



MUSC3705

DYfZcfa UbWV '@JVcfUhc fm'7

HYfa 'H\fYY'##'&\$&\$



GWcc`cZH Y`5 frg`UbX`A YXJU`#`I BGK `..5 frg`UbX`GcWJU`GWYbWg

7 ci fgY`Cj Yfj]Yk

GHJZZ'7cbHJW`8YHJ`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWjhcb	D\cbY
>c\b`B Ud]Yf	^bUd]Yf4 i bgk "YXi "Ui	: f]XUm%\$"" \$! %%" \$ž'cf`Vm Uddc]bha Ybž'cf Xfcd`]b	K YVghYf'%%	- ' ,) * -) '

GWcc`7cbHJW`bZcfa Uhjcb

GWcc`cZhY`5fng`UbX`A YX]U

Fcca " %&ž@Y] Y"" žF cVYfhK YVghYf`6i]X]b[`fl %Ł

D\cbY. f\$&Ł- ' ,) '(,) *

9a Uj]: [gUa 4 i bgk "YXi "Ui](#)

K YVg]hY: [k k k "Ufng"i bgk "YXi "Ui #gUa](#)

H\Y`GWcc`cZhY`5fng`UbX`A YX]U`k ci `X`_]Y`h`F YgdYVW`m5W`bck`YX[Y`hY`HfUX]hcbU`7i g`hX]Ubgž
hY`6YXY[U`fP`Ybg]b[hcb`WJa di gŁž; UX][U`f7]mUbX`5fh/`8Yg][b`7Ua di gYgŁ`UbX`hY`B [i bbUk U`
dYcd`Y`f5i g`fU]Ub`8YZYbW : cfW`5WUXYa m]b`7 UbVYffUŁcZhY`UbXg`k \YfY`YUW`WJa di g`cZI`BGK`]g
`cW]hYX"

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`(`

Gi a a UfmicZ\hY'7ci fgY

H\Y'UWēi]g]hcb'cZ\[\`mXYj Y'cdYX'Wē`UVcfUhj Y'UbX'dfYgYbhUj]cb'g_]`g'g']bWYUg]b[`m]a dcfUbh]b
WēbhYa dcfUfma i g]Wa U_]b['UbX'h'i g'fY'Yj UbhZcf'hY'dfY!dfcZYgg]cbU'hfU]b]b['cZU''gh XYbhg']b'U`
a U'ēfg'cZhY'6A i g'dfc[fUa "'A I G7' +\$) 'DYfZcfa UbW'@UVcfUhcfm7]g'hY'h'fXžUbX'ZbU'žDYfZcfa UbW'
@UVcfUhcfmWēi fgY'Zcf'gh XYbhg'Ybfc`YX']b'hY'A i g]Wē'c[mUbX'Gcb]W5fng'a U'ēfg'cZhY'6UWY'cf'cZ
A i g]Wdfc[fUa "'H\]g'Wēi fgY'Vi]Xg'cb'hY'h'Wb]WU'UbX'WYUhj Y'Zci bXUj]cbg'XYj Y'cdYX']b'YUF]Yf
DYfZcfa UbW'@UVcfUhcfmWēi fgYgžUbX'hY'Uk UfYbYgg'cZU'fUb[Y'cZa i g]W' [YbfYg'UbX'dfUW]Wg
YbWēi bhYfYX']b'chYf'Wēi fgYg']b'hY'a i g]Wdfc[fUa "'Gh XYbhg'YUfb'hc'Udd'mW]hW']ghYb]b['UbX
fYUX]b[g'cZdYfZcfa UbW']hYfUh fYžUbX'[U]b'g_]`g'UbX'Yi dYf]YbW']b'hY'XYj Y'cda YbhUbX'W fUhcfg\]d'cZ
]bbcj Uhj Y'[fci d'dYfZcfa UbW'g"

BchY. 'H\]g'g'U'%&i C7'Wēi fgY"'Mci 'k]`Ybfc`]b`(' I C7]b'YUW'cZh'fYY'gi W'Wgg]j Y'h'fa g'k]h'U'fYgi 'h
fYdcfYX'VmU'g]b['Y'[fUXY'Uh'hY'YbX'cZhY'h'fX'(' I C7'Wēi fgY"

7ci fgY'@YUfb]b['Ci hWēa Yg

%" 5dd'mW]hW]ga 'UbX'UbU'm]g]cZhY']hYfUh fY'cb'dYfZcfa UbW'žUbX'cZa UghYf'WUgg'dfYgYbhUj]cbgž
hc'hY'dfYdUfUj]cb'cZhY]f'ck b'dYfZcfa UbW'
&" 8Yg][b'UbX'dfYgYbhYZZYW] Y'YbgYa V'Y'a UYf]U'UbX'dYfZcfa UbW'g
' " 5dd'mdf]bW]d'Yg'cZhY'Ua kcf_'hc'a i g]WYbgYa V'Y

