ?@81;87=>
242VGV 7=86CNBL ?;07<>2C :>=F5=B@0FVN ;0<>B@8468=C H;OE>< V=4C:FVW 3;N:C@>=V70FVW.
;O ;V:C20==O ?0FVT=BV2, O:V 265 70AB>A>2CNBL ;>?V=02V@/@8B>=02V@, A;V4 4>B@8
<5=4>20=>3> ?@8 70AB>AC20==V ;0<>B@8468=C B0 V=4C:B>@V2 3;N:C@>=V70FVW (482. @>74V;
«A>1;82>ABV 70AB>AC20==O»).
0 40=8<8 4>A;V465=L 70 CG0ABN 74>@>28E 4>1@>2>;LFV2, 70AB>AC20==O 0B070=02V@C
/@8B>=02V@C (300 <3/100 <3) 7<5=HC20;> AUC B0 !_{max};0<>B@8468=C C ?;072V (C 4>7V 100 <3) C
A5@54=L>2V4=> (482. @>74V; «A>1;82>ABV 70AB>AC20==O»).
0=V 282G5==O in vitro 2?;82C ;0<>B@8468=C =0 >@30=VG=V :0BV>==V B@0=A?>@B5@8 2 (" 2)
?@>45<=>AB@C20;8, I> ;0<>B@8468=, 0;5 =5 N(2)-3;N:C@>=V4 <5B01>;VB, T V=3V1VB>@< " 2 C
?>B5=V9=> ;V=VG=> 7=0GCI8E :>=F5=B@0FVOE. &V 40=V 45<=>AB@CNBL, I> ;0<>B@8468= T
1V;LH ?>BC6=8< V=3V1VB>@< " 2, =V6 F8<5B848=, 7 !₅₀ ?>:07=8:0<8 53,8 μB0 186 μ2V4?>2V4=> (482.
@>74V; «A>1;82>ABV 70AB>AC20==O»).
70T<>4VO V7 70;CG5==O< ;01>@0B>@=8E B5ABV2.
>2V4><;O;>AO ?@> 270T<>4VN ;0<>B@8468=C 7 B5AB0<8, I> 70AB>A>2CNBLAO 4;O H284:>3>
287=0G5==O 450:8E ;V:0@AL:8E 70A>1V2 C A5GV, @57C;LB0B< G>3> <>6CBL AB0B8
E81=>?>78B82=V ?>:07=8:8, >A>1;82> ?@8 287=0G5==V D5=F8::848=C. ;O ?V4B25@465==O
?>78B82=8E @57C;LB0BV2 =5>1EV4=> 70AB>AC20B8 0;LB5@=0B82=89 1V;LH A?5F8DVG=89 EV

A>1;82>ABV 70AB>AC20==O.

(:V@=V 28A8?0==O.

@>B03>< ?5@H8E 8 B86=V2 2V4 ?>G0B:C ;V:C20==O ;0<>B@8468=>< <>65 28=8:0B8 ?>1VG=0 4VO 7
1>:C H:V@8 C 283;O4V 28A8?0=L. # 1V;LH>ABV 28?04:V2 28A8?0==O T ?>c0-6>=A>=0 V B>:A8G=89
5?V45@<0;L=89 =5:@>;V7. # 4>@>A;8E, O:V 1@0;8 CG0ABL C 4>A;V465==OE V7 70AB>AC20==O<
ACG0A=8E @5:><5=40FV9 7 4>7C20==O ;0<>B@8468=C, G0AB>B0 BO6:8E H:V@=8E 28A8?0=L
AB0=>28BL ?@81;87=> 1 =0 500 E2>@8E =0 5?V;5?AVN. @81;87=> C ?>;>28=8 F8E 28?04:V2
4V03=>ABC202AO A8=4@< !BV25=c0-6>=A>=0
(1 =0 1000).

'0AB>B0 BO6:8E H:V@=8E 28A8?0=L C E2>@8E =0 1V?>;O@=V @>7;048 AB0=>28BL 1 =0 1000.

4VB59 @878: 28=8:=5==O A5@9>7=8E H:V@=8E 28A8?0=L 28I89, =V6 C 4>@>A;8E.

0 40=8<8 4>A;V465=L, G0AB>B0 28?04:V2 28A8?0=L, I> ?@872>48;8 4> 3>A?VB0;V70FVW, C 4VB59
20@VNT 2V4 1 =0 300 4> 1 =0 100 E2>@8E. # 4VB59 ?5@HV >7=0:8 H:V@=8E 28A8?0=L <>6CBL 1CB8
?><8;:>2> A?@89=OBV 70 V=D5:FVN, B>

8 B86=V2 B5@0?VW.

030;L=89 @878: 28=8:=5==O H:V@=8E 28A8?0=L, >G5284=>, BVA=> ?>2O70=89 V7 28A>:8<8
?>G0B:>28<8 4>70<8 ;0<>B@8468=C B0 ?5@528I5==O< @5:><5=4>20=>W AE5<8 71V;LH5==O 4>7 ?@8
B5@0?VW ;0<>B@8468=><, 0 B0:>6 V7 AC?CB=V< 70AB>AC20==O< 20;L?@>0BC.

>15@56=VABN A;V4 70AB>A>2C20B8 ;0<>B@8468= 4;O ;V:C20==O E2>@8E, O:V <0;8 0;5@3VN 01>
28A8?0==O ?@8 70AB>AC20==V V=H8E 0=B85?V;5?B8G=8E ?@5?0@0BV2 2 0=0<=57V, >A;V;L:8
G0AB>B0 ?>O28 ?>

@8 ?>O2V 28A8?0=L =0 H:V@V A;V4 =5309=> >3;O=CB8 ?0FVT=B0 (O: 4>@>A;>3>, B0: V 48B8=C) B0
?@8?8=8B8 ?@89>< ?@5?0@0BC, O:I> =5<0T 4>:07V2, I> H:V@=V 28A8?0==O =5 ?>2O70=V 7 ?@89><>
< ?@5?0@0BC. 5 @5:><5=4CTBLAO ?>2B>@=> @>7?>G8=0B8 ;V:C20==O ;0<>B@8468=><, :>8 2>=>
1C;> ?@8?8=5=> G5@57 ?>O2C 28A8?0=L 2=0A;V4>: ?>?5@54=L>3> ;V:C20==O ;0<>B@8468=>4>

?>2B>@=>3> ?@87=0G5==O ?@5?0@0BC =5>1EV4=> 72068B8 >GV:C20=C :>@8ABL 2V4 ;V:C20==O B0 <>6;8289 @878:.

"0:>6 ?>2V4<;O;>AL, I> H:V@=V 28A8?0==O T G0AB8=>N A8=4@>ABV, O:89 AC?@>2>46CTBLAO @V7=><0=VB=8<8 A8AB5<=8<8 A8=4@<0<8, I> 2:;NG0NBL 30@OG:C, ;V?0BVN, =01@O: >1;8GGO, 7 2V B0 ?>@CH5==O DC=:FVW ?5GV=:8. !8=4@< <>65 <0B8 @V7=V ABC?5=V BO6:>ABV V 7@V4:0 <>65 ?@872>48B8 4> 48A520=>3> 2=CB@VH=L>AC48==>3> 73>@B0==O :@>2V B0 ?>;V>@30==>W =54>AB0B=>ABV. 06;82> 2V47=0G8B8, I> @0==V >7=0:8 3V?5@GCB;82>ABV (=0?@8:;04, 30@OG:0 B0 ;V?0BVO) <>6CBL 28=8:0B8 =02VBL ?@8 2V4ACB=>ABV H:V@=8E 28A8?0=L. @8 =0O2=>ABV B0:8E A8 >3;O=CB8 B0, ?@8 2V4ACB=>ABV V=H8E ?@8G8=, ?@8?8=8B8 ?@89< ?@5?0@0BC. :V=VG=V ?>3V@H5==O B0 ACWF840;L=89 @878:.

V4 25 4> 50 % ?0FVT=BV2 V7 1V?>;O@=8<8 @>7;040<8 <0NBL I>=09<5=H5 >4=C ACWF840;L=C A?@>1C B0 2>=8 <>6CBL 2V4GC20B8 ?>3V@H5==O A8 ?>O2C ACWF840;L=8E =0254V=:8 (ACWF840;L=VABL), =570;56=> 2V4 B>3>, 70AB>A>2C20;8 2>=8 ?@5?0@0B8 4;O ;V:C20==O 1V?>;O@=>3> @>7;04C, 7>:@5<0 ;0<>B@8468=, G8 =V. "0:>6 T 40=V, I> ?0FVT=B8, E2>@V =0 5?V;5?AVN, <0NBL ?V428I5=89 @878: ACWF840;L=>ABV.

0 ?0FVT=B0<8, O:V ;V:CNBLAO ;0<>B@8468=>< V7 ?@82>4C 1V?>;O@=>3> @>7;04C, =5>1EV4=> C206=> A?>AB5@V30B8 ?@8 :;V=VG=>3V@H5==V (I> 2:;NG0T ?>O2C =>28E A8ABV, >A>1;82> =0 ?>G0B:C :C@AC ;V:C20==O 01> ?V4 G0A 77C20==O. # 45O:8E ?0FVT=BV2, B8E, EB> <0T 2 0=0<=57V ACWF840;L=C ?>254V=:C 01> 4CN ACWF840;L=V =0 ?>G0B:C ;V:C20==O, <>65 1CB8 1V;LH89 @878: ?>O28 ACWF840;L=8E 4C<>: 01> ACWF840;L=8E A?@>1, I> 1C45 28<030B8 C206=>3> A?>AB5@565==O ?V4 G0A ;V:C20==O.

