

V=AB@C:FVO  
4;O <548G=>3> 70AB>AC20==O ;V:0@AL:>3> 70A>1C

""  
(MIRTASTADIN®)

!;:04:

4VNG0 @5G>28=0:

1 B01;5B:0, 2:@8B0 ?;V2:>2>N >1>;>=:>N,

4>?>28=8: ;0:B>70, <=>3V4@0B; 3V?@<<5;>70; :@>E<0;L :C:C@C47O=89;

3V4@>:A8?@>?V;F5;N;>70; :@5<=VN 4V>:A84 :>;>W4=89 1572>4=89; <03=VN AB50@0B;

?>;V5B8;5=3;V:>;L; B8B0=C 4V>:A84 (171); 70;V70 >:A84 6>2B89 (172); EV=>;V=>289 6>2B89 (104);

6>2B89 70EV4 FCF (110) 4;O B01;5B>: ?> 15 <3; 70;V70 >:A84 G5@2>=89 (172); 70;V70 >:A84 6>2B89 (172); 70;V70 >:A84 G>@=89 (172) 4;O B01;5B>: ?> 30 <3.

V:0@AL:0 D>@<0. "01;5B:8, 2:@8BV ?;V2:>2>N >1>;>=:>N.

A=>2=V DV78:>-EVABV: 6>2BV, 2:@8BV ?;V2:>2>N >1>;>=:>N, 4>230ABV, 42>>?C;;V B01;5B:8, 7

@8A:>N 7 >4=>3> 1>:C (4;O B01;5B>: ?> 15 <3);

15652V, 2:@8BV ?;V2:>2>N >1>;>=:>N, 4>230ABV, 42>>?C;;V B01;5B:8,7 @8A:>N 7 >4=>3> 1>:C (4;O B01;5B>: ?> 30 <3);

1V;V,2:@8BV ?;V2:>2>N >1>;>=:>N, :@C3;V, 42>>?C;;V B01;5B:8 (4;O B01;5B>: ?> 45 <3).

\$0@<0:>B5@0?52B8G=0 3@C?0. A8E>0=0;5?B8:8. =B845?@5A0=B8. >4 "X N06X11.

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

\$0@<0:>48=0

V@B070?V= ?@5A8=0?B8G=89  $\alpha_2$ -0=B03>=VAB, O:89 71V;LHCT =>@04@5=5@3VG=C V

A5@>B>=V=5@3VG=C =59@>?5@540GC C F5=B@0;L=V9 =5@2>2V9 A8AB5B>=V=5@3VG=89 5D5:B

F5 @57C;LB0B A?5F8DVG=>W 4VW @5F5?B>@V2 5-"<sub>1</sub>, >A:V;L:8 :CT >18420 @5F5?B>@8 5-"<sub>2</sub> V 5-"<sub>3</sub>.

18420 5=0=BV><5@8 S+) 1;>:CT @5F5?B>@8  $\alpha_2$ - V 5-"<sub>3</sub>, B>4V O: 5=0=BV><5@ (R-) 1;>:CT @5F5?B>@8

5-"<sub>3</sub>. 2060TBLAO, I> 1- 0=B03>=VG=0 4VO A?@8G8=NT 70A?>:V9;82C 4VN ;V=5@3VG=0 4VO

B5@0?52B8G=8E 4>7 @V4:> A?>AB5@V30TBLAO ;;V=VG=> ACBBT2V =51060=V ?@>O28 @>7;04V2

A5@F52>-AC48=>W A8AB5<8.

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

V@B070?V= <0T 28A>:C 01A>@1FVN, ;V=V9=C D0@<0:>:V=5B8:C =02VBL ?@8 ?5@528I5==V @5:>

<5=4>20=8E <56 4>7C20==O (15-45 <3 =0 45=L) B0 5;V4 =0?V2282545==O 20-40 3>48=, I> 40T 7<>3C

?@89<0B8 ?@5?0@0B 1 @07 =0 4>1C. 4=0: G5@57 B5, I> ;V:0@AL:89 70AV1 7=0G=>

<5B01>;V7CTBLAO C 35?0B>F8B>E@<<=V9 A8AB5 B0 5:A:@5BCTBLAO 3>;>2=8< G8=>< V7 A5G5N,

9>3> ;V@5=A <>65 1CB8 <5=H8< G5@57 ?5GV=:>2C 01> =8@:>2C =54>AB0B=VABL.

VA;O ?5@>@0;L=>3> ?@89> V ?>2=VABN 01A>@1CTBLAO (1V>4>ABC?=VABL ?@81;87=> 50 %),

4>AO30NG8 ?V:0 C ?;072V ?@81;87=> G5@57 2 3>48=8. @89>< W6V =5 2?;820T =0 D0@<0:>:V=5B8:C

?@5?0@0BC.