HYUW.]b['GhfUH[]Yg`

j]XYc[fUd\mUbX'bcH'g'cb'Uh'YUgh('a UghYf!WUggYgE'

DcfhZ'jcg'k]''VY'gi Va]H'X'h'fci [\ 'Hi fb]hb'UbX'a Uf_YX'Vm'h'Y''YWh' fYf''

Gi Va]gg]cb'bcH'g.D'YUgY'gYY'XYH]g'cZ'h]g'Ugg][ba Ybh'cb'h'Y'A ccX'Y

Hi fb]hb'gYH]b[. 'H\]g'Ugg][ba Ybh]g'gi Va]H'X'h'fci [\ 'Hi fb]hb'UbX'gh'XYbhg'WUb'gYY'Hi fb]hb'g]a]Uf]m
fYdcfng''

5ggYgga Ybh' . 'DYfZcfa UbW'g'fYgYbH]h]cb

GhUfhXUH' . '

8YH]g.

H\fYY'j]b!WUgg'dYfZcfa UbW'g'UbX'Ub'j]b!WUgg'W'cbXi W]b['h'ghgWUzc'X]b['UggYgga Ybh'Ug_(' "

Gdc_Yb'ZYXVUW_k]''VY'[]j Yb'Vm'h'Y''YWh' fYf']b'WUggz'UbX'k f]H'Yb'ZYXVUW_g'cfhm'UZ'Yf''

5XX]h]cbU'XYH]g.

H\]g'W'a dcbYbhk]''U'gc'j]bWi XY'U'g'cfh'W'cbXi W]b['YI Ua z\Y'X'j]b'h'Y'Z]bU'gh'X]c'cZH&''

Gh'XYbh'g'k]''Xc'U'a]b]a i a 'cZ%]b!WUgg'dYfZcfa UbW'j]b'H%UbX'&]b!WUgg'dYfZcfa UbW'g'j]b'H' " 'H\YgY
dYfZcfa UbW'g'UfY'[fci d'dYfZcfa UbW'g'z'Ug'bcH'X'Z'f'UggYgga Ybh'Ug_(' "

Hi fb]hb'gYH]b[. 'H\]g'j]g'bcH'U'Hi fb]hb'Ugg][ba Ybh

5 HhYbXUbWw`F Yei]fYa Ybhg

D`YUgY`bch`hUh`YWh`fY`fYwcfX]b[g`UfY`bchUj`U]UV`Y`Zcf`h]g`Wci`fgY`"Gh`XYbhg`UfY`ghfcb[`mYbWci`fU[YX`hc`UhhYbX`U`WUggYg`UbX`WcbhUWhhY`7ci`fgY`5i`hcf]mhc`a`U_Y`U`hYfbUhj`Y`UffUb[Ya`Ybhg`Zcf`WUggYg`a`]ggYX"

7 ci fgY`GWXYXi `Y

[J \]yk`WUgg`hja`YhUV`Y`](#)

H]a`YhUV`Y`

8UhY	HmdY	7cbhYbh
C`K`YY_`,`G`YdhYa`VYf`! %%G`YdhYa`VYf`	;`fci`d`K`cf_`	D`YUgY`UhhYbX`hc`mci`f`YbgYa`V`Y`Ybfc`a`Ybh`
K`YY_`%`%(`G`YdhYa`VYf`! %`G`YdhYa`VYf`	Gh`X]c`	⊖Xi`ghfmg_]`g`X]gW`gg]cb`
K`YY_`&.`&%G`YdhYa`VYf`! &)`G`YdhYa`VYf`	Gh`X]c`	⊖Xi`ghfmg_]`g`X]gW`gg]cb`
K`YY_`'`.`&`,`G`YdhYa`VYf`! &`C`Wtc`VYf`	Gh`X]c`	⊖Xi`ghfmg_]`g`X]gW`gg]cb`C`F`gh`XYbhdfYgYbUh]cbg` C`F`V`c`h`
K`YY_`(`)`C`Wtc`VYf`!`-` C`Wtc`VYf`	Gh`X]c`	K`YY_g`(!)`ž`+!`%\$`⊖`WUgg`dfYgYbUh]cbg`U`WwcfX]b[` hc`g`WXYXi`Y`UffUb[`YX`VmihY`YbX`c`Zk`YY_`%`