0FVT=BV2 (B0 >AV1, O:V 4>3;O40NBL 70 ?0FVT=B0<8) =5>1EV4=> ?>?5@548B8 ?@> =5>1EV4=VABL A?>AB5@565==O 70 1C4L-O:8< ?>3V@H5==O< WE=L>3> AB0=C (2:;NG0NG8 ?>O2C =>28E A8 ?>O2>N ACWF840;L=8E =0254V=:8 01> AE8;L=VABN 4> A0<>CH:>465==O 4;O B>3>, I>1 =5309=> 725@=CB8AL ?> <548G=C 4>?><>3C ?@8 28=8=:5==V F8E A8 @8 FL>FV=8B8 A8BC0FVN B0 2=5AB8 2V4?>2V4=V 7 B5@0?52B8G=>3> @568 2:;NG0T <>6;825 ?@8?8=5==O ;V:C20==O C ?0FVT=BV2 V7 ?@>O20<8 :;V=VG=>3> ?>3V@H5==O (2:;NG0NG8 ?>O2C =>28E A8 ?>O2C ACWF840;L=8E =0254V=:8, >A>1;82> O:I> FV A8<8 T BO6:8<8, 28=8:0NBL @0?B>2> V =5 T G0AB8=>N 265 VA=CNG8E A8

'0AB>B0 28?04V2 ACWF840;L=8E =0254V=:8 1C;0 >FV=5=0 2=0A;V4>: AC:C?=>3> 0=0;V7C ?;0F51>:>=B@>;L>20=8E :;V=VG=8E 4>A;V465=L ;0<>B@8468=C V7 70;CG5==O< 7030;< 6467 ?0FVT=BV2 V7 =87:>N ?>:070=L.

?V43@C?V E2>@8E V7 1V?>;O@=8<8 @>7;040<8 G0AB>B0 B0:8E 28?04:V2 C G8A;>2>H5==V, 0;5 =5 AB0B8AB8G=> 7=0G8<>, 1C;0 1V;LH0 ?@8 70AB>AC20==V ;0<>B@8468=C (29/1212 [2,4 %]) ?>@V 2=O=> 7 ?;0F51> (19/1054 [1,8 %]). 0 40=8<8 AC:C?=>3> 0=0;V7C ?A8EV0B@8G=8E ?>:070=L, B0:V 28?04:8 G0ABVH5 28=8:0;8 ?@>BO3< ?5@H>3> @8E, O:V ;V:C20;8AL ;0<>B@8468=>254V=:>2V 28?04:8 G0ABVH5 28=8:0;8 2 G>;>2V:V2.

?V43@C?V E2>@8E =0 5?V;5?AVN =5 1C;> 28O2;5=> AB0B8AB8G=> 7=0GCI>W @V7=8FV 2 G0AB>BV B0:8E 28?04:V2 ?@8 70AB>AC20==V ;0<>B@8468=C ?>@V2=O=> 7 ?;0F51>. 572060NG8 =0 B5, I> :V;L:VABL 28?04:V2 ACWF840;L=8E =0254V=:8 1C;0 4>A8BL =87:>N (6/1073 [0,6 %]) ?@8 70AB>AC20==V ;0<>B@8468=C B0 2/805 (0,3 %) ?@8 70AB>AC20==V ?;0F51>, I>1 4>72>;8B8 ?@>25AB8 ?52=5 ?>@V2=O==O O:89 1C;> ?>2V4<;5=> 35=FVTN 7 ;V:0@AL:8E 70A>1V2 B0 ?@>4C:BV2 E0@GC20==O !((FDA) =0 >A=>2V ?@>2545=>3> FVTN 35=FVTN <5B0-0=0;V7C 11 ?@>B8AC4><=8E ?@5?0@0BV2, 2:;NG0NG8 ;0<>B@8468=.

>@<>=0;L=V :>=B@0F5?B828.

?;82 3>@<>=0;L=8E :>=B@0F5?B82V2 =0 5D5:B82=VABL ;0<>B@8468=C.

C;8 >B@8<0=V 40=V, I> :<1V=0FVO 5B8=V;5AB@04V>; 30=>@35AB@5;L 150 71V;LH8B8 (H;OE< B8B@0FVW) ?V4B@87C ;0<>B@8468=C (242VGV). # 6V=>:, O:V I5 =5 ?@89<0NBL ?@5?0@0B8-V=4C:B>@8 3;N:C@>=V70FVW ;0<>B@8468=C V 265 ?@89<0NBL 3>@<>=0;L=V :>=B@0F5?B828 (7 B86=52>N ?5@5@2>N 25 ?V428I5==O @V2=O ;0<>B@8468=C ?V4 G0A B86=52>W ?5@5@28. &5 ?V428I5==O 1C45 1V;LH8<, O:I> 4>7C ;0<>B@8468=C 71V;LH8B8 70 45=L 4> 01> ?@>BO3< B86=52>W ?5@5@28. ">7?>G8=0NBL ?@89<0B8 ?5@>@0;L=V :>=B@0F5?B828 01> 70:V=GCNBL :C@A 70AB>AC20==O ?5@>@0;L=8E :>=B@0F5?B82V2, ?>28==V ?>ABV9=> ?5@51C20B8 ?V4 =03;O4<< ;V:0@O V 2 1V;LH>ABV 28?04:V2 W< ?>B@V1=0 1C45 :>@5:FVO 4>78 ;0<>B@8468=C.

=HV ?5@>@0;L=V :>=B@0F5?B828 B0 3>@<=>70=8 <>6CBL 0=0;>3VG=> 2?;820B8 =0 D0@
<0>:V=5B8G=V 2;0AB82>ABV ;0<>B@8468=C.
?;82 ;0<>B@8468=C =0 5D5:B82=VABL 3>@<=>0;L=8E :>=B@0F5?B82V2.
0 @57C;LB0B0<8 ::V=VG=>3> 4>A;V465==O I>4> 282G5==O 270T<>4VW, 2 O:>
16 74>@>28E 4>1@>2>;LFV2, 1C;> 28O2;5=> =57=0G=5 71V;LH5==O 282545==O ;52>=>@35AB@5;N
B0 7;V:C;>AB83> B0 ;NB5W=V7CNG>3> 3>@<=>V2 C A8@>20BFV :@>2V C 28?04:C, :>;8 ;0
<>B@8468= 70AB>A>2C202AO @07>< V7 3>@<=>0;L=8<8 :>=B@0F5?B820<8 (:<1V=0FVO
5B8=V;5AB@04V>; 30=>@35AB@5;L 150 2C;OFVN OTG=8:V2 =52V4><89. ;5 =5 <>6=0 2V4:840B8
<>6;82>ABV, I> 2 45O:8E ?0FVT=BV2, O:V >4=>G0A=> ?@89<0NBL ;0<>B@8468= V 3>@<=>0;L=V
:>=B@0F5?B828, FV 74OBL 4> 7=865==O 5D5:B82=>ABV >AB0==VE. ">?>O2C @0?B>2>W
:@>2>B5GV.
?;82 ;0<>B@8468=C =0 AC1AB@0B8 >@30=VG=8E :0BV>==8E B@0=A?>@B5@V2 2 (" 2).
0<>B@8468= T V=3V1VB>@<=>8@:>2>W BC1C;O@=>W A5:@5FVW G5@57 1V;;8 >@30=VG=8E
:0BV>==8E B@0=A?>@B5@V2. &5 <>65 A?@8G8=OB8 71V;LH5==O ?;07<>2>3> @V2=O 45O:8E
?@5?0@0BV2, I> 5:A:@5BCNBLAO 3>;>2=8< G8=>< 28I5=02545=8< H;OE>AC20==O 0
>?>28=8. @5?0@0B 7C. 0FVT=B0< V7 @V4:VA=8<8 A?04:>28<8 70E2>@N20==O<8, B0:8<8 O:
=5?5@5=>A878, =54>AB0B=VABL ;0:B078 0?>0 B0<0;L01A>@1FVO 3;N:>78-30;0:B>78, =5 A;V4
70AB>A>2C20B8 F59 ?@5?0@0B.
83V4@>D>;0B@54C:B070.
0AC20==V <>6;8289 9>3> 2?;82 =0 <5B01>;V7< D>;0BV2. 4=0: ?@8 B@820;>AC20==V =5 2V41C20;>AO
1C4L-O:8E VAB>B=8E 7ABV 35<>3>;1V=C, A5@54=L>3> >1TF8BV2, :>=F5=B@0FVW D>;0BV2 C
A8@>20BFV B0 5@8B@>F8B0E ?@>BO3< 1 @>:C B0 :>=F5=B@0FVW D>;0BV2 2 5@8B@>F8B0E
?@>BO3< 5 @>:V2.
8@:>20 =54>AB0B=VABL.
4>A;V465==OE >4=>@07>2>W 4>78 2 ?0FVT=BV2 V7 B5@2V ACBBT2> =5 7=V4=>3> <5B01>;VBC.
">15@56=>ABV.
0FVT=B8, O:V ?@89<0NBL V=HV ?@5?0@0B8, I>
0
?V;5?AVO.
0?B>25 ?@8?8=5==O ?@89>B85?V;5?B8G=8E 70A>1V2, <>65 A?@>2>:C20B8 71V;LH5==O G0AB>B8
=0?04V2. 0 28=OB:< B8E 28?04:V2, :>;8 AB0= ?0FVT=B0 28<030T @0?B>2>3> ?@8?8=5==O ?@89>O2V
28A8?0=L), 4>7C ?@5?0@0BC A;V4 7<5=HC20B8 ?>ABC?>2>, =5 <5=H5 2 B86=V2.
0 40=8<8 ;VB5@0BC@8, BO6:V 5?V;5?B8G=V =0?048 <>6CBL A?@8G8=OB8 @014>;V7, ?>;V>@30==C
=54>AB0B=VABL V A8=4@< 48A520=>3> 2=CB@VH=L>AC48==>3> 73>@B0==O :@>2V, V=:>;8 7
;5B0;L=8< :V=F53VG=V 28?04:8 <>6;82V V =0 B;V ;V:C20==O 0
V?>;O@=V @>7;048.
VB8 V ?V4;VB:8.
V:C20==O 0=B845?@5A0=B0<8 ?>2O70=> 7 ?V428I5=8< @878:< ACWF840;L=8E =0254V=:8 C 4VB59
B0 ?V4;VB:V2 V7 25;8:8<8 45?@5A82=8<8 @>7;040<8 B0 V=H8<8 ?A8EVG=8<8 @>7;040<8.
\$5@B8;L=VABL.
@87=0G5==O 04C:B82=8E 4>A;V465==OE =0 B20@8=0E =5 ?>@CHC20;> D5@B8;L=VABL. 0=8E ?@>
2?;82 0
"5@0B>35==VABL.
070E, I> ?5@528IC20;8 B5@0?52B8G=V 4>78 4;O ;N459, =5 28O28;8 B5@0B>35==>3> 5D5:BC.

