

!"#\$%&'()\* &  
+,\$-".#-/0&1,/2) &

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!"#\$%&'(  
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"#\$%&'(#)\*%#\$+!, '\$-./, '\$-.0!\$%!.-%\$12.-!(!)3%%\$%(!(#.14)%()2!5)66.1.!7)88'2\$(9!)!-.(\*8\$2.!3'(#)\*%#\$+!32-!(!)+\*..2(!)\*!.%)6:!.13'(#)\*%#\$+!-\$%+'(.%;!!<%%'%.%13--\*.%%, '\$\$23@#3%!!  
#)=!(!)!-(\*8\$2.!=#.(#.\*!32!\$2-\$-\$-'36>%!7)2(\*\$?('\$)2%!=3\*\*32(!3'(#)\*%#\$+ @!37A2)=6.-18.2(% @!  
)!2)!8.2(\$2; !(

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)\*+#%, "-+.%\*(

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4)%()2!5)66.1.!\$%!7)88\$((.-!(!).2%\*\$21!366!%7#)63\*69!32-!\*.%.3\*7#!+'?6\$73(\$2%\$2:)6:\$21!  
B37'6(9@!%!(3BB!/\$276'-\$21!+)%(-)7%0@!)!%('-.2(% @!\$276'-.!3++\*)+\$3(!3(\*\$?('\$)2!)B!3'(#)\*%#\$+  
\*.7)12\$(2!)B!(#)%!\$2:)6:.-!\$2!(#.=)\*A;!!C\*)+.\*!3(\*\$?('\$)2!32-!\*7)12\$(2)3\*.\*!7\*\$(\$736!(!)  
.2%\*\$21!(#3(!3'(#)\*%#\$+!7\*.-\$(!\$%!1\$:..2!=#.2!32-!=#.\*!\$(!\$%!-'@!+\*..2(\$21!3'(#)\*%#\$+!-\$%+'(.% @!  
32-!+\*)8)(\$21!7)663?)\*3(\$2!38)21!\*%.3\*7#. \*%;!!(

!

D#.2!-(\*8\$2\$21!3'(#)\*%#\$+!3(\*\$?('\$)2@!\*%.3\*7#. \*%!%#)'6-!B38\$6\$3\*\$E.!(#.8%.6:.%!=\$#!(#.!  
+\*)B.%%\$)236!2)\*8%!32-!%(32-3\*-%!B!(#.\*\$!373-.8\$7!-\$%7\$+6\$2.!32-!3++69!(#.8!3++\*)+\$3(.69;!  
F.%3\*7#. \*%!%#)'6-!36%)!\*.1'63\*69!7)88'2\$73(!(#)%!.!2)\*8%!32-!%(32-3\*-% @!3!8\$2\$8'8!=#.2!32!  
\$2-\$-\$-'36!G)\$2%13!\*.%.3\*7#!+\*)G.7(!32-!(!).232!322'36!?'3%% @!=\$#(!366!.8+6)9..% @!B37'6(9@!  
%(3BB@!%('-.2(%!32-!)(#.\*!\$2-\$-\$-'36%!\$2:)6:.-!\$2!(#.\*\$;!%!%.3\*7#

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/"+0%#&0.\$(  
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H)\*!.37#!\$2-\$-\$-'36@!(#.!\*+\$:\$6.1.!B!3'(#)\*%#\$+!%#)'6-!?!?!?3%.-!)2!3!%\$12\$B\$732(!7)2(\*\$?('\$)2!(!  
(#.!7)27.+('36\$E3(\$2@!-.%\$12@!.!7'(\$2@!)!\$2(.+\*(3(\$2!)B!(#.!\*%.3\*7#@!3%!=.66!3%!(!)(#.!  
-\*3B(\$21!)!%!'?%(32(\$..69!\*.\$=\$21!)!\*.%.3\*7#@!3%!=\$21!(#.!\*%(\$76#!B\*

!