Gi Va]gg]cb 'cZ5ggYgga YbhiHUg_g

Hi fb]h]b 'Gi Va]gg]cb

Ʒmci 'YbWci bHYf'U'dfcV'Ya 'k \Yb'UH'Ya dh]b['hc'gi Va]hmc i f'Ugg][ba YbhiH'fci [\ 'Hi fb]h]bž'd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'-',) "' ' ' %cf'Ya U]'H'Ya 'cb'YI HYfbU'HY'hgi ddcfh4 i bgk "YXi "Ui "'Gi ddcfh
\ci fg'UfY', .\$\$Ua '—%\$.\$\$da 'cb'k YY_XUmg'UbX'-. \$\$Ua '—) .\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUfl" Ʒmci
UfY'i bUV'Y'hc'gi Va]hmc i f'Ugg][ba YbhiXi Y'hc'U'ZU'i 'hk]H'Hi fb]h]b'mci 'a UmUdd'm'Zcf'Ub'YI HYbg]cbž'Vi hmc i
a i ghfYHU]b'mci f'h]W_Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfhfU'cb['k]H'UbmcH'Yf'fY'Yj UbhXcW a YbHg'k'hc
]bWi XY'Ug'Yj]XYbVW'hc'gi ddcfhmc i f'YI HYbg]cb'Udd'jW]h]cb" Ʒmci 'Ya U]'9I HYfbU'Gi ddcfhmc i 'k]
Ui 'ca UH]WU'm'fYW]j Y'U'h]W_Yhbi a VYfž'Vi h]Zmci 'HY'Yd\cbY'mci 'k]'b'Y'YX'hc'gd'Y'W]WU'mUg_'Zcf'cbY"
Hi fb]h]b'U'gc'dfcj]XYg'i dXUH'g'cb'H'Y]f'gmgh'Ya 'ghU'i g'cb'Hk]H'Yf"

; YbYfU'mž'UggYgga YbhiHUg_g'a i ghVY'gi Va]H'YX'Y'Y'W'fcb]WU'mj]U'Y]H'Yf'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba YbH' 'b]bg]H'UbVW'g'k \YfY'H'g]g'bc]hd'cgg]V'Yž'hk]'VY'gh'UH'X'cb'mci f'Wci fgY'g'A ccX'Y'g]H'k]H
U'HYfbUH] Y'gi Va]gg]cb'XYHU]g"

: cf]bZ'fa UH]cb'cb'\ck 'hc'gi Va]hUgg][ba YbHg'cb]bY'j]U'A ccX'Y. \H'hdg.#gh XYbH'i bgk "YXi "Ui #ck!
gi Va]hUgg][ba YbH'a ccX'Y

5 WUXYa]W< cbYgmiUbX`D`U[]Uf]ga

D`U[]Uf]ga `]g`i g]b[`hY`k cfXg`cf`]XYUg`cZc`hYfg`UbX`dfYgYbh]b[`hYa `Ug`mci f`ck b``#WUb`hU`Y`a Ubm
Zcfa gZ`Zca `XY`]VYfU`h`V`X`Y`U`h]b[`h`U`W`Y`X`Y`b`U`m`W`c`d`m]b[`Zca `U`gci f`W`k]h`ci h`U`W`b`c`k `Y`X[`Y`a `Y`b`h`

I B G K `[fci dg`d`U[]Uf]ga `]b`h`c`h`Y`Z`c`ck]b[`W`U`h`Y[`cf]Y`g.

7 cdm]b[.`i`g]b[`h`Y`g`U`a `Y`cf`j`Y`fmg]a]U`f`k`cf`X`g`h`c`h`Y`cf][]b`U`h`Y`h`cf`]X`Y`U`k]h`ci h`U`W`b`c`k `Y`X[]b[`h`Y`

5 WUXYa]WbZcfa Uh]cb

: cfYggYbh]U`gh XYbh]bZcfa Uh]cb fY`Uh]b[`tc.

- fYei Yghg`Zcf`YI H`bg]cb/
- `UhY`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZYfmdc`]WYg/
- YI Ua]bUh]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfUH]cb`]b`hY`Yj YbhicZ]`bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]mUbX`X]gUV`]m/
- UbX`c`hYf`YggYbh]U`UWUXYa]W]bZcfa Uh]cbz`gYY

[\ftdg.#k k k "Uftg"i bgk "YXi "Ui #W ffYbh\]gh XYbh\]UWUXYa \]W\]bZcfa Uh\]cb#dfchW`g!\[i \]XY`\]bYg#](#)

⇒ U[Y`7 fYX]h

H\]g:]a U[Y`]g`hY`dfcdYfmicZ>c\b`B Ud]Yfz`W`i fgY`W`bj Ybcf

7F ⇒ CG

7F ⇒ CG`Dfcj]XYf`7cXY.`\$\$\$- ;

5W_bck`YX[Ya YbhicZ7ci bhfm

K Y`UW_bck`YX[Y`hY`6YXY[U`dYcd`Y`k`c`UfY`hY`fUX]h]cbU`W`ghcX]Ubg`cZ`hY`UbXg`cb`k` \]W`I BGK
? Ybg]b[`tc`W]a`di`g`]g`cW]hYX"