0AB>AC20==O C ?5@V>4 203VB=>ABV 01> 3>4C20==O 3@C44N.
878.; ?>2O70=89 V7 70AB>AC20==O< ?@>B85?V;5?B8G=8E ?@5?0@0BV2 2 FV;>
V=:0< 4VB>@>4=>3> 2V:C A;V4 725@=CB8AO 70 ?>@04>N 4> ;V:0@O. V4 G0A ?;0=C20==O
203VB=>ABV =5>1EV4=VABL ;V:C20==O ?@>B85?V;5?B8G=8<8 70A>10<8 A;V4 ?5@53;O=CB8. V=:0<,
E2>@8< =0 5?V;5?AVN, O:V 265 ;V:CNBLAO, A;V4 C=8:0B8 @0?B>2>3> ?5@5@820==O
?@>B85?V;5?B8G=>W B5@0?VW, >A:V;L:8 F5<>65 A?@8G8=8B8 703>AB@5==O =0?04V2 B0 <0B8
BO6:V =0A;V4:8 O: 4;O 6V=:8 B0: V 4;O 48B8=8.
878: 28=8=:5==O 2@>465=8E 0=><0;V9 C 4VB59 <0B5@V2, O:V ;V:C20;8AL ?@>B85?V;5?B8G=8<8
;V:0@AL:8<8 70A>10<8, 28I89 ?>@V2=O=> 7 B0:8< C 7030;L=V9 ?>?C;OFVW ?@81;87=> =0 3 %.
09?>H8@5=VH8<8 45D5:B0<8, ?@> O:V 1C;8 ?>2V4><;5==O, AB0=>28;8 @>7I5;8=0 3C18 (70OG0 3C10),

2048 @>728B:C A5@F52>-AC48==>W A8AB5<8 B0 45D5:B8 =5@2>2>W B@C1:8. 878: 28=8:=5==O
2@>465=8E 204 28I89 ?@8 :><1V=>20=V9 ?@>B85?V;5?B8G=V9 B5@0?VW ?>@V2=O=> 7
<=>B5@0?VTN, B>

878:., ?>2'O70=89 V7 70AB>AC20==O< ;0<>B@8468=C.

C;8 >B@8<0=V ?>AB<0@:5B8=3>2V 40=V 7 :V;L:>E ?@>A?5:B82=8E @5TAB@V2 70 CG0ABN ?>=04
2000 6V=>:, O:V >B@8

0=8E ?@> 70AB>AC20==O ;0<>B@8468=C ?@8 :><1V=>20=V9 B5@0?VW =54>AB0B=L>, I>1 7@>18B8
28A=>2>:, G8 <0T ;0<>B@8468= 2?;82 =0 @878: 28=8:=5==O 204 @>728B:C, 0A>FV9>20=8E 7 V=H8<8
?@5?0@0B0<8.

/: V V=HV ?@5?0@0B8, ;0<>B@8468= ?@87=0G0NBL ?V4 G0A 203VB=>ABV BV;L:8 C 28?04:C, O:I>
>GV:C20=0 :>@8ABL 4;O <0B5@V ?5@52060T <>6;8289 @878: 4;O ?;>40.

0<>B@8468= <0T A;01:89 V=3V1VB>@=89 2?;82 =0 483V4@>D>;0B@54C:B07C V B>@5B8G=> <>65
?V428I8B8 @878: ?>@CH5==O 5<1@V>=0;L=>3> @>728B:C H;OE>< 7<5=H5==O @V2=O D>;VT2>W
:8A;>B8 (482. @>74V; «A>1;82>ABV 70AB>AC20==O»). ">1EV4=VABL ?@89>;VT2>W :8A;>B8 ?V4 G0A
?;0=C20==O B0 C @0==V AB@>:8 203VB=>ABV.

\$V7V>;>3VG=V 7ABV <>6CBL 2?;820B8 =0 @V25=L ;0<>B@8468=C B0/01> 9>3> B5@0?52B8G=89
5D5:B. C;8 28?04:8 7<5=H5==O @V2=O ;0<>B@8468=C ?V4 G0A 203VB=>ABV, I> ?>B5=V9=>
71V;LHC20;> @878: 2B@0B8 :>=B@>;N 70 =0?040<8. VA;O =0@>465==O 48B8=8 @V25=L ;0
<>B@8468=C <>65 H284:> 71V;LH8B8AL 7 ?>B5=V9=8< @878:>< 28=8:=5==O 4>7>70;56=8E
?>1VG=8E @50:FV9. ">=F5=B@0FVW ;0<>B@8468=C C A8@>20BFV :@>2V =0 B>1C2 4>
203VB=>ABV, 01> 040?BC20B8 2V4?>2V4=> 4> ;V=VG=>3> AB0=C. >40B:>2> A;V4 :>=B@>;N20B8
4>7>70;56=V ?>1VG=V @50:FVW ?VA;O =0@>465==V 48B8=8.

5@V>4 3>4C20==O 3@C44N.

>2V4><;O;>AO, I> ;0<>B@8468= 284V;OTBLAO C 3@C4=5 <>;> C 20@V015;L=8E :>=F5=B@0FVOE.

@8 FL>48;8AL =0 3@C4=>4>2C20==V, @V25=L ;0<>B@8468=C C A8@>20BFV :@>2V AO30B8
@V2=V2, ?@8 O:8E 1C2 <>6;8289 D0@<0>;>3VG=89 5D5:B.

">@8ABL 2V4 3>4C20==O 3@C44N ?>28==0 1CB8 ?>@V2=O==0 7 <>6;828< @878:>< 28=8:=5==O
?>1VG=>W 4VW C 48B8=8.

**40B=VABL 2?;820B8 =0 H284:VABL @50:FVW ?@8 :5@C20==V 02B>B@0=A?>@B< 01> V=H8<8
<5E0=V7<0<8.**

?5@V>4 ;V:C20==O 0< <>6;82V 70?0<>@>G5==O B0 48?;>?VO. A:V;L:8 @50:FVO =0 ;V:C20==O
?@>B8AC4><=8<8 ?@5?0@0B0<8 E0@0:B5@87CTBLAO V=482V4C0;L=8<8 2V4ABO<8, ?0FVT=B0<
@5:><5=4CTBLAO ?@>:=AC;LBC20B8AO 7 ;V:0@5< AB>A>2=> <>6;82>ABV :5@C20==O 02B<>1V;5
< V @>1>B8 7 @CE><8<8 <5E0=V7<0<8 =0 B;V ?@89>

!>AV1 70AB>AC20==O B0 4>78.

0

5 A;V4 ?5@528IC20B8 @5:><5=4>20=C ?>G0B:>2C 4>7C ;0<>B@8468=C, O: V @5:><5=4>20=89 >1□T<
71V;LH5==O 4>78. @8 H284:>78 2 ?@>F5AV WW ?V41>@C 2V47=0G0TBLAO ?V428I5==O G0AB>B8
A5@9>7=8E 45@<0B>;>3VG=8E CA;;04=5=L.

?V;5?AVO.

@8 <>=>B5@0?VW.

>@>A;V B0 4VB8 2V:>< 2V4 12 @>:V2 (482. B01;. 1).

>G0B:>20 4>70 ;0<>B@8468=C AB0=>28BL 25<3 1 @07 =0 4>1C ?@>BO3>< 2 B86=V2, ?>BV< ?@89
<0NBL ?> 50 <3/4>1C ?@>BO3>< =0ABC?=8E 2 B86=V2, C ?>40;LH> 4>7C ?V428ICNBL =0

50-100 <3 :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8<0;L=>3> 5D5:BC. 28G09=0 ?V4B@870 4>@V2=NT
100-200 <3/4>1C 70 1 01> 2 ?@89><8. ;O 45O:8E ?0FVT=V2 <>65 1CB8 ?>B@V1=0 4>70 500 <3/4>1C.

VB8 2V:>< 2V4 2 4> 12 @>:V2 (482. B01;. 2).

