

!" #&/
4;O <548G=>3> 70AB>AC20==O ?@5?0@0BC

&□"□
(CETIL)

!::04:

4VNG0 @5G>28=0: F5DC@>:A8
1 B01;5B:0 :A8:A8< 250 <3 01> 500 <3;
4>?>28=8: F5;N;>70 :@8AB0;VG=0, =0B@VN ;0C@8;AC;LD0B, =0B@VN :@>A:0@<5;>70, >;VO
@>A;8==0 3V4@>35=V7>20=0, :@5<=VN 4V>:A84 :>;>W4=89 1572>4=89, 3V4@>:A8?@>?V;
<5B8;F5;N;>70, ?>;V5B8;5=3;V:>;L 4000, ?@>?V;5=3;V:>;L, B8B0=C 4V>:A84 (171), B0;L:.

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

\$0@<0:>B5@0?52B8G=0 3@C?0. @>B81=V 70A>18 4;O A8AB5<=>3> 70AB>AC20==O. 5B0-;0:B0<=V
0=B81V>B8:8. >4 " ! J01D !02.

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

>:070==O.

V:C20==O V=D5:FV9, 28:;8:0=8E GCB;828<8 4> ?@5?0@0BC >@30=V7<0<8, 0 A0<5:
V=D5:FVW ->@30=V2: A5@54=V9 >B8B, A8=CA8B, B=>=78;VB V D0@8=3VB;
V=D5:FVW 48E0;L=8E H;OEV2: ?=52<=>VO, 3>AB@89 1@>=EVB B0 703>AB@5==O E@>=VG=>3>
1@>=EVBC;
V=D5:FVW A5G>282V4=8E H;OEV2: ?VT;>=5D@8B, F8AB8B B0 C@5B@8B;
V=D5:FVW H:V@8 B0 <O:8E B:0=8=: DC@C=:C;L>7, ?V>45@
3>=>@50, 3>AB@89 =5CA:;04=5=89 3>=>:>:>289 C@5B@8B B0 F5@2VF8B;
;V:C20==O @0==VE ?@>O2V2 E2>@>18 09<0 B0 =0ABC?=5 ?>?5@5465==O ?V7=VE ?@>O2V2
E2>@>18 09<0 C 4>@>A;8E B0 4VB59 2V:< 2V4 12 @>:V2.

@>B8?>:070==O.

V42815=0 GCB;82VABL 4> F5D0;>A?>@8=>28E 0=B81V>B8:V2.

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

'CB;82VABL 4> 0=B81V>B8:C ABV 2V4 @53V>=C B0 <>65 7<. 0 =5>1EV4=>ABV A;V4 725@=CB8AO 4>
ABV 4> 0=B81V>B8:0.

0728G09 B@820;VABL ;V:C20==O AB0=>28BL 7 4=V2.

;O :@0I>3> 70A2>T==O ?@5?0@0B @5:><5=4CTBLAO ?@89<0B8 ?VA;O W48.

>@>A;V

1V;LHVABL V=D5:FV9

250 <3 2 @078 =0 4>1C;

V=D5:FVW A5G>282V4=8E H;OEV2

125 <3 2 @078 =0 4>1C;

V=D5:FVW 48E0;L=8E H;OEV2

A5@54=L>3> ABC?5=O BO6:>ABV (1@>=EVB8)

250 <3 2 @078 =0 4>1C;

1V;LH BO6:V V=D5:FVW 48E0;L=8E

H;OEV2 01> ?V4>7@0 =0 ?=52<=>VN

500 <3 2 @078 =0 4>1C;

?VT;>=5D@8B

250 <3 2 @078 =0 4>1C;

=5CA:;04=5=0 3>=>@50

>4=>@07>2> 1 3 ?@5?0@0BC;

E2>@>10 09<0 C 4>@>A;8E B0 4VB59

2V:< 2V4 12 @>:V2

500 <3 2 @078 =0 4>1C ?@>BO3>< 20 4=V2.