@81;87=> 85 % ?;07<8 :@>2V. !BV9:0 :>=F5=B@0FVO 4>AO30TBLAO ?VA;O3-4 4=V2 @53C;O@=>3>

?@89>

!5@54=V9 ?5@V>4 =0?V2282545==O 20-40 3>48=, V=:>;8 A?>AB5@V30TBLAO ?5@V>4

=0?V2282545==O 4> 65 3>48=, 0;5 C ?0FVT=BV2 <>;>4H>3> 2V:C ?5@V>4 =0?V2282545==O <5=H89.

V@B070?V= 4>1@5 <5B01>;V7CTBLAO V 282>48BLAO V7 A5G5N V :0;> ?@>BO3>< :V;L:>E 4=V2.

V>B@0=AD>@<0FVO 28=8:0T 2>A=>2=>< 48<5B8;N20==O V >:A840FVW 7 ?>40;LH>N :>=N30FVTN.

# 28?@>1C20==OE *Vn vitro* A>< ?5GV=:8 ;N48=8 ?>:070=>, I> F8B>E@<< 450, 5=78<8 !Y 2D6 V !Y 12

70;CG5=V 2 CB2>@5==O <5B01>;VBC :A8, B>4V O: 5=78< !Y 4 2V4?>2V40T 70 CB2>@5==O

<5B01>;VBV2 N-48<5B8; V ->:A84. 8<5B8;<5B01>;VB8 T D0@<0:>;>3VG=> 0:B82=8<8, V WE D0@

<0:>:V=5B8G=V 2;0AB82>ABV 0=0;>3VG=V B0:8< =5<5B01>;V7>20=>3> ?@5?0@0BC.

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

>:070==O. V:C20==O 5?V7>4V2 206:>W 45?@5AVW.

@>B8?>:070==O.

- 5GV=>20 01> =8@:>20 =54>AB0B=VABL;
- AC?CB=T 70AB>AC20==O @0<8 <=>0:A84078 ( );
- 48BOG89 2V.;
- ?5@V>4 203VB=>ABV B0 3>4C20==O 3@C44N;
- ?V428I5=0 V=482V4C0;L=0 GCB;82VABL 4> A:;04>28E ?@5?0@0BC.

70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9.

V@B0AB04V= =5 @5:><5=4CTBLAO ?@87=0G0B8 @07>< 7 V=3V1VB>@0<8 (<=>0:A84078).  
V:C20==O < A;V4 @>7?>G8=0B8 70 2 B86=V ?VA;O 70:V=G5==O B5@0?VW V=3V1VB>@0<8 □.  
V@B0AB04V= <>65 ?V4A8;N20B8 A540B82=C 4VN 15=7>4V075?V=V2 B0 V=H8E 70A?>:V9;828E  
70A>1V2. !;V4 1CB8 >15@56=8<8, ?@87=0G0NG8 FV ;V:0@AL:V 70A>18 @07>< 7  
V@B0AB04V= ?>A8;NT ?@83=VGC20;L=C 4VN 0;:>3>;N =0 F5=B@0;L=C =5@2>2C A8AB53>;L=8E  
=0?>W2.  
/:I> V=HV AC1AB0=FWW, O:V ?V4A8;NNBL 4VN A5@>B>=V=C (AC<0B@8?B0= 01> V=HV  
B@8?B0=8), B@0<04>; (7=51>;N20;L=89 70AV1), >:A8B@8?B0= V B@8?B>D0= (?@5:C@A>@8  
A5@>B>=V=C) 01> V=3V1VB>@8 72>@>B=>3> 70E>;5==O A5@>B>=V=C (V=HV 0=B845?@5A0=B8)  
70AB>A>2CNBLAO >4=>G0A=>, A;V4 1CB8 >15@56=8<8 G5@57 <>6;8289 @>728B>: B0: 720=>3>  
A5@>B>=V=5@3VG=>3> A8=4@>74V; «A>1;82>ABV 70AB>AC20==O»). /:I> :<1V=0FVO  
V@B0AB04V=C 7 F8<8 ?@5?0@0B0<8 T B5@0?52B8G=> =5>1EV4=>N, A;V4 7 25;8:>N >15@56=VABN  
287=0G8B8 4>7C20==O V ?>ABV9=> :>=B@>;N20B8 ?>O2C >7=0: @>728B:C 4>B>=V=5@3VG=>3>  
5D5:BC ?V4 G0A ?V4B@8W AB8B>=V=5@3VG=>3> A8=4@>1EV4=> ?@8?8=8B8 70AB>AC20==O  
?@5?0@0BC B0 =5309=> 268B8 70E>4V2 I>4> WE CAC=5==O.  
=0GCI>W ;:V=VG=>W 270T<>4VW 01> D0@<0:>:V=5B8G=8E 7AB5@V30;>AL ?@8 A?V;L=>  
!;V4 1CB8 >A>1;82> >15@56=8<8 ?@8 >4=>G0A=>AC20==V V@B0AB04V=C V A8;L=>4VNG8E  
V=3V1VB>@V2 ?@>B5078 (;V:0@AL:89 70AV1 4;O ;V:C20==O-70E2>@N20=L), >A:V;L:8 <>6;82V  
<O7>20 A;01:VABL V ?>@CH5==O 48E0==O; ?@>B83@81:>28E 07>;V2, 5@8B@B8:) <>6;825  
?V428I5==O :>=F5=B@0FVW ?@5?0@0BV2 C ?;072V; =5D07>4>=C (0=B845?@5A0=B) <>6;82V  
A>=:82VABL, H;C=:>2>:8H:>2V A8-8: =C4>B0, G0ABVH5 70?>@. @8 >4=>G0A=>AC20==V W=, 4>70  
V@B0AB04V=C <>65 1CB8 71V;LH5=0. /:I> ;V:C20==O F8<8 70A>10<8 7025@H5=>, 4>7C  
!;V4 <0B8 =0 C207V, I> >4=>G0A=5 70AB>AC20==O B0 71V;LH8B8, :>;8 ;V:C20==O F8<5B848=><  
?@8?8=OTBLAO.  
V@B0AB04V= <>65 ?>A8;N20B8 4VN A540B82=8E 2;0AB82>AB59 15=7>4V075?V=C.  
# ?0FVT=BV2, O:V ?@89<0NBL 20@D0@8=, NR (:V;L:VABL, I> A2V4G8BL ?@> AE8;L=VABL 4>  
73>@B0==O :@>2V). @8 70AB>AC20==V 28A>:8E 4>7 :>=B@>;N20B8 ?@>B@><1V=>289 G0A B0  
V=HV ?0@0<5B@8 73>@B0==O C @07V >4=>G0A=>3> 70AB>AC20==O 20@D0@8=C B0 AC20==O  
?>BC6=>3> V=3V1VB>@0 CYP3A4 :5B>:>=07>;C ?V428IC20;> ?V:>2V @V2=V C ?;072V B0 AUC (?>:IV  
?V4 :@82>N «:>=F5=B0FVO/G0A») =0 40 % B0 50 % 2V4?>2V4=>.