>G0B:>20 4>70 ;0<>B@8468=C 4;O ;V:C20==O B8?>28E <0;8E 5?V;5?B8G=8E =0?04V2 AB0=>28BL

0,3 <3/:3/<0A8 BV;0/4>1C 70 1 01> 2 ?@89><8 ?@>BO3>< 2 B86=V2, ?>BV< ?@89<0NBL 0,6 <3/:3/<0A8 BV;0/4>1C 70 1 01> 2 ?@89><8 ?@>BO3>< =0ABC?=8E 2 B86=V2. # ?>40;LH>7C ?V428ICNBL =0 0,6 <3/:3 :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8<0;L=>3> 5D5:BC. 28G09=0 ?V4B@870 4>@V2=NT 1-10 <3/:3 /4>1C 70 1 01> 2 ?@89><8. ;O 45O:8E ?0FVT=BV2 7 B8?>28<8 01A0=A0<8 <>65 1CB8 ?>B@V1=0 1V;LH0 4>70.

'5@57 @878: 28=8:=5==O 28A8?0=L ?>G0B:>2C 4>7C B0 B540;LH>3> ?V428I5==O 4>78 =5 A;V4 ?5@528IC20B8.

@8 :><1V=>20=V9 B5@0?VW.

>@>A;V B0 4VB8 2V:>< 2V4 12 @>:V2(482. B01;. 1).

;O ?0FVT=BV2, O:V ?@89<0NBL 20;L?@>0B (A0< ?> A>1V 01> 7 V=H8<8 ?@>B85?V;5?B8G=8<8 ?@5?0@0B0<8), ?>G0B:>20 4>70 ;0<>B@8468=C AB0=>28BL 25 <3 G5@57 45=L ?@>BO3>< 2 B86=V2, ?>BV< ?> 25 <3 :>6=89 45=L ?@>BO3>< =0ABC?=8E 2 B86=V2. VA;O FL>3> 4>7C ?>B@V1=> 71V;LHC20B8 (<0:A8<0;L=> =0 25-50 <3/4>1C) :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8<0;L=>3> B5@0?52B8G=>3> 5D5:BC. 28G09=0 ?V4B@870 4>@V2=NT 100-200 <3/4>1C 70 1 01> 2 ?@89><8.

;O ?0FVT=BV2, O:V ?@89<0NBL V=HV ?@>B85?V;5?B8G=V ?@5?0@0B8 01> V=HV ?@5?0@0B8 V=4C:B>@8 3;N:C@>=V70FVW ;0<>B@8468=C C ?>T4=0==V 7 V=H8<8 ?@>B85?V;5?B8G=8<8 ?@5?0@0B0<8 01> 157 =8E (70 28=OB:>< 20;L?@>0BC =0B@VN), ?>G0B:>20 4>70 ;0<>B@8468=C AB0=>28BL 50 <3 1 @07 =0 4>1C ?@>BO3>< 2 B86=V2, C ?>40;LH>70 4>@V2=NT 200-400 <3/4>1C 70 2 ?@89><8. ;O 45O:8E ?0FVT=BV2 <>65 1CB8 =5>1EV4=>N 4>70 700 <3/4>1C.

;O ?0FVT=BV2, O:V ?@89<0NBL V=HV ?@5?0@0B8, I> ACBBT2> =5 V=4C:CNBL 01> ?@83=VGCNBL 3;N:C@>=V70FVN ;0<>B@8468=C (482. «70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9»), ?>G0B:>20 4>70 028BL 25 <3 1 @07 =0 4>1C ?@>BO3>< 2 B86=V2, C ?>40;LH>VA;O FL>3> 4>7C ?>B@V1=> 71V;LHC20B8 (<0:A8<0;L=> =0 50-100 <3/4>1C) :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8<0;L=>3> B5@0?52B8G=>3> 5D5:BC. 28G09=0 ?V4B@870 4>@V2=NT 100-200 <3/4>1C 70 1 01> 2 ?@89><8.

"01;8FO 1.

5:><5=4>20=0 AE5<0 ;V:C20==O 5?V;5?AVW 4;O 4>@>A;8E V 4VB59 2V:> 2V4 12 @>:V2.

568< ;V:C20==O		1-9 B0 2-9 B86=V	3-9 B0 4-9 B86=V	V4B@870
>=>B5@0?VO		25 <3/4>1C (1 ?@89><)	50 <3/4>1C (1 ?@89><)	100-200 <3/4>1C (70 1 01> 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28 < 71V;LH5==O< 4>78 4> 50-100 <3 :>6=V 1-2 B86=V
><1V=>20=0 B5@0?VO 7 20;L?@>0B> < =0B@VN, =570;56=> 2V4 V=H8E AC?CB=VE ?@5?0@0BV2		12,5 <3/4>1C (?@89>< ?> 24 <3 G5@57 45=L)	25 <3/4>1C (1 ?@89><)	100-200 <3/4>1C (70 1 01> 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28 < 71V;LH5==O< 4>78 =0 25-50 <3 :>6=V 1-2 B86=V
><1V=>20=0 B5@0?VO 157 20;L?@>0BC =0B@VN	&N AE5B@V1=> 70AB>A>2C20B8 7: - D5=VB>W=><, - :0@10<075?V=><, - D5=>10@1VB0;><, - ?@8=>< 01> 7 V=H8<8 V=4C:B>@0<8 3;N:C@>=V70FVW ;0<>B@8468=C	50 <3/4>1C (1 ?@89><)	100 <3/4>1C (2 ?@89><8)	200-400 <3/4>1C (70 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28 < 71V;LH5==O< 4>78 =0 100 <3 :>6=V 1-2 B86=V
	&N AE5B@V1=> 70AB>A>2C20B8 I>4> V=H8E ?@5?0@0BV2, O:V ACBBT2> =5 V=4C:CNBL 01> ?@83=VGCNBL 3;N:C@>=V70FVN ;0 <>B@8468=C	25 <3/4>5=L (1 ?@89><)	50 <3/4>5=L (1 ?@89><)	100-200 <3/4>5=L (70 1 01> 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28 < 71V;LH5==O< 4>78 4> 50-100 <3 :>6=V 1-2 B86=V

0FVT=B0<, O:V ?@89<0NBL ?@>B85?V;5?B8G=V ?@5?0@0B8, 270T<>4VO O:8E 7 ;0<>B@8468=>< =52V4><0, @5:><5=4CTBLAO 70AB>A>2C20B8 B0:C A0

7207:C 7 @878:>< 28=8:=5==O 28A8?0=L ?>G0B:>2C 4>7C B0 B540;LH>3> 71V;LH5==O 4>78 =5 A;V4 ?5@528IC20B8.

VB8 2V4 2 4> 12 @>:V2 (482. B0I;.: 2).

VBO<, O:V >B@80B =0B@VN C ?>T4=0==V 7 V=H8<8 ?@>B85?V;5?B8G=8<8 ?@5?0@0B0<8 01> 157 =8E, ?>G0B:>20 4>70 ;0<>B@8468=C AB0=>28BL 0,15/:3 <0A8 BV;0 =0 4>1C 70 1 ?@89>< ?@>BO3>< 2 B86=V2, ?>BV< 0,3 <3/:3 <0A8 BV;0 =0 4>1C 70 1 ?@89>< ?@>BO3>< =0ABC?=8E 2 B86=V2. 0;V 4>7C ?>B@V1=> 71V;LHC20B8 (<0:A8<0;L=> =0 0,3 <3/:3 <0A8 BV;0) :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8 <0;L=>3> B5@0?52B8G=>3> 5D5:BC. V4B@870 4>@V2=NT 1-5 <3/:3 <0A8 BV;0 70 1 01> 2 ?@89><8 (<0:A8<0;L=0 200 <3/4>1C).

;O 4VB59, O:V ?@89<0NBL V=HV ?@>B85?V;5?B8G=V ?@5?0@0B8 01> V=HV ?@5?0@0B8- V=4C:B>@8 3;N:C@>=V70FVW ;0<>B@8468=C C ?>T4=0==V 7 V=H8<8 ?@>B85?V;5?B8G=8<8 ?@5?0@0B0<8 01> 157 =8E (70 28=OB:>< 20;L?@>0BC =0B@VN), ?>G0B:>20 4>70 028BL 0,6 <3/:3 <0A8 BV;0 =0 4>1C 70 2 ?@89><8 ?@>BO3>< 2 B86=V2, ?>BV< 1,2 <3/:3 <0A8 BV;0 =0 4>1C ?@>BO3>< =0ABC?=8E 2 B86=V2. 0;V 4>7C ?>B@V1=> 71V;LHC20B8 (<0:A8<0;L=> =0 1,2 <3/:3 <0A8 BV;0) :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8<0;L=>3> B5@0?52B8G=>3> 5D5:BC. !5@54=O ?V4B@870 4>@V2=NT 5-15 <3/:3 <0A8 BV;0 =0 4>1C 70 2 ?@89><8 (<0:A8<0;L=> 400 <3/4>1C).

;O 4VB59, O:V ?@89<0NBL V=HV ?@5?0@0B8, I> ACBBT2> =5 V=4C:CNBL 01> ?@83=VGCNBL 3;N:C@>=V70FVN ;0<>B@8468=C (482. «70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9»), ?>G0B:>20 4>70 028BL 0,3 <3/:3 <0A8 BV;0 =0 4>1C 70 1 01>

2 ?@89><8 ?@>BO3>< 2 B86=V2, C ?>40;LH>

0,6 <3/:3) :>6=V 1-2 B86=V 4> 4>AO3=5==O >?B8<0;L=>3> B5@0?52B8G=>3> 5D5:BC. 28G09=0 ?V4B@870 4>@V2=NT 1-10 <3/:3 =0 4>1C 70 1 01> 2 ?@89><8. 0:A8<0;L=0 4>70

200 <3/4>1C.

;O ?@028;L=>3> @>7@0EC=:C ?V4B@8W 4>78 A;V4 :>=B@>;N20B8 <0AC BV;0 48B8=8.