&5DC@>:A8< 28?CA:0TBLAO B0:>6 C 283;04V =0B@VT2>W A>;V 4;O ?0@5=B5@0;L=>3>

70AB>AC20==O. &5 4>72>;OT ?@>2>48B8 ?>A;V4>2=C B5@0?VN >4=8< 0=B81V>B8:< ?@8

?5@5E>4V 7 ?0@5=B5@0;L=>3> 22545==O =0 ?5@>@0;L=5, O:I> 4;O FL>3> T :;V=VG=V ?>:070==O.

&5DC@>:A8A;V4>2=>

>A;V4>2=0 B5@0?VO

=52<>=VO: 1,5 3 F5DC@>:A81C (2=CB@VH=L>25==> 01> 2=CB@VH=L><O7>2>) ?@>BO3<< 48-72
 3>48= 7 =0ABC?=8< 70AB>AC20==O< ?C ?> 500 <3 2 @078 =0 4>1C ?5@>@0;L=> ?@>BO3<< 7 4=V2.
 03>AB@5==O E@>=VG=>3> 1@>=EVBC: 750 <3 F5DC@>:A81C (2=CB@VH=L>25==> 01>
 2=CB@VH=L><O7>2>) ?@>BO3<< 48-72 3>48= 7 =0ABC?=8< 70AB>AC20==O< ?C ?> 500 <3 2 @078 =0
 4>1C ?5@>@0;L=> ?@>BO3<< 5-7 4=V2.
 "@820;VABL O: ?0@5=B5@0;L=>3>, B0: V ?5@>@0;L=>3> ;V:C20==O 287=0G0TBLAO 7 C@0EC20==O
 < BO6:>ABV V=D5:FVW B0 AB0=C E2>@>3>.

VB8
 28G09=0 4>70 AB0=>28BL 125 <3 (70AB>A>2C20B8 C 2V4?>2V4=V9 ;V:0@AL:V9 D>@7C20==V) 01> 10
 <3/:3 <0A8 BV;0 2 @078 =0 4>1C (<0:A8<0;L=0 4>1>20 4>70 250 <3). ;O ;V:C20==O A5@54=L>3>
 >B8BC 4VBO< 2V:< 4> 2 @>:V2 ?@87=0G0NBL ?@5?0@0B C 4>7V 125 <3 (70AB>A>2C20B8 C
 2V4?>2V4=V9 ;V:0@AL:V9 D>@7C20==V) 01> 10 <3/:3 <0A8 BV;0 2 @078 =0 4>1C (<0:A8
 4>1>20 4>70 250 <3), 4VBO< 2V:< 2V4 2 @>:V2 250 <3 01> 15 <3/:3 <0A8 BV;0 2 @078 =0 4>1C (<0:A8
 <0;L=0 4>1>20 4>70 500 <3). >A2V4C 70AB>AC20==O ?@5?0@0BC 4VBO< 2V:< 4> 3
 VBO< 2V:< 4> 2 @>:V2 @5:<5=4CTBLAO ?@87=0G0B8 F5DC@>:A8< 0:A5B8; C D>@
 %2>@V ;VB=L>3> 2V:C B0 E2>@V 7 =8@:>2>N =54>AB0B=VABN
 !?5FV0;L=8E 70AB5@565=L 4;O FVTW 3@C?8 E2>@8E =5<0T. 0AB>A>2CNBL 728G09=V 4>78, <0:A8
 <0;L=> 1 3 =0 4>1C.
 %2>@V 7 =8@:>2>N =54>AB0B=VABN
 &5DC@>:A8< 282>48BLAO 3>;>2=8< G8=>< =8@:0<8. # ?0FVT=BV2 V7 28@065=8< ?>@CH5==O<
 DC=:FVW =8@>: @5:<5=4CTBLAO 7<5=H8B8 4>7C F5DC@>:A8, I>1 :>3> ?>2V;L=VHC 5:A:@5FVN (
 482. B01;8FN =86G5).