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

!CWF84/ACWF840;L=V =03V@H0==O  
5?@5AVO 0A>FVNTBLAO 7 ?V428I5=8< @878:>< 28=8:=5==O ACWF840;L=8E =0  
V4><>, I> ?0FVT=B8 7 ACWF840;L=8<8 28?04:0<8 2 0=0<=57V, 01> ?0FVT=B8, O:V ?@>O2;ONBL  
28@065=89 ABC?V=L ACWF840;L=>3><8A;5==O I5 4> ?>G0B:C ;V:C20==O, <0NBL 28189 @878:  
28=8:=5==O ACWF840;L=8E 4C<>: 01> A?@>1 A0<>3C1AB20 B0 ?>28==V ?5@51C20B8 ?V4 @5B5;L=8  
< :>=B@>;5< ?@>BO3>< CAL>3> ;V:C20==O. 5B0 0=0;V7 ?;0F51>:=>=B@>;L>20=8E ;:V=VG=8E  
4>A;V465=L 0=B845?@5A0=BV2, I> 70AB>A>2CNBLAO 4>@>A;8< V7 ?A8EVG=8<8 @>7;040<8,  
?>:0702 ?V428I5=89 @878: @>728B:C ACWF840;L=>W ?>254V=:8 ?@8 ?@89>@V2=O==V 7 ?0FVT=B0  
<8 2V:>< 4> 25 @>:V2, O:V >B@8.  
5B5;L=89 =03;O4 70 ?0FVT=B0<8 B0 >A>1;82> 70 B8<8, EB> <0T ?V428I5=89 @878.; A;V4 2AB0=>28B8  
?@>BO3>< B5@0?VW 0=B845?@5A0=B0<8, >A>1;82> =0 @0==VE AB04VOE ;V:C20==O B0 7  
?>40;LH>N 7N 4>7C20==O. 0FVT=BV2 (B0 >AV1, O:V =03;O40NBL 70 ?0FVT=B0<8) ?>B@V1=>  
?>?5@548B8 ?@> =5>1EV4=VABL ?5@52V@:8 1C4L-O:>3> ;:V=VG=>3> ?>3V@H5==O,  
ACWF840;L=>W ?>254V=:8 G8 4C<>: B0 =5728G09=8E 7254V=:8. !;V4 =5309=> 725@=CB8AL 70