"01;8FO 2.

5:><5=4>20=0 AE5<0 ;V:C20==O 5?V;5?AVW 4;O 4VB59 2V4 2 4> 12 @>:V2, (7030;L=0 4>1>20 4>70 2 <3/:3 <0A8 BV;0 =0 4>1C).

568< ;V:C20==O	1-9 B0 2-9 B86=V	3-9 B0 4-9 B86=V	V4B@870
>=>B5@0?VO B8?>28E <0;8E 5?V;5?B8G=8E =0?04V2	0,3 <3/:3 (1-2 ?@89><8)	0,6 <3/:3 (1-2 ?@89><8)	1-10 <3/:3 (70 1 01> 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28< 71V;LH5==O < 4>78 ?> 0,6 <3/:3 :>6=V 1-2 B86=V, <0:A8
><1V=>20=0 B5@0?VO 7 20;L?@>0B>< =0B@VN, =570;56=> 2V4 V=H8E AC?CB=VE ?@5?0@0BV2	0,15 <3/:3 * (1 ?@89><)	0,3 <3/:3 (1 ?@89><)	1-5 <3/:3 (70 1 01> 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28< 71V;LH5==O < 4>78 ?> 0,3 <3/:3 :>6=V 1-2 B86=V, <0:A8
><1V=>20=0 B5@0?VO 157 20;L?@>0BC =0B@VN	&N AE5B@V1=> 70AB>A>2C20B8 7: - D5=VB>W=>, - :0@10<075?V=><, - D5=>10@1VB0;><, - ?@8=>< 01> 7 V=H8<8 V=4C:B>@0<8 3;N:C@>=V70FVW ;0 <>B@8468=C	0,6 <3/:3 (2 ?@89><8)	1,2 <3/:3 (2 ?@89><8)
	&N AE5B@V1=> 70AB>A>2C20B8 I>4> V=H8E ?@5?0@0BV2, I> ACBBT2> =5 V=4C:CNBL 01> ?@83=VGCNBL 3;N:C@>=V70FVN ;0 <>B@8468=C	0,3 <3/:3 (1-2 ?@89><8)	0,6 <3/:3 (1-2 ?@89><8)
			5-15 <3/:3 (70 2 ?@89><8) 4>AO30TBLAO ?>ABC?>28< 71V;LH5==O < 4>78 ?> 1,2 <3/:3 :>6=V 1-2 B86=V, <0:A8
			1-10 <3/:3 (70 1-2 ?@89><8) 4>AO30TBLAO ?>ABC?>28< 71V;LH5==O < 4>78 ?> 0,6 <3/:3 :>6=V 1-2 B86=V, <0:A8

* /:I> @>7@0E>20=0 4>70 <5=H5 12,5 <3, ?@89<0B8 0<5=4CTBLAO.

VBO<, O:V ?@89<0NBL ?@>B85?V;5?B8G=V ?@5?0@0B8, 270T<>4VO O:8E 7 ;0<>B@8468=>< =52V4><0, @5:> <5=4CTBLAO 70AB>A>2C20B8 B0:C AE5

'5@57 @878: 28=8:=5==O 28A8?0=L ?>G0B:>2C 4>7C B0 B540;LH>3> ?V428I5==O 4>78 =5 ?>B@V1=> ?5@528IC20B8.

030;L=V @5:><5=40FVW 4;O ;V:C20==O 5?V;5?AVW.

@07V ?@8?8=5==O ?@89<0==O AC?CB=VE ?@>B85?V;5?B8G=8E ?@5?0@0BV2 4;O 4>AO3=5==O <>=>B5@0?VW ;0<>B@8468=>< 01> C @07V 4>40B:>2>3> ?@87=0G5==O V=H8E ?@>B85?V;5?B8G=8E ?@5?0@0BV2 ?V4 G0A ;V:C20==O ;0<>B@8468=>< A;V4 72068B8 =0 2?;82, I> <>65 28=8:=CB8 ?@8 FL>

V?>;O@=V @>7;048.

>@>A;V (2V:>< 2V4 18 @>:V2).

'5@57 @878: 28=8:=5==O 28A8?0=L ?>G0B:>2C 4>7C B0 B540;LH>3> ?V428I5==O 4>78 =5 ?>B@V1=> ?5@528IC20B8.

0<5=4CTBLAO 4;O ;V:C20==O ?0FVT=BV2 7 @878:× @>728B:C 45?@5A82=>3> 5?V7>4C.

!;V4 4>B@83> =86G5 ?5@5EV4=>3> @568AC20==O. &59 @568< 2;;NG0T ?V428I5==O 4>78 ;0

<>B@8468=C 4> 4>AO3=5==O ?V4B@8W AB01V;V70FV9=>W 4>78 ?@>BO3×

6 B86=V2 (482. B01;. 3), ?VA;O G>3> ?@89× V=H8E ?A8E>B@>?=8E B0/01> ?@>B85?V;5?B8G=8E ?@5?0@0BV2 <>6=0 ?@8?8=8B8 C @07V ;;V=VG=>W 4>FV;L=>ABV (482. B01;. 4).

5>1EV4=> @>73;O=CB8 4>FV;L=VABL ?@87=0G5==O 4>40B:>2>W B5@0?VW 4;O ?>?5@5465==O

5?V7>4V2 <0=VW, >A;V;L:8 5D5:B82=VABL 0

"01;8FO 3.

5:><5=4>20=0 AE5<0 71V;LH5==O 4>78 ;0<>B@8468=C 4;O 4>AO3=5==O ?V4B@8W

AB01V;V70FV9=>W 4>1>2>W 4>78 ?V4 G0A ;V:C20==O 4>@>A;8E (2V:× 2V4 18 @>:V2) 7 1V?>;O@=8 <8 @>7;040<8

568< ;V:C20==O	1-2-9 B86=V	3-4-9 B86=V	5-9 B8645=L	!B01V;V70FV9=0 4>70* (6-9 B8645=L)
>40B:>20 B5@0?VO 7 V=3V1VB>@0<8 3;N:C@>=V70FVW ;0 <>B@8468=C, =0?@8;;04 7 20;L?@>0B>×	12,5 <3 (25 <3 G5@57 45=L)	25 <3 (1 @07 =0 4>1C)	50 <3 (1 @07 =0 4>1C 01> 70 2 ?@89><8)	100 <3 (1 @07 =0 4>1C 01> 70 2 ?@89><8) (<0:A8<0;L=0 4>1>20 4>70 200 <3)
>40B:>20 B5@0?VO 7 V=4C:B>@0<8 3;N:C@>=V70FVW ;0 <>B@8468=C 4;O ?0FVT=BV2, O:V =5 ?@89 <0NBL V=3V1VB>@8, B0:V O: 20;L?@>0B. &N AE5B@V1=> 70AB>A>2C20B8 7: - D5=VB>W=×, - :0@10<075?V=>×, - D5=>10@1VB0;××, - ?@8=× 01> 7 V=H8<8 V=4C:B>@0<8 3;N:C@>=V70FVW ;0 <>B@8468=C	50 <3 (1 @07 =0 4>1C)	100 <3 (70 2 ?@89><8)	200 <3 (70 2 ?@89><8)	300 <3 =0 6-9 B8645=L, ?V428ICNG8 4> 400 <3/45=L C @07V =5>1EV4=>ABV =0 7-9 B8645=L (70 2 ?@89><8)
>>B5@0?VO ;0 <>B@8468=>< 01> 4>40B:>20 B5@0?VO 4;O ?0FVT=BV2, O:V 70AB>A>2CNBL V=HV ?@5?0@0B8, I> ACBBT2> =5 ?@83=VGCNBL 01> V=4C:CNBL 3;N:C@>=V70FVN ;0 <>B@8468=C	25 <3 (1 @07 =0 4>1C)	50 <3 (1 @07 =0 4>1C 01> 70 2 ?@89><8)	100 <3 (1 @07 =0 4>1C 01> 70 2 ?@89><8)	200 <3 (2V4 100 4> 400 <3) (1 @07 =0 4>1C 01> 70 2 ?@89><8)

@8 0FVT=B0<, O:V ?@89<0NBL ?@>B85?V;5?B8G=V ?@5?0@0B8 7 =52V4×8< 2?;82>< =0 D0@<0>;V=5B8:C ;0<>B@8468=C, A;V4 70AB>A>2C20B8 AE5IC20==O 4>78, O:0 @5:><5=4CTBLAO 4;O AC?CB=L>3> 70AB>AC20==O 20;L?@>0BC.

* !B01V;V70FV9=C 4>7C <>6=0 7 2V4 ;;V=VG=>W 2V4?>2V4V.

>40B:>20 B5@0?VO 7 V=3V1VB>@0<8 3;N:C@>=V70FVW ;0<>B@8468=C, =0?@8;;04 7 20;L?@>0B>

>G0B:>2>N 4>7>N 4;O ?0FVT=BV2, O:V ?@89<0NBL O: AC?CB=N B5@0?VN B0:89 V=3V1VB>@ 3;N:C@>=V70FVW, O: 20;L?@>0B, T 25<3 G5@57 45=L ?@>BO3>< 2 B86=V2, ?>BV< 25 <3 1 @07 =0 4>1C =0ABC?=V 2 B86=V. >7C ?>B@V1=> 71V;LH8B8 4> 50<3 =0 4>1C (70 1 01> 2 ?@89><8) =0 5-9 B8645=L. 28G09=>N 4>7>N 4;O 4>AO3=5==O ?>B8<0;L=>W 2V4?>2V4V T 100 <3 =0 4>1C (70 1 01> 2 ?@89><8). 4=0: 4>7C <>6=0 71V;LH8B8 4> <0:A8<0;L=>W 200 <3/4>1C, 70;56=> 2V4 ;;V=VG=>W 2V4?>2V4V.