;V@5=A :@50B8=V=C	T1/2 (3>48=8)	5:<5=4>20=5 4>7C20==O
≥30 <:/E2.	1,4 2,4	>@53C20==O 4>78 =5 ?>B@V1=> (70AB>A>2CNBL AB0=40@B=C 4>7C 2V4 125 <3 4> 500 <3 2 @078 =0 4>1C)
10-29 <:/E2.	4,6	!B0=40@B=0 V=482V4C0;L=0 4>70 :>6=V 24 3>48=8
<10 <:/E2.	16,8	!B0=40@B=0 V=482V4C0;L=0 4>70 :>6=V 48 3>48=
?@>4>26 35 <>4V0;V7C	2 4	4=C 4>40B:>2C AB0=40@B=C 4>7C A;V4 70AB>A>2C20B8 ?VA;O :>6=>3> 4V0;V7C

>1VG=V @50:FVW.

>1VG=V @50:FVW ?@8 70AB>AC20==V F5DC@>:A8 28@065=V V <0NBL 2 >A=>2=>1>@>B=89
 E0@0:B5@.
 =D5:FVW B0 V=207VW: =04Candida.
 I>:C A8AB5<8 :@>2V: 5>78=>DV;VO, ?>78B82=89 B5AB C<1A0, B@><1>F8B>?5=VO, ;59:>?5=VO
 (V=:;>8 3;81>:0), 35<>;VB8G=0 0=5
 ?>A?>@8=8 O: ;0A <0NBL 2;0AB82VABL 01A>@1C20B8AO =0 ?>25@E=V<5<1@0=8 5@8B@>F8BV2
 B0 270T<>4VOB8 B0< 7 0=B8BV;0<8, I> <>65 ?@8725AB8 4> ?>78B82=>W ?@>18 C<1A0 (2?;82 =0
 287=0G5==O ACABV :@>2V) B0 4> 35<>;VB8G=>W 0=5
 I>:C VW A8AB5<8: @50:FVW 3V?5@GCB;82>ABV, 2;:NG0NG8 H:V@=V 28A8?0==O, :@>?82O=:C,
 A25@1V6, <548:0<5=B>7=C 30@OG:C, A8@>20B:>2C E2>@>1C, 0=0DV;0:AVN
 I>:C =5@2>2>W A8AB5<8: 3>;>2=89 1V;L, 70?0<>@>G5==O.
 I>:C B@02=>3> B@0:BC: 30AB@>5=B5@>;>3VG=V @>7;048, 2;:NG0NG8 4V0@5N, =C4>BC, 1V;L C
 682>BV, 1;N20==O, ?A524<5<1@0=>7=89 :>;VB (482. @>74V; «A>1;82>ABV 70AB>AC20==O»)
 I>:C 35?0B>1V;V0@=>W A8AB5<8: B@0=78B>@=5 ?V428I5==O @V2=O ?5GV=:>28E D5@<5=V2 (" ,
 !",), 6>2BO=8FO (3>;>2=8< G8=>< E>;5AB0B8G=0), 35?0B8B.
 I>:C H:V@8 B0 ?V4H:V@=>W B:0=8=8: ?>;V<>@D=0 5@8B5<0, A8=4@< !BV25=A0-6>=A>=0,
 B>:A8G=89 5?V45@<0;L=89 =5:@>;V7 (5:70=B5<0B>7=89 =5:@>;V7).

5@54>7C20==O.

5@54>7C20==O F5D0;>A?>@8=0<8 <>65 A?@8G8=8B8 ?>4@07=5==O 3>;>2=>3> <>7:C, I> <>65
 ?@8725AB8 4> 28=8:=5==O AC4>

V25=L F5DC@>:A820BFV :@>2V <>65 1CB8 7<5=H5=89 H;OE>< 35<>4V0;V7C B0 ?5@8B>=50;L=>3> 4V0;V7C.