<548G=>N ?>@04>N C @07V ?>O28 B0:8E A8  
5@CG8 4> C2038 <>6;82VABL A0<>3C1AB20, >A>1;82> =0 ?>G0B:C ;V:C20==O, ?0FVT=BC =5>1EV4=>  
4020B8  
@83=VG5==O 4VO;L=>ABV :VAB:>2>3> <>7:C  
@>B03><;V:C20==O ?@5?0@0B< ?>2V4><;O;>AO ?@> ?@83=VG5==O 4VO;L=>ABV :VAB:>2>3>  
<>7:C, I> 70728G09 ?@>O2;OTBLAO 3@0=C;>F8B>?5=VTN 01> 03@0=C;>F8B>7> >1>@>B=89  
03@0=C;>F8B>7 ?>2V4><;O;>AO O: ?@> 28?04>;, I> @V4:> B@0?;OTBLAO C ;;V=VG=8E  
4>A;V465==OE ?@5?0@0BC. # ?>AB<0@:5B8=3>289 ?5@V>4 ?>2V4><;O;>AO ?@> ?>>48=>:V 28?04:8  
03@0=C;>F8B>7C, ?5@5206=> >1>@>B=>3>, 0;5 V=>4V 7 ;5B0;L=8< =0A;V4:> A?>AB5@V30;8AO C  
?0FVT=BV2 2V:< ?>=04 65 @>:V2. V:0@<0T 725@B0B8 C203C =0 B0:V A8<8, O: 30@OG:0, 1V;L C  
3>@;V, AB<0B8B 01> V=HV >7=0:8 V=D5:FVW. >;8 28=8:0NBL B0:V A8<8, ;V:C20==O =5>1EV4=>  
?@8?8=8B8 B0 7@>18B8 0=0;V7 :@>2V.  
>2BO=8FO.  
V:C20==O =5>1EV4=> ?@8?8=8B8, O:I> 28=8:=5 6>2BO=8FO.  
!B0=8, O:V ?>B@51CNBL ;V:0@AL:>3> =03;04C  
15@56=5 4>7C20==O, 0 B0:>6 @53C;O@=5 B0 @5B5;L=5 A?>AB5@565==O =5>1EV4=V ?0FVT=B0< 7  
B0:8<8 AB0=0<8:  
5?V;5?AVO B0 >@30=VG=V C@065==O 3>;>2=>3><>7:C: E>G0 ;;V=VG=89 4>A2V4 ?>:07CT, I>  
5?V;5?B8G=V =0?048 28=8:0NBL @V4:> ?@8 ;V:C20==V<, O: V ?@8 ;V:C20==V V=H8<8  
0=B845?@5A0=B0<8, ?@5?0@0B =5>1EV4=> 70AB>A>2C20B8 7 >A>1;82>N >15@56=VABN ?0FVT=B0  
< 7 5?V;5?B8G=8<8 =0?040<8 2 0=0<=57V. V:C20==O =5>1EV4=> ?@8?8=8B8 ?0FVT=B0<, C O:8E  
@>72820NBLAO 5?V;5?B8G=V =0?048, 01> :>;8 A?>AB5@V30TBLAO 71V;LH5==O G0AB>B8  
5?V;5?B8G=8E =0?04V2;  
?5GV=:>20 =54>AB0B=VABL: ?VA;O 70AB>AC20==O ?5@>@0;L=> 15<3 3> ABC?5=O B06:>ABV  
?>@V2=O=> 7 ?0FVT=B0<8 7 =>@<0;L=>N DC=:FVTN ?5GV=:8. !5@54=O ?;07<>20 :>=F5=B@0FVO  
=0 55 %. @87=0G0NG8 30 <3 2C20B8 A?V22V4=>H5==O :>@8ABL/?>B5=V9=89 @878: 4;O ?0FVT=B0;  
=8@:>20 =54>AB0B=VABL: ?VA;O >4=>@07>2>3> ?5@>@0;L=>3> 70AB>AC20==O 15<3 2>N  
=54>AB0B=VABN ?>3> ABC?5=O (10 <;/E2 ≤ ;V@5=A :@50B8=V=C < 40 <;/E2) 01> B06:>3> ABC?5=O  
(;V@5=A :@50B8=V=C < 10 <;/E2) ;;V@5=A =0 30 % B0 50 % 2V4?>2V4=> ?>@V2=O=> 7V 74>@>28<8  
4>1@>2>;LFO<8. !5@54=O :>=F5=B@0FVO 2V ?V428I8;0AL =0 55 % B0 115 % 2V4?>2V4=>. 5 1C;>  
6>4=8E 7=0G=8E 28?04:V2 2V4AB59 C ?0FVT=BV2 7 =8@:>2>N =54>AB0B=VABN ;53:>3> ABC?5=O (40  
<;/E2 ≤ ;V@5=A :@50B8=V=C < 80 <;/E2) ?>@V2=O=> 7 :>=B@>;L=>N 3@C?>N. @87=0G0NG8 30 <3  
2C20B8 A?V22V4=>H5==O :>@8ABL/?>B5=V9=89 @878: 4;O ?0FVT=B0 B0 :>=B@>;N20B8 ;;V@5=A  
:@50B8=V=C;  
70E2>@N20==O A5@FO, B0:V O: ?>@CH5==O ?@>2V4=>ABV, AB5=>:0@4VO B0 =5I>402=>  
?5@5=5A5=89 V=D0@:B :0@40. "0:V 28?04:8 ?>B@51CNBL 728G09=8E 70AB5@56=8E 70E>4V2 B0  
?@87=0G5==O AC?CB=L>W B5@0?VW 7 >15@56=VABN;  
0@B5@V0;L=0 3V?>B5=7VO;  
FC:@>289 4V015B: C ?0FVT=BV2, E2>@8E =0 4V015B, 0=B845?@5A0=B8 <>6CBL 2?;820B8 =0  
@V25=L 3;N:>78 2 :@>2V. >65 28=8:=CB8 =5>1EV4=VABL :>@5:FVW 4>78 V=AC;V=C B0/01> 4>78  
?5@>@0;L=8E 3V?>3;V:5<5=4CTBLAO @5B5;L=5 A?>AB5@565==O.  
/: ?@8 70AB>AC20==V V=H8E 0=B845?@5A0=BV2, =5>1EV4=> 27OB8 4> C2038 B0:5:  
?@8 70AB>AC20==V 0=B845?@5A0=BV2 C ?0FVT=BV2, E2>@8E =0 H87>D@5=VN 01> V=HV  
?A8EVG=V @>7;048, <>6CBL 703>AB@N20B8AO ?A8E>B8G=V A8<8; <>6CBL AB0B8 V=B5=A82=VH8  
<8 ?0@0=>W40;L=V 4C  
?@8 ;V:C20==V 45?@5A82=>W D078 1V?>;O@=>3> @>7;04C 2>=0 <>65 ?5@59B8 2 <0=V0:0;L=C D07C.  
5>1EV4=> @5B5;L=> A?>AB5@V30B8 70 ?0FVT=B0<8 7 <0=V0:0;L=8<8 01> 3V?><0=V0:0;L=8<8  
?@>O20<8 2 0=0<=57V. 0AB>AC20==O 1EV4=> ?@8?8=8B8, O:I> ?0FVT=B 2E>48BL C <0=V0:0;L=C  
D07C;  
E>G0 728:0==O 4> ?@5?0@0BC V@B0AB04V= =5 28=8:0T, ?>AB<0@:5B8=3>289 4>A2V4  
70AB>AC20==O ?>:07CT, I> @0?B>25 ?@8?8=5==O ;V:C20==O ?VA;O B@820;>3> 70AB>AC20==O  
<>65 V=:>;8 ?@872>48B8 4> A8O2;ONBLAO =57=0G=8<8 ;;V=VG=8<8 A8<0<8 B0 ?@>E>4OBL A0  
A>1V. !5@54 @V7=>×0=VB=8E A8 O:V ?>2V4><;O;>AO, =09G0ABVH8<8 1C;8 70?0<>@>G5==O,  
71C465==O, =5A?>:V9, 3>;>2=89 1V;L B0 =C4>B0. %>G0 ?@> =8E ?>2V4><;O;>AL O: ?@> A8<8 2V4  
1EV4=> @>7C FV A8<8 <>6CBL 1CB8 ?>2O70=V 7 ?5@51V3< >A=>2=>3> 70E2>@N20==O. 5:>