>40B:>20 B5@0?VO 7 V=4C:B>@0<8 3;N:C@>=V70FVW ;0<>B@8468=C 4;O ?0FVT=BV2, O:V =5 ?@89<0NBL V=3V1VB>@8, B0:V O: 20;L?@>0B. &N AE5B@V1=> 70AB>A>2C20B8 7 D5=VB>W=><, :0@10<075?V=><, D5=>10@1VB0;><, ?@8=>< 01> 7 V=H8<8 V=4C:B>@0<8 3;N:C@>=V70FVW ;0 <>B@8468=C.

>G0B:>2>N 4>7>N 4;O ?0FVT=BV2, O:V ?@89<0NBL ?@5?0@0B8, I> V=4C:CNBL 3;N:C@>=V70FVN ;0 <>B@8468=C, V =5 ?@89<0NBL 20;L?@>0B, T 50 <3 1 @07 =0 4>1C ?@>BO3>< 2 B86=V2, ?>BV< 100 <3/4>1C (70 2 ?@89><8) =0ABC?=V 2 B86=V. >7C ?>B@V1=> 71V;LH8B8 4> 200<3/4>1C (70 2 ?@89><8) =0 5-9 B8645=L. >7C <>6=0 71V;LH8B8 4> 300<3/4>1C =0 6-9 B8645=L, >4=0: 728G09=>N 4>7>N 4;O 4>AO3=5==O ?>B8<0;L=>W 2V4?>2V4V T 400 <3/4>1C (70 2 ?@89><8), O:C <>6=0 ?@87=0G0B8 7 7-3> B86=O.

>=>B5@0?VO ;0<>B@8468=>< 01> 4>40B:>20 B5@0?VO 4;O ?0FVT=BV2, O:V 70AB>A>2CNBL V=HV ?@5?0@0B8, I> ACBBT2> =5 V=4C:CNBL 01> ?@83=VGCNBL 3;N:C@>=V70FVN ;0<>B@8468=C (482. «70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9»).

>G0B:>2>N 4>7>N 4;O F8E ?0FVT=BV2 T 25 <3 1 @07 =0 4>1C ?@>BO3>< 2 B86=V2, ?>BV< 50 <3/4>1C (70 1 01> 2 ?@89><8) =0ABC?=V 2 B86=V. >7C ?>B@V1=> 71V;LH8B8 4> 100<3/4>1C =0 5-9 B8645=L. 28G09=>N 4>7>N 4;O 4>AO3=5==O ?>B8<0;L=>W 2V4?>2V4V T 200 <3/4>1C (70 1 01> 2 ?@89><8), >4=0: ?V4 G0A ;;V=VG=8E 4>A;V465=L 70AB>A>2C20;8AL 4>78 100-400<3. VA;O 4>AO3=5==O =5>1EV4=>W ?V4B@8W AB01V;V70FV9=>W 4>78 ?@89>< V=H8E ?A8E>B@>?=8E ?@5?0@0BV2 <>6=0 ?@8?8=8B8 73V4=> 7 =02545=>N =86G5 AE5<>N (482. B01;. 4).

"01;8FO 4.

V4B@870 ?@8 1V?>;O@=8E @>7;040E 7 ?>40;LH8< ?@8?8=5==O< ?@89>B@>?=8E 01> ?@>B85?V;5?B8G=8E 70A>1V2.

568< ;V:C20==O	1-9 B8645=L	2-9 B8645=L	7 3-3> B86=O*
?>40;LH8< ?@8?8=5==O< ?@89>@V2 3;N:C@>=V70FW ;0<>B@8468=C, =0?@.20;L?@>0BC0	>42>WB8 AB01V;V70FV9=C 4>7C, =5 ?5@528ICNG8 100 <3/B8645=L, B>1B> AB01V;V70FV9=C 4>7C 100 <3 =0 4>1C 1C45 71V;LH5=> 2 1-9 B8645=L 4> 200 <3/4>1C	V4B@87C 200 <3/4>1C (@>7?>4V;5=C =0 2 ?@89><8)	
?>40;LH>N 2V4N V=4C:B>@V2 3;N:C@>=V70FVW ;0<>B@8468=C 70;56=> 2V4 4>78. &N AE5B@V1=> 70AB>A>2C20B8 7: - D5=VB>W=>< - :0@10<075?V=><, - D5=>10@1VB0;><, - ?@8=>< 01> 7 V=H8<8 V=4C:B>@0<8 3;N:C@>=V70FVW ;0<>B@8468=C1	400 <3	300 <3	200 <3
	300 <3	225 <3	150 <3
	200 <3	150 <3	100 <3
?>40;LH8< ?@8?8=5==O< ?@89> ?@5?0@0BV2, I> ACBBT2> =5 ?@83=VGCNBL 01> V=4C:CNBL 3;N:C@>=V70FVN ;0<>B@8468=C2	V4B@87C, >B@8<0=C ?@8 ?V42815==V 4>78 (200 <3/4>1C), @>7?>4V;5=C =0 2 ?@89><8 (100-400 <3)		

* >7C <>6=0 71V;LH8B8 ?@8 =5>1EV4=>ABV 4> 400<3/4>1C.

@8 0FVT=B0<, O:V ?@89<0NBL ?@>B85?V;5?B8G=V ?@5?0@0B8 7 =52V4>8< 2?;82>< =0 D0@<0>;V=5B8:C ;0<>B@8468=C, A;V4 70AB>A>2C20B8 @568< ;V:C20==O, ?@8 O:>70 0@5:FVO ?@>2>48BLAO =0 >A>=2V ;;V=VG=>3> AB0=C.

05>1EV4=C AB01V;V70FV9=C 4>7C ;0<>B@8468=C ?>B@V1=> ?>42>WB8 V 715@V30B8 =0 FL>0BC.

1>7C ;0<>B@8468=C ?>B@V1=> ?>ABC?>2> 7<5=HC20B8 ?@>BO3>< 3 B86=V2 ?VA;O ?@8?8=5==O ?@89>V=4C:CNBL 3;N:C@>=V70FVN;

2>B@V1=> 715@V30B8 4>7C, 4>AO3=CBC ?VA;O @568

7C20==O ;0<>B@8468=C 4;O ?0FVT=BV2 7 1V?>;O@=8< @>7;04>< 2 @07V 4>40B:>2>3>

?@87=0G5==O V=H8E ?@5?0@0BV2.

;V=VG=>3> 4>A2V4C 77C20==O ;0<>B@8468=C C @07V ?@87=0G5==O V=H8E ?@5?0@0BV2 =5<0T, 0;5, 107CNG8AL =0 40=8E I>4> 270T<>4VW ;V:0@AL:8E 70A>1V2, <>6=0 @5:><5=4C20B8

=86G5=02545=C AE5

7C20==O ;0<>B@8468=C 4;O ?0FVT=BV2 7 1V?>;O@=8< @>7;04<< ?@8 4>40B:>2>

568< ;V:C20==O	!B01V;V70FV9=0 4>70 ;0<>B@8468=C (<3/4>1C)	1-9 B8645=L	2-9 B8645=L	7 3-3> B86=O
>40B:>25 ?@87=0G5==O V=3V1VB>@V2 3;N:C@>=V70FVW ;0 <>B@8468=C, =0?@8;:04 20;L?@>0BC, 70;56=> 2V4 4>78 ;0<>B@8468=C	200 <3	100 <3	V4B@87C (100 <3/4>1C)	
	300 <3	150 <3	V4B@87C (150 <3/4>1C)	
	400 <3	200 <3	V4B@87C (200 <3/4>1C)	
>40B:>25 ?@87=0G5==O V=4C:B>@V2 3;N:C@>=V70FVW ;0 <>B@8468=C E2>@8<, O:V =5 ?@89<0NBL 20;L?@>0B, B0 70;56=> 2V4 4>78 ;0 <>B@8468=C. &N AE5B@V1=> 70AB>A>2C20B8 7: - D5=VB>W=<×, - :0@10<075?V=<×, - D5=>10@1VB0;<×, - ?@8=<× 01> 7 V=H8<8 V=4C:B>@0 <8 3;N:C@>=V70FVW ;0 <>B@8468=C	200 <3	200 <3	300 <3	400 <3
	150 <3	150 <3	225 <3	300 <3
	100 <3	100 <3	150 <3	200 <3
>40B:>25 ?@87=0G5==O V=H8E ?@5?0@0BV2, I> ACBBT2> =5 ?@83=VGCNBL 01> V=4C:CNBL 3;N:C@>=V70FVN ;0 <>B@8468=C	V4B@87C, 4>AO3=CB ?VA;O @56878 (200 <3/4>1C) (100-400 <3)			

@8 0FVT=B0<, O:V ?@89<0NBL ?@>B85?V;5?B8G=V ?@5?0@0B8 7=52V4<8< 2?;82<< =0 D0@<0>:V=5B8:C ;0<>B@8468=C,
A;V4 70AB>A>2C20B8 @568< ;V:C20==O, O:89 @5:<5=4CTBLAO 4;O AC?CB=L>3> 70AB>AC20==O 20;L?@>0BC.

@8?8=5==O ?@89>

5 2V47=0G0;>AL ?V428I5==O G0AB>B8, ABC?5=O BO6:>ABV 01> B8?C ?>1VG=8E @50:FV9 ?VA;O
@0?B>2>W 2V4@V2=NNG8 7 ?;0F51>. "<< ?@5?0@0BC <>6=0 >4@07C, 157 ?>ABC?>2>3> 7<5=H5==O
4>78.