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

03VB=VABL

:A?5@8<5=B0;L=8E 4>:07V2 5<1@V>?0B8G=>W 01> B5@0B>35==>W 4VW F5DC@>:A8ABV.

>4C20==O 3@C44N

&5DC@>:A8< ?@>=8:0T C 3@C4=5 <>;>:, B>4 3>4C20==O 3@C44N ?@5?0@0B A;V4 70AB>A>2C20B8 7 >15@56=VABN.

VB8.

VBO< 2V:> 4> 2 @>:V2 @5:><5=4CTBLAO ?@87=0G0B8 F5DC@>:A8< 0:A5B8; C D>@A2V4C 70AB>AC20==O ?@5?0@0BC 4;O ;V:C20==O 4VB59 2V:> 4> 3 2 =5<0T.

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

>A>1;82>N >15@56=VABN ?@5?0@0B ?@87=0G0NBL ?0FVT=B0<, C O:8E 1C;8 0;5@3VG=V @50:FVW =0 ?5=VF8;V=8 01> V=HV 15B0-;0:B0<=V 0=B81V>B8:8.

0AB>AC20==O F5DC@>:A83> @>ABC Candida. "@820;5 70AB>AC20==O <>65 B0:>6 ?@8725AB8 4> =043> @>ABC V=H8E =5GCB;828E>@30=V7Enterococci, Clostridium difficile), I> <>65, C A2>N G5@3C, 28<030B8 ?@8?8=5==O ;V:C20==O.

@8 70AB>AC20==V 0=B81V>B8:V2 H8@>:>3> A?5:B@0 4VW <>65 A?>AB5@V30B8AO ?A524<>5 <1@0=>7=89 ;>;VB, O:89 <>65 ?@>O2;OB8AO 2V4 ;53:>W D>@<8 4> 703@>7;82>3> 4;O 68BBO AB0=C. "><0B8 F5 =0 C207V, O:I> C ?0FVT=BV2 28=8:0T BO6:0 4V0@5O ?V4 G0A 01> ?VA;O

0=B810:B5@V0;L=>W B5@0?VW.:/I> 28=8:0T B@820;001> 28@065=0 4V0@5O 01> ?0FVT=B 2V4GC20T @V7:89 ?5@59<>?>4V1=89 1V;L C 682>BV, ;V:C20==O ?>28==> 1CB8 =5309=> ?@8?8=5=>, V ?0FVT=BC A;V4 ?@>25AB8 @5B5;L=5 >1AB565==O.

V4 G0A ;V:C20==O F5DC@>:A8<< E2>@>18 09<0 A?>AB5@V30;0AO @50:FVO /@8H0-5@:A359 <5@0. >=0 28=8:0T 157?>A5@54=L> G5@57 10:B5@8F84=C 4VN F5DC@>:A8>@30=V7<, I>

A?@8G8=OT E2>@>1C 09<0, A?V@>E5BC Borrelia burgdorferi. 0FVT=B0< =5>1EV4=> ?>OA=8B8, I> F5 728G09=89 =0A;V4>: 0=B81V>B8:>B5@0?VW E2>@>18 09<0, I> <8=0T 157 ;V:C20==O.

@8 ?@>2545==V ?>A;V4>2=>W B5@0?VW G0A ?5@5E>4C 7 ?0@5=B5@0;L=>W B5@0?VW F5DC@>:A8@0;L=C 287=0G0TBLAO BO6:VABN V=D5:FVW, ;V=VG=8< AB0=< ?0FVT=B0 B0 GCB;82VABN ?0B>35==>3> >@30=V7ABV ;V=VG=>3> ?>:@0I0==O ?@>BO3< 72 3>48= ?0@5=B5@0;L=C B5@0?VN F5DC@>:A8<< A;V4 ?@>4>26C20B8. 5@54 ?>G0B:< ?@>2545==O ?>A;V4>2=>W B5@0?VW A;V4 >7=09<8B8AO 7 2V4?>2V4=>N =AB@C:FVTN 4;O <548G=>3> 70AB>AC20==O F5DC@>:A8

40B=VABL 2?;820B8 =0 H284:VABL @50:FVW ?@8 :5@C20==V 02B>B@0=A?>@B< 01> @>1>BV 7 V=H8<8 <5E0=V7<0<8.