<5=4CTBLAO ?>ABC?>2? ?@8?8=OB8 ;V:C20==O <;  
=5>1EV4=> 1CB8 >15@56=8<8 ?@8 ;V:C20==V ?0FVT=BV2 7 @>7;040<8 A5G>284V;5==O, 2 B.G.  
2=0A;V4>: 3V?5@B@>DVW ?5@542>W 70;>78, ?0FVT=BV2 7 3>AB@>N 70:@8B>:CB>2>N 3;0C:>>N  
B0 ?V428I5=8< 2=CB@VH=L>>G=8< B8A:>< (>4=0: 2?;82 ?@5?0@0BC V@B0AB04V= <0;>9<>2V@=89  
7 >3;04C =0 9>3> 4C65 =87L:C 0=B8E>;V=5@3VG=C 0:B82=VABL);  
0:0B87VO/?A8E><>B>@=5 71C465==O: 70AB>AC20==O 0=B845?@5A0=BV2 ?>2O70=5 7 @>728B:><  
0:0B87VW, I> E0@0:B5@87C20;0AO AC1T:B82=> =5?@8T<=8< 01> B@82>6=8< 71C465==O< B0  
=5>1EV4=VABN G0AB> @CE0B8AO @07< 7 =5<>6;82VABN A?>:V9=> A84VB8 01> AB>OB8. 091V;LH  
V<>2V@=>, I> FV A8<8 <>6CBL 28=8:=CB8 ?@>BO3<< ?5@H8E :V;L:>E B86=V2 ;V:C20==O, B>78  
<>65 1CB8 H:V4;828< 4;O 74>@>2O.