030;L=V @5:><5=40FVW 7 4>7C20==O 4;O >A>1;828E 3@C? ?0FVT=BV2.

V=:8, O:V ?@89<0NBL 3>@<>=0;L=V :>=B@0F5?B828.

>G0B>: ;V:C20==O ;0<>B@8468=>< ?0FVT=B>:, O:V 265 ?@89<0NBL 3>@<>=0;L=V :>=B@0F5?B828.

%>G0 ?5@>@0;L=V :>=B@0F5?B828 71V;LHCNBL :;V@5=A ;0<>B@8468=C, 2=>A8B8 :>@5:B828 C
AE578 ;0<>B@8468=C C @07V ?@89>@<>=0;L=8E :>=B@0F5?B82V2 ?>B@518 =5<0T. >7C
71V;LHCNBL 70 @5:<5=4>20=>N AE5<>N C 28?04:0E, :>;8 ;0<>B@8468= 4>40TBLAO 4> 20;L?@>0BC
(V=3V1VB>@C 3;N:C@>=V70FVW ;0<>B@8468=C) 01> 4> V=4C:B>@0 3;N:C@>=V70FVW ;0
<>B@8468=C 01> ;0<>B@8468= 4>40TBLAO 70 2V4ACB=>ABV 20;L?@>0BC 01> V=4C:B>@0
3;N:C@>=V70FVW ;0<>B@8468=C (482. B01;. 1 B0 B01;. 3).

>G0B>: :C@AC ;V:C20==O 3>@<>=0;L=8<8 :>=B@0F5?B820<8 ?0FVT=B>:, O:V 265 ?@89<0NBL
?V4B@878 ;0<>B@8468=C V=5 ?@89<0NBL V=4C:B>@8 3;N:C@>=V70FVW ;0<>B@8468=C.

V4B@87C ;0<>B@8468=C C 1V;LH>ABV 28?04:V2 ?>B@V1=> 1C45 71V;LH8B8 C 420 @078. 5:>
<5=4CTBLAO, I>1 2V4 ?>G0B:C ;V:C20==O 3>@<>=0;L=8<8 :>=B@0F5?B820<8 4>70 ;0<>B@8468=C
71V;LHC20;0AL 2V4 50 4> 100 <3/45=L :>6=>3> B86=O 2V4?>2V4=> 4> V=482V4C0;L=>W ;;V=VG=>W
2V4?>2V4V =0 ;V:C20==O. 1V;LH5==O 4>78 =5 ?>28==> ?5@528IC20B8 707=0G5=>3> @V2=O, O:I>
BV;L:8 73V4=> 7 ;;V=VG=>N 2V4?>2V44N =0 ;V:C20==O B0:5 71V;LH5==O 4>78 =5 1C45 =5>1EV4=5.
@8?8=5==O :C@AC ;V:C20==O 3>@<>=0;L=8<8 :>=B@0F5?B820<8 ?0FVT=B>:, O:V 265 ?@89<0NBL
?V4B@878 ;0<>B@8468=C V=5 ?@89<0NBL V=4C:B>@8 3;N:C@>=V70FVW ;0<>B@8468=C.
V4B@87C ;0<>B@8468=C C 1V;LH>ABV 28?04:V2 ?>B@V1=> 1C45 7<5=H8B8 4> 50 %. 5:>
<5=4CTBLAO 4>1>2C 4>7C ;0<>B@8468=C 7<5=HC20B8 ?>ABC?>2> 2V4 50 4> 100 <3 :>6=>3> B86=O
(=5 1V;LH5 25 % 7030;L=>W 4>78 70 B8645=L) ?@>BO3< 3 B86=V2, O:I> 2V4?>2V4=> 4>
V=482V4C0;L=>W ;;V=VG=>W 2V4?>2V4V =0 ;V:C20==O =5 1C45 707=0G5=> V=0:H5.

0AB>AC20==O @07>< 7 0B070=02V@>=02V@><.
%>G0 70AB>AC20==O 0B070=02V@C/@8B>=02V@C 7<5=HCT :>=F5=B@0FVN ;0<>B@8468=C C ?;07
2V, 7<5=4>20=V AE5<8 71V;LH5==O 4>7C20==O 0B@V1=>, 7 >3;04C =0 70AB>AC20==O
0B070=02V@C/@8B>=02V@C.
1V;LH5==O 4>78 ?@5?0@0BC ?>28==> 107C20B8AL =0 @5:<5=40FVOE 70;56=> 2V4 AE5<
70AB>AC20==O 0 040TBLAO 4> 20;L?@>0BC (V=3V1VB>@C 3;N:C@>=V70FVW ;0<>B@8468=C) 01>
4> V=4C:B>@0 3;N:C@>=V70FVW ;0<>B@8468=C, 01> 040TBLAO 70 2V4ACB=>ABV 20;L?@>0BC
01> V=4C:B>@0 3;N:C@>=V70FVW ;0<>B@8468=C.
?0FVT=BV2, O:V 265 70AB>A>2CNBL ?V4B@878 0A>2CNBL V=4C:B>@8 3;N:C@>=V70FVW, 4>7C 0
=02V@><, 01> 7<5=HC20B8, O:I> ;V:C20==O 0B070=02V@>=02V@>< ?@8?8=OTBLAO.
%2>@V;VB=L>3> 2V:C (2V4 65 @>:V2).
7C =5 ?>B@V1=>. \$0@<0:>:V=5B8:0 ;0<>B@8468=C C FV9 2V:>2V9 3@C?V =5 2V4@V7=OTBLAO 2V4
B0:>W C ?0FVT=BV2 <>;>4H>3> 2V:C.
5GV=:>20 =54>AB0B=VABL.
>G0B:>2C 4>7C, 71V;LH5==O 4>78 B0 ?V4B@87C ?>B@V1=> 7<5=H8B8 7030;>< =0 50 % 4;O
?0FVT=BV2 7 ?>N (H:0;0 '09;L4- N, ABC?V=L) B0 =0 75 % - 7 B06:>N (H:0;0 '09;L4- N, ABC?V=L !)
?5GV=:>2>N =54>AB0B=VABN.
1V;LH5==O 4>78 B0 ?V4B@87C :>@83CNBL 73V4=> 7 ;;V=VG=8< 5D5:B>
8@:>20 =54>AB0B=VABL.
@8 ?@87=0G5==V E2>@8< 7 =8@:>2>N =54>AB0B=VABN A;V4 4>B@815@56=>ABV. ;O E2>@8E 7
B5@N AB04VTN =8@:>2>W =54>AB0B=>ABV ?>G0B:>20 4>70 ;0<>B@8468=C 107CTBLAO =0
V=482V4C0;L=V9 AE53> ;V:C20==O, 4;O E2>@8E 7V 7=0G=>N =8@:>2>N =54>AB0B=VABN A;V4 7
<5=HC20B8 ?V4B@87C ;0<>B@8468=C.
>2B>@=89 ?>G0B>: ;V:C20==O.
>;8 ?0FVT=BC, O:89 ?@8?8=82 ;V:C20==O, ?@87=0G0NBL ?>2B>@=89 ?>G0B>: ;V:C20==O, ?>B@V1=>
GVB:> 2AB0=>28B8 =5>1EV4=VABL 71V;LH5==O ?V4B@8W 4>78, B>:C ?>G0B:>2C 4>7C B0
?5@52815==O @5:<5=4>20=>W AE5<8 71V;LH5==O 4>78 ;0<>B@8468=C. '8< 1V;LH89 V=B5@20;<
?@89>?5@54=L>W 4>78, B8< 1V;LH5 C2038 A;V4 ?@84V;8B8 @56878 4> @V2=O ?V4B@8W 4>78. >;8
V=B5@20; ?VA;O ?@8?8=5==O ?@89>W 4>78 2V4?>2V4=> 4> VA=CNG>W AE5<8.
5 @5:<5=4CTBLAO ?>2B>@=> ?>G8=0B8 ;V:C20==O ;0<>B@8468=><, O:I> ;V:C20==O 1C;>
?@8?8=5=> C 7207:C 7 ?>O2>N 28A8?0=L 2=0A;V4>: ?>?5@54=L>3> ;V:C20==O ;0<>B@8468=>4>
?>2B>@=>3> ?@87=0G5==O ?@5?0@0BC =5>1EV4=> 72068B8 >GV:C20=C :>@8ABL 2V4 ;V:C20==O
B0 <>6;8289 @878:.

VB8.

@5?0@0B =5 @5:<5=4CTBLAO 70AB>A>2C20B8 4VBO< 2V:< 4> 2 @>:V2. 0
0 @5:<5=4>20=V 4>78, O:V 28E>4OBL V7 V=482V4C0;L=8E 4>7, 1C4CBL :@0B=V 4>ABC?=8< 4>70<
B01;5B>:. @8 FL>78 =5 ?>28==V ?5@528IC20B8 4>7, @>7@0E>20=8E =0 <0AC BV;0 E2>@8E 4VB59.
VBO<, O:8< 4V03=>7 5?V;5?AVO 2AB0=>2;5=> 2?5@H5, @>7?>G8=0B8 7<>=>B5@0?VW 0< =5 @5:>
<5=4CTBLAO.

5@54>7C20==O.

@8 >4=>@07>2>@8 FL>1EV4=V 3>A?VB0;V70FVO, ?@<820==O H;C=:0, ?@89>< 0:B82>20=>3>
2C3V;;O, 70AB>AC20==O 2V4?>2V4=>W ?V4B@8W B5@0?VW.

>1VG=V @50:FVW.