A;V;L:8 ?@5?0@0B <>65 A?@8G8=OB8 70?0<>@>G5==O, ?0FVT=BV2 A;V4 ?>?5@548B8, I> :5@C20B8 02B><>1V;5< V ?@0FN20B8 7 V=H8<8 <5E0=V7<0<8 =5>1EV4=> 7 >15@56=VABN.

70T<>4V0 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9.

@5?0@0B8, I> 7<5=HCNBL :8A;>B=VABL H;C=:>2>3> A>:C,<>6CBL 7<5=HC20B8 1V>4>ABC?=VABL F5DC@>:A8

/: V V=HV 0=B81V>B8:8, ? <>65 <0B8 2?;82 =0 D;>@C :8H5G=8:C, I> ?@872545 4> 7<5=H5==O @501A>@1FVW 5AB@>35=V2 B0 7=865==O 5D5:B82=>ABV :<1V=>20=8E ?5@>@0;L=8E :>=B@0F5?B82=8E 70A>1V2.

A;V;L:8 ?@8 D5@>FV0=V4=>2V ?0FVT=B0<, O:V ;V:CNBLAO F5DC@>:A8<< 0:A5B8;><, @5:> <5=4CTBLAO 28:>@8AB>2C20B8 3;N:>7>>:A8407=C 01> 35:A>:V=07=C <5B>48:8. &5DC@>:A8< =5 2?;820T =0 ;C6=>?V:@0B=89 0=0;V7 287=0G5==O :@50B8=V=C.

!CAC20==O 7 ?@>15=8F84<< 71V;LHCT ?;>IC ?V4 :@82>N «:>=F5=B@0FVO-G0A» C A8@>20BFV :@>2V =0 50 %. V25=L F5DC@>:A820BFV :@>2V 7<5=HCTBLAO 70 4>?><>3>N 4V0;V7C.

@8 ;V:C20==V F5D0;>A?>@8=0<8 1C;8 ?>2V4<>;5==O ?@> ?>78B82=89 B5AB C<1A0. &59 D5=><5= <>65 2?;820B8 =0 ?5@5E@5A=C ?@>1C =0 AC2V.

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

\$0@<0:>48=0

&5DC@>:A8@0;L=0 D>@<0 10:B5@8F84=>3> F5D0;>A?>@8=>2>3> 0=B81V>B8:0 F5DC@>:A8 >@30=V7

0:B5@8F84=0 4VO F5DC@>:A8< ?@83=VG5==O A8=B57C ;:VB8==>W >1>;>=:8 >@30=V7

01CB0 @578AB5=B=VABL 4> 0=B81V>B8:0 2V4@V7=OTBLAO C @V7=8E @53V>=0E B0 <>65 7<, 0 4;O >:@5<8E HB0ABV 4> 0=B81V>B8:0, >A>1;82> ?@8 ;V:C20==V BO6:8E V=D5:FV9.

&5DC@>:A8< <0T 28A>:C 0:B82=VABL 2V4=>A=> B0:8E>@30=V7

3@0<=530B82=V 05@>18:

Haemophilus influenzae (2;:NG0NG8 HB0<8, ABV9:V 4> *Haemophilus parainfluenzae*, *Moraxella (Branhamella) catarrhalis*, *Neisseria gonorrhoeae* (2;:NG0NG8 HB0<8, I> ?@>4C:CNBL ?5=VF8;V=07C, B0 ?5=VF8;V=07>=5?@>4C:CNGV HB0<8), *Escherichia coli*, *Klebsiella spp.*, *Proteus mirabilis*, *Providencia spp.*, *Proteus rettgeri*;

3@078B82=V 05@>18:

Staphylococcus aureus (<5B8F8;V=GCB;82V HB0<8) B0 :>03C;07>=530B82=V AB0DV;>:>::8 (<5B8F8;V=GCB;82V HB0<8), *Streptococcus pyogenes* (B0 V=HV 15B0-35<>;VB8G=V AB@5?B>:>:8), *Streptococcus pneumoniae*, *Streptococcus* 3@C?8 (*Streptococcus agalactiae*);

0=05@>18:

3@078B82=V B0 3@0<=530B82=V :>:8 (2;:NG0NG8 2848 *Peptococcus* B0 *Peptostreptococcus*), 3@0 78B82=V 10:B5@VW (2;:NG0NG8 2848 *Clostridium*) B0 3@0<=530B82=V 10:B5@VW (2;:NG0NG8 2848 *Bacteroides* B0 *Fusobacterium*), *Propionibacterium spp.*;

V=HV >@30=V7<8:

orrelia burgdorferi;

>@30=V7<8, =5GCB;82V 4> F5DC@>:A8:

llostridium difficile, *Pseudomonas spp.*, *Campylobacter spp.*, *Acinetobacter calcoaceticus*, *Listeria monocytogenes*, <5B8F8;V==5GCB;82V HB0<8 *Staphylococcus aureus* B0 *Staphylococcus epidermidis*, *Legionella spp.*;

45O:V HB0<8 =86G5=02545=8E >@30=V7 F5DC@>:A8

Enterococcus (Streptococcus) faecalis, *Morganella morganii*, *Proteus vulgaris*; *Enterobacter spp.*, *Citrobacter spp.*, *Serratia spp.*, *acteroides fragilis*

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

VA;O?5@>@0;L=>3> 70AB>AC20==O F5DC@>:A8 0:A5B8; 01A>@1CTBLAO C :8H5G=8:C,

3V4@>;V7CTBLAO =0 A;87>2V9 >1>;>=FV >AB0==L>3> V C 283;04V F5DC@>:A8 ?>B@0?;OT C :@>2>>1V3.

?B8<0;L=89 @V25=L 01A>@1FVW A?>AB5@V30TBLAO >4@07C ?VA;O ?@89>20BFV :@>2V

A?>AB5@V30TBLAO ?@81;87=> G5@57 2-3 3>48=8 ?VA;O ?@89>4 =0?V2282545==O ?@5?0@0BC A

B0=>28BL ?@81;87=> 1-1,5 3>48=8. V25=L 7207C20==O 7 1V;:0<8 33-55 % 70;56=> 2V4 <5B>48:8

287=0G5==O. &5DC@>:A8< 284V;OTBLAO =8@:0<8 C =57AB0=V H;OE<< :0=0;LF52>W A5:@5FVW B0 ;:C1>G:>2>W DV;LB@0FVW.

4=>G0A=5 70AB>AC20==O ?@>15=5F84C 71V;LHCT ?;>IC ?V4 :@82>N A5@54=L>W A8@>20B>2>W :>=F5=B@0FVW =0 50 %.

V25=L F5DC@>:A82 A8@>20BFV :@>2V 7<5=HCTBLAO 2=0A;V4>: 4V0;V7C.

\$0@<0F52B8G=V E0@0:B5@8AB8:8.

A=>2=V DV78:>-EVABV: 1V;V 01><0965 1V;V 42>>?C;:V B01;5B:8, 2:@8BV >1>;>=:>N 7

@>7?>4V;LG>N @8A:>N 7 >4=>3> 1>:C, B0 =0?8A<< «LUPIN» 7 V=H>3>.

"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, ?> 1 1;VAB5@C C :0@B>==V9 C?0:>2FV.

0B53>@VO 2V4?CA:C. 70 @5F5?B>

8@>1=8:.

N?V= V

VAF57=0E>465==O.

198-202, LN =40AB@V0; @VO 2, 0=4848? 462046 8AB 09A5= .., =4VO.