V?>=0B@VT

C65 @V4:> 1C;8 ?>2V4><;5==O ?@> 3V?>=0B@VT ?>2O70=> 7 =5045:20B=>N A5:@5FVTN  
0=B84VC@5B8G=>3> 3>@<>=C (), ?@8 70AB>AC20==V 3> 2V:C 01> ?0FVT=B8, O:V 70AB>A>2CNBL  
AC?CB=N B5@0?VN, I> <>65 A?@8G8=8B8 3V?>=0B@VTB@51CNBL 268BBO 70AB5@56=8E 70E>4V2.  
15@>B>=V=>289 A8=4@><

70T<4VO 7 A5@>B>=V=5@3VG=8<8 0:B82=8<8 @5G>28=0<8: A5@>B>=V=>289 A8=4@><>65  
28=8:=CB8, :>;8 A5;5:B82=V V=3V1VB>@8 72>@>B=>3> 70E>?;5==O A5@>B>=V=C  
70AB>A>2CNBLAO AC?CB=L> 7 V=H8<8 A5@>B>=V=5@3VG=8<8 0:B82=8<8 @5G>28=0<8. !8<0<8  
A5@>B>=V=>2>3> A8=4@> 206;828E ?>:07=8:V2. 3> AB0=C 2;;NG0NBL A?;CB0=VABL A2V4<>ABV,  
@>74@0B>20=VABL B0 :@09=T 71C465==O, I> ?@>3@5ACT 4> 45;V@VN B0 :>8. ?>AB  
<0@:5B8=3>2>3> 4>A2V4C 2V4<>, I> A5@>B>=V=>289 A8=4@>< 28=8:0T 4C65 @V4:> C ?0FVT=BV2,  
O:8E ;V:CNBL BV;L:8

0FVT=B8 ;VB=L>3> 2V:C

0FVT=B8 ;VB=L>3> 2V:C 70728G09 1V;LH GCB;82V 4> ?>O28 ?>1VG=8E@50:FV9 0=B845?@5A0=BV2.  
8=8:=5==O ?>1VG=8E @50:FV9 C ?0FVT=BV2 2V:> 2V4 65 @>:V2 A?>AB5@V30;>AO =5 G0ABVH5,  
=V6 C ?0FVT=BV2 V=H8E 2V:>28E :0B53>@V9.

V@B0AB04V= =5 ?@87=0G0NBL ?0FVT=B0< V7 @V4:VA=8<8 A?04:>28<8 D>@<0<8 =5?5@5=>A8  
<>ABV 30;0:B>78, ;0:B07=>W =54>AB0B=>ABV 01> 3;N:>7>-30;0:B>7=>W <0;L01A>@1FVW.  
0@2=8:., I> 2E>48BL 4> A:;04C B01;5B>: V@B0AB04V= 15 <3 (6>2B89 70EV4 FCF (110), <>65 A?@8G8=8  
0;5@3VG=V @50:FVW.

**0AB>AC20==O C ?5@V>4 203VB=>ABV 01> 3>4C20==O 3@C44N.**

@5?0@0B =5 70AB>A>2CNBL C ?5@V>4 203VB=>ABV 01> 3>4C20==O 3@C44N.  
# @07V 4V03=>ABC20==O 203VB=>ABV ?@>BO3<< ;V:C20==O ?@5?0@0B<< <>6;825 ?V428I5==O  
@878:C 28=8:=5==O A8=4@>W ?C;L<>=0@=>W 3V?5@B5=7VW C =>2>=0@>465=8E (), O:89 70728G09  
@>72820TBLAO ?@>BO3<< ?5@H8E 24 3>48= ?VA;O =0@>465==O.

**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.**

V@B0AB04V= ?>3V@HCT :=F5=B@0FVN C2038, >A>1;82> =0 ?>G0B:C ;V:C20==O. 0FVT=B8, O:V  
70AB>A>2CNBL ?@5?0@0B V@B0AB04V=, ?>28==V C=8:0B8 28:>=0==O ?>B5=FV9=> =5157?5G=8E  
284V2 4VO;L=>ABV, O:V 28<030NBL :=F5=B@0FVW C2038, B0:8E O: :5@C20==O 02B>B@0=A?>@B>  
< 01> V=H8<8 <5E0=V7<0<8.

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

"01;5B:8 A;V4 ?@89<0B8 ?5@>@0;L=>, :>2B0B8 =5 @>76>2CNG8, 70?820B8 @V48=>N.  
>@>A;V.D5:B82=0 4>1>20 4>70 70728G09 AB0=>28BL 2V4 15 4> 45<3; ?>G0B:>20 4>70 15 01> 30<3.  
V@B070?V= ?>G8=0T ?@>O2;OB8 5D5:B 7030;>< ?VA;O 1-2 B86=V2 ;V:C20==O. V:C20==O 045:20B=>N  
4>7>N <0T 28;;8:0B8 ?>78B82=C 2V4?>2V4L ?@>BO3<< 2-4 B86=V2. @8 =54>AB0B=V9 2V4?>2V4V  
4>7C <>6=0 71V;LH8B8. /:I> ?@>BO3<< =0ABC?=8E 2-4 B86=V2 5D5:BC =5 A?>AB5@V30TBLAO,  
?@5?0@0B =5>1EV4=> 2V4  
0FVT=B8 ;VB=L>3> 2V:C. 5:><5=4>20=0 4>70 B0:0 6 A0<0, O: V 4;O 4>@>A;8E. <5B>N 4>AO3=5==O  
704>2V;L=>3> B0 157?5G=>3> @57C;LB0BC 71V;LH5==O 4>78 4;O ?0FVT=BV2 ;VB=L>3> 2V:C  
74V9A=NNBL ?V4 AC2>@8< =03;O4<< ;V:0@O.