>1VG=V @50:FVW ?@8 70AB>AC20==V ;0<>B@8468=C <0NBL A;01:> 28@065=89 E0@0:B5@,
@>72820NBLAO ?@>BO3>< ?5@H8E 2 B86=V2 B5@0?VW V <8=0NBL ?VA;O ?@8?8=5==O ?@89>
I>:C H:V@8 B0 ?V4H:V@=>W :;VB:>28=8: H:V@=V 28A8?0==O, A8=4@< !BV25=A0-6>=A>=0,
B>:A8G=89 5?V45@<0;L=89 =5:@>;V7 (A8=4@< 09T;;0).
=>4V ?@8 70AB>AC20==V ;0<>B@8468=C <6CBL @>72820B8AO A5@9>7=V H:V@=V @50:FVW, O:V
=09G0ABVH5 28=8:0NBL ?@>BO3>< ?5@H8E 8 B86=V2 7 ?>G0B:C ;V:C20==O B0 7=8:0NBL ?VA;O 2V4
G0 =09G0ABVH5 FV @50:FVW <8=0NBL ?VA;O 2V4:V;L:0 ;5B0;L=8E 28?04:V2.
4VB59 @878: 28=8:5==O A5@9>7=8E H:V@=8E 28A8?0=L 28189, =V6 C 4>@>A;8E. # 4VB59 ?5@HV
>7=0:8 H:V@=8E 28A8?0=L <>6=0 ?><8;>2> ?@89=OB8 70 V=D5:FVN, B>

0=V ;V=VG=8E A?>AB5@565=L A2V4G0BL ?@> B5, I> H:V@=V @50:FVW G0ABVH5 @>72820NBLAO
C E2>@8E, O:V >B@8T2C :8A;>BC 01> ?@>B85?V;5?B8G=V ?@5?0@0B8, I> =5 T V=4C:B>@0<8
<5B01>;V7CNG8E D5@<5=BV2 ?5GV=:8, V ?>2O70=V 7 28A>:8<8 ?>G0B:>28<8 4>70<8 ;0<>B@8468=C
B0 ?5@528I5==O< @5:><5=4>20=>W AE5<8 71V;LH5==O 4>7.

I>:C VW A8AB5<8: A8=4@< 3V?5@GCB;82>ABV, 2;;NG0NG8 B0:V A8<8 O: 30@OG:0, ;V?0BVO,
=01@O: >1;8GGO, 72V B0 ?>@CH5==O DC=:FVW ?5GV=:8, 48A520=0 2=CB@VH=L>AC48==0
:>03C;OFVO () B0 ?>;V>@30==0 =54>AB0B=VABL.

06;82> 2V47=0G8B8, I> @0==V >7=0:8 3V?5@GCB;82>ABV (=0?@8::04 30@OG:0 B0 ;V?0BVO) <>6CBL
28=8:0B8 =02VBL 70 2V4ACB=>ABV H:V@=8E 28A8?0=L. 0 =0O2=>ABV B0:8E A8>3;O=CB8 B0 70
2V4ACB=>ABV V=H8E ?@8G8= ?@8?8=8B8 ?@89<0==O 0

I>:C A8AB5<8 :@>2V V;VW A8AB5<8: =59B@>?5=VO, ;59:>?5=VO, 0=5<1>F8B>?5=VO,
?0=F8B>?5=VO, 0?;0AB8G=0 0=5F8B>7, ;V?0BVO.

5<0B>;>3VG=V 2V4E8;5==O <>6CBL 1CB8 O: ?>2O70=V, B0: V =5 ?>2O70=V 7 A8=4@<<<
3V?5@GCB;82>ABV.

A8EVG=V ?>@CH5==O: 4@0BV2;82VABL, 03@5A82=VABL, 45?@5AVO, B@82>6=89 AB0=, B8:,
30;NF8=0FVW B0 A?;CB0=VABL A2V4<>ABV.

I>:C =5@2>2>W A8AB5<8 - ?V4 G0A <>=>B5@0?VW (70 40=8<8 ;:V=VG=8E 4>A;V465=L): 3>;>2=89
1V;L, 70?0<>@>G5==O, A>;82VABL, 157A>==O, B@5<>@, 0B0:AVO, 703>AB@5==O AC4<=8E
=0?04V2, ?>@CH5==O :>>@48=0FVW, <>2;5==O B0 ?0<□OBV.

0<>B@8468= <>65 ?>3V@HC20B8 A8<8 ?0@:V=A>=V72V4><;5==O ?@> 5:AB@0@5>0B5B>7 C
E2>@8E =0 FN ?0B>;>3VN.

0 V=H8<8 ;:V=VG=8<8 40=8<8: A>;82VABL, 0B0:AVO, 3>;>2=89 1V;L, 70?0<>@>G5==O, =VAB03<,
B@5<>@, 157A>==O, 0A5?B8G=89 <5=V=3VB, B@82>6=5 71C465==O, 2B@0B0 @V2=>2038, @CE>2V
@>7;048, 703>AB@5==O E2>@>18 0@:V=A>=0, 5:AB@0?V@0@5>0B5B>7, 71V;LH5==O G0AB>B8
=0?04V2.

I>:C >@30=V2 7>@C: 48?;>?VO, 7=865==O 3>AB@>B8 7>@C, :>=N=:B82VB.

I>:C H;C=:>2>-.8H:>2>3> B@0:BC: =C4>B0, 1;N20==O, 4V0@5O, ACEVABL C @>BV, 48A?5?AVO,
70?>@, E2>@>18 7C1V2, 1V;L C 682>BV.

I>:C ?5GV=:8: ?V428I5==O ?>:07=8:V2 DC=:FV>=0;L=8E ?5GV=:>28E B5ABV2, ?>@CH5==O
DC=:FVW ?5GV=:8, ?5GV=:>20 =54>AB0B=VABL. >@CH5==O DC=:FVW ?5GV=:8 70728G09
7CAB@VG0TBLAO C 7207:C 7 @50:FVO<8 3V?5@GCB;82>ABV.

>@CH5==O :VAB:>2>-<O7>2>W A8AB5<8 B0 A?>;CG=8E B:0=8=: 2V B@02<8, 1>;L>2V 2V4GCBBO,
1V;L C A?8=V, C 4V;O=FV H8W, A88 A8AB5<=>3> G5@2>=>3> 2>2G0:0.

=HV ?>@CH5==O: AB<;N20=VABL, ?@>?0A=8FO, V=D5:FVW, 3@8?>?>4V1=89 A8=4@<,
=574C60==O, @8=VB, D0@8=3VB, ?>@CH5==O 48E0==O, 48A<5=>@5O, ?>@CH5==O

<5=AB@C0;L=>3> F8;;C, 203V=VB. 0?0<>@>G5==O, 48?;>?VO, 0B0:AVO V ?>@CH5==O 7>@C
G0ABVH5 @5TAB@CNBLAO C E2>@8E, O:V >45@6CNBL :0@10<075?V= C A?>;CG5==V 7 ;0
<>B@8468=>728B>: F8E ?>1VG=8E @50:FV9 70;568BL 2V4 4>78 ?@5?0@0BC. 07=0G5=V A8<8 <>6CBL
7=8:0B8 ?@8 7=865==V 4>1>2>W 4>78 G8 7

>1VG=V @50:FVW, ?>2O70=V 7 ?@8?8=5==O< ;V:C20==O: H:V@=5 28A8?0==O, 70?0<>@>G5==O,
3>;>2=89 1V;L, 0B0:AVO, =C4>B0, 48?;>?VO, A>;82VABL, 703>AB@5==O AC4<=8E =0?04V2,
0AB5=VO, ?>@CH5==O 7>@C.

!5@9>7=V ?>1VG=V @50:FVW, I> ?>B@51CNBL ?@8?8=5==O ;V:C20==O: A5@9>7=V H:V@=V
?@>O28, 0AB5=VO, 3>;>2=89 1V;L, =C4>B0, 1;N20==O. "0:V CA:;04=5==O G0ABVH5 7CAB@VG0;8AO,
O:I> 71V;LH5==O 4>78 ?@>2>48;>AL C ?@8A:>@5=>6 ?@8 A?>;CG=>AC20==V ;0<>B@8468=C 7
20;L?@>T2>N :8A;>B>N 01> ?@>B85?V;5?B8G=8<8 ?@5?0@0B0<8, I> =5 T V=4C:B>@0<8
<5B01>;V7CNG8E D5@<5=BV2 ?5GV=:8, A8=4@< 3V?5@GCB;82>ABV, H:V@=5 28A8?0==O, =C4>B0,
?>@CH5==O :>>@48=0FVW, A>;82VABL, 45?@5AVO, =574C60==O.
E2>@8E ;VB=L>3> 2V:C ?>1VG=V @50:FVW, I> ?>B@51CNBL 2V4

"5@>ABV.5 @>:V2.

#<>28 715@V30==O.

15@V30B8 C =54>ABC?=>□, 2>@83V=0;L=V9 C?0:>2FV.

#?0:>2:0.

"01;5B:8 ?> 25 <3 ?> 30 B01;5B>: C D;0:>=0E.
"01;5B:8 ?> 100 <3 01> 150 <3 ?> 60 B01;5B>: C D;0:>=0E.

0B53>@VO 2V4?CA:C. 0 @5F5?B><.

8@>1=8:. \$0@<0A09=A =:./Pharmascience Inc.

VAF57=0E>465==O 28@>1=8:0 B0 9>3> 04@5A020465==O 4VO;L=>ABV
6111 >O,<0C=B 25=N, 100, >=@50;L, 2515: 4 2"4, 0=040/
6111 Royalmount Avenue 100, Montreal, Quebec, H4P 2T4, Canada.