8@>:20 =54>AB0B=VABL. ;V@5=A 3> 01> BO6:>3> ABC?5=O (;V@5=A :@50B8=V=C □ 40 <:/E2).  
@87=0G0NG8 ?@5?0@0B FV9 :0B53>@VW ?0FVT=BV2, A;V4 :=B@>;N20B8 ;;V@5=A :@50B8=V=C.  
5GV=:>20 =54>AB0B=VABL. ;V@5=A A>1;82> C @07V ?V428I5==O 4>78.  
0FVT=BV2 7 45?@5AVTN A;V4 ;V:C20B8 ?@>BO3× 4>AB0B=L>3> ?5@V>4C, I>=09<5=H5 6 ?>2=>3>  
7=8:=5==O ;;V=VG=8E A81V30==O 28=8:=5==N 5D5:BC <2V4AC20==O ?@5?0@0BC ?@8?8=ONBL  
?>ABC?>2>.

VB8.  
@87=0G0B8 4VBO< ?@5?0@0B =5 @5:><5=4CTBLAO.  
>254V=:0, ?>2O70=0 7 ACWF84× (A?@>18 A0<3C1AB20 B0 ACWF840;L=V 4C@>6VABL (?5@5206=>  
03@5AVO, >?>78FV9=0 ?>254V=:0 B0 3=V2) =09G0ABVH5 A?>AB5@V30;8AL C ;;V=VG=8E  
4>A;V465==OE A5@54 4VB59 B0 ?V4;VB:V2, O:8E ;V:C20;8 0=B845?@5A0=B0<8, C ?>@V2=O==V 7  
4VBL<8 B0 ?V4;VB:0<8, O:8E ;V:C20;8 ?;0F51>./:I>, '@C=BCNG8AL =0 ;;V=VG=V9 =5>1EV4=>ABV,  
?@89=OB> @VH5==O ?@> 70AB>AC20==O ?@5?0@0BC, 70 ?0FVT=B>< =5>1EV4=> @5B5;L=>  
A?>AB5@V30B8 I>4> 28=8:=5==O ACWF840;L=8E A8  
:@V< B>3>, 40=V 7 4>23>B@820;>W 157?5:8 C 4VB59 B0 ?V4;VB:V2 AB>A>2=> @>ABC, AB0B52>3>  
4>7@V20==O, :>3=VB82=>3> B0 ?>254V=:>2>3> @>728B:C 2V4ACB=V.

5@54>7C20==O.  
@8 ?5@54>7C20==V 1C;> 2V47=0G5=> ?@83=VG5==O F5=B@0;L=>W =5@2>2>W A8AB5<8 V7 A8<0  
<8 457>@VT=B0FVW V B@820;>W A540FVW, O:V AC?@>2>46C20;8AO B0EV:0@4VTN V ;53:>N  
0@B5@V0;L=>N 3V?5@- 01> 3V?>B5=7VTN. 4=0: VA=CT 9<2V@=VABL A5@9>7=VH8E =0A;V4:V2  
(2;;NG0NG8 ;5B0;L=V) ?@8 4>7C20==OE, O:V 1030B>@07>2> ?5@528ICNBL B5@0?52B8G=C 4>7C,  
>A>1;82> ?@8 77C20==V.  
@8 28=8:=5==V ?5@H8E >7=0: ?5@54>7C20==O A;V4 268B8 70E>4V2 I>4> WE CAC=5==O. V:C20==O  
?@>2>48BLAO 0:B82>20=8< 2C3V;;01EV4=>ABV ?@87=0G0NBL ?@><820==O H;C=:0. >40;LH0  
B5@0?VO A8<0B8G=0.

>1VG=V @50:FVW.  
@8 70AB>AC20==V ?@5?0@0BC <>6;82V =86G5=02545=V ?>1VG=V 5D5:B8.  
I>:C ;VW A8AB5<8 B0 A8AB5<8 :@>2V: 3>AB@5 ?@83=VG5==O :VAB:>2>3><>7:C (7=865==O  
DC=:FV9 :VAB:>2>3><>7:C 7 2V4?>2V4=8<8 7<1>F8B?>5=VO).  
I>:C 5=4>:@8==>W A8AB5<8 B0 <5B01>;V7 ?V428I5==O 0?5B8BC V, O: =0A;V4>;, 71V;LH5==O<0A8  
BV;0, 3V?>=0B@VT@CH5==O A5:@5FVW 0=B84VC@5B8G=>3> 3>@<>=C.  
A8EVG=V @>7;048: A?;CB0=VABL A2V4><>ABV, 48A:>@B, ?>@CH5==O A=C, =5A?>:V9, 157A>==O,  
@50;VAB8G=V A=>284V==O, =VG=V :>H<0@8, <0=VO, 068B0FVO, 30;NF8=0FVW, ?A8E><>B>@=0  
71C465=VABL (C B.G. 0:0B87VO, 3V?5@:V=57VO), ACWF840;L=V =054V=:0.  
I>:C =5@2>2>W A8AB5<8: A>;82VABL, A540FVO, 3>;>2=89 1V;L, 70?0><>@>G5==O, B@5<>@,  
>5B0@3VO, A8=4@< «AB><;5=8E =V3», ?0@5AB57VO, A8=:>?5, ;>=VO, AC4>8 (7 @878:< B@02  
<0B870FVW B0 :@>2>B5G), A5@>B>=V=>289 A8=4@<, ?0@5AB57VO A;87>2>W >1>;>=:8  
?>@>6=8=8 @>B0.  
I>:C A5@F52>-AC48==>W A8AB5<8: >@B>AB0B8G=0 3V?>B5=7VO ?@8 7;>65==O, 0@B5@V0;L=0  
3V?>B5=7VO.  
I>:C B@02=>W A8AB5<8: ACEVABL C @>BV, =C4>B0, 4V0@50, 1;N20==O,>@0;L=0 3V?5AB57VO,  
=01@O: A;87>2>W >1>;>=:8 ?>@>6=8=8 @>B0, ?0=:@50B8B.  
5?0B>1V;V0@=V ?>@CH5==O: ?V428I5==O @V2=O ?5GV=:>28E B@0=A0  
I>:C H:V@8 B0 ?V4H:V@=>W ;;VB:>28=8: 5:70=B5<0, A8=4@< !BV25=A0-6>=A>=0, 1C;L>7=89 45@  
<0B8B, @<=0 5@8B5<0, B>:A8G=89 5?V45@<0;L=89 =5:@>;V7.  
I>:C >?>@=>-@CE>2>3> 0?0@0BC: 0@B@0;3VO,  
A=CT ?V428I5=89 @878: ?5@5;>: C ?0FVT=BV2, O:V 70AB>A>2CNBL ?@5?0@0B8 40=>W 3@C?8.  
030;L=V ?>@CH5==O: 35=5@0;V7>20=0 01> ;>:0;L=0 545<0 (=01@O:), ?V428I5=0 2B><;N20=VABL, A>  
<=0<1C;V7  
&V ?>@CH5==O <>6CBL A?>AB5@V30B8AO ?@>BO3× ?5@V>4C ;V:C20==O <01> ?VA;O  
?@8?8=5==O ;V:C20==O.  
%>G0 V@B0AB04V= =5 A?@8G8=OT 70;56=>ABV, @0?B>25 ?@8?8=5==O ?@89>3> 70AB>AC20==O

<>65 ?@8725AB8 4> A8=4@> <8=0NBL C 287=0G5=89 AB@>: 157 ;V:C20==O. !5@54 @V7=8E  
2AB0=>2;5=8E A8B0, =5A?>:V9, 068B0FVO. =865==O 4>78 70728G09 =5 ?@872>48BL 4> 7<5=H5==O  
A>=;82>ABV/A540B0FVW, 0;5 <>65 703@>6C20B8 5D5:B82=>ABV 0=B845?@5A0=BC. 1C465==O B0  
157A>==O (I <>6CBL 1CB8 A8<0<8 45?@5AVW) <>6CBL @>728=CB8AO 01> ?>3V@H8B8AO  
2=0A;V4>: ;V:C20==O 0=B845?@5A0=B0<8. @8 ;V:C20==V < 1C;8 ?>2V4><;5==O ?@> @>728B>: 01>  
>3V@H5==O 71C465==O B0 157A>==O.  
C;8 ?>2V4><;5==O ?@> 28?04:8 ACWF840;L=>3> <8A;5==O B0 ACWF840;L=>W ?>254V=:8 ?@>BO3<  
B5@0?VW < 01> >4@07C ?VA;O ?@8?8=5==O ;V:C20==O.  
!>AB5@V30;>AO B825 71V;LH5==O @V2=O B@0=A04=0: =5 ?>2V4><;O;>AO ?@> ?>1VG=V  
@50:FVW, ?>2O70=V 7<, I> 28=8:0;8 7 1V;LH>N G0AB>B>N ?@>BO3< ;V:C20==O <, =V6 ?;0F51>).

"5@ABV. 3 @>:8.

#<>28 715@V30==O. 15@V30B8 ?@8 B5@83V=0;L=V9 C?0:>2FV. 15@V30B8 C =54>ABC?=>

#?0:>2:0.

> 10 B01;5B>: C 1;VAB5@V; ?> 2 01> 5 1;VAB5@V2 C :0@B>==V9 :>@>1FV.

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

8@>1=8:.

!"@F=09(28?CA: A5@V9).

VAF57=0E>465==O 28@>1=8:0 B0 9>3> 04@5A020465==O 4VO;L=>ABV.

!B040HB@0AA5 2-18, 61118 04 \$V;L15;L, V<5GG8=0.