&'(#)\*%#\$+!+).(2(\$3669!7)2:..9%!1\*.3(!?2.B\$(U3!7#)\*% @!?'(!(\$!36%)!\$2:)6:.%!+.\*%)236!  
\*.%)2%\$?\$6\$(9!B)\*!(#.!\*%.3\*7#!+'?6\$%#.-;!!<2!(#.!%7#)63\*69!3\*.23@!3'(#)\*%#\$+!36%)!B)\*8%!(#.!?  
B)\*!\*. =3\*-%!32-!73\*..\*!3-:327.8.2(!<(!\$%!..%2(\$36!(#3(!3!+.\*%)2>%!7)2%2(!?!)?(3\$2.-!?.B)\*!  
+637\$21!(#.\*\$!238.!2!3!96\$2. @!%\$27.!377)'2(3?\$6\$(9!32-!\*.%)2%\$?\$6\$(9!B)\*!(#.!7)2()\*0 -1\*(#.!7

!"

+?6\$%#.-!) \*A!\$%!\$8+6\$.-!=#.2!3'(#)\*%#\$+!7\*.-\$(!\$%!1\$:.2;!!"#.\*.B)\*.@\$B!329)2.!\$%!377)\*-.-!

/" +0%#&0.\$(:#,'# (

!

L.(.\*8\$23(\$2%)!B!P6.3-!3'(#)\*Q!32-!B7(#)\*Q!-\$BB.\*!%\$12\$B\$732(69!-.+.2-\$21!)2!(#.!.373-.8\$7!  
-\$%7\$+6\$2.;!!5)2%.K'.2(69@!=#.2!83A\$21!P3'(#)\*%#\$+!)\*.\*Q!-.(.\*8\$23(\$2%)!B!P6.3-!3'(#)\*Q!  
\*.B.\*!(!#.!+\*)B.%%\$)236!2)\*8%!32-!%(32-3\*-%!)B!(#. \$\*!373-.8\$732(69!-.+.2-\$21!)2!(#.!.373-.8\$7!  
\*.K'\$\*.8.2(%!B\*)8!(#.!.%.3\*7#!G)\*236!\$2!=#\$7#!(#.9#!)+.!+'?6\$%#!)\*!(#.!.%+)2%)\*!B!(#.!.%.3\*7#!  
\$2:)6:-;!!<2!(#.!.2(!)B!3!%\$( '3(\$2!\$2!=#\$7#!3'(#)\*%#\$+!)\*.\*!7322)(!?.!-.(\*8\$2.-@!(#.!.7)  
3'(#)\*%!%#)'6-!7)2(37(!#.\$!\*%.+.7(\$.:B\*(8.2(!7#3\$\*)!\*!3%%)7\$3(!.%.3\*7#!-.32!B)\*!3%%\$%(327. ;!  
!

;%\* <" +0%#(=%\*+#. >"+%#&

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<2-\$:-'36%#)%!.7)2(\*\$?'(\$2%!)2)(!G'(%\$B9!3'(#)\*%#\$+!)2!(#.!.3B)\*.8.2(\$2.-!7\*\$(\*\$3  
7)'6-!%(\$6637A2)=6.-1.-!\$2-\$:-'3669!)!3%!3!1\*)+'!2-.\*!3!%\$216.!#3-\$21!/. ;!;!R56\$2\$736!  
<2:..%(\$13()\*%R!)!RC3\*(\$7\$+3(\$21!<2:..%(\$13()\*%R0@!32-!(#. \$\*!373-.8\$732(69!-.+.2-\$21!)2!(#.!.373-.8\$7!  
R%.\*.-!3%!%7\$2(\$B\$7!3-.\$%)\*%@R!R7\*\$(\$73669!\*.:\$.=-(#!%('9!+\*)+)%36@R!R7)66.7(-!3(3@R  
R+\*):\$.-!32-!73\*.-!B)\*!%('9!+3(\$2(%@R!R+3\*(\$7\$+3(-!\$2!=\$(\$21!)\*!(.7#2\$736!.-\$(21!)B!(#.!  
832'%7\*\$+(R0;  
!

SI38+6.%!)B!37(\$:\$(\$.%!(#3(!36)2.!-!)2)(!K'36\$B9!3!7)2(\*\$?'()\*!B)\*!3'(#)\*%#\$+!\$276'-.@!?'(!3\*!.2)(!  
6\$8\$(-!)M!37K'\$%\$(\$2!)B!B'2-\$21T!1.2.\*36!%'+.\*:\$%\$2!)B!3!\*.%.3\*7#!1\*)+'!)\*!1.2.\*36!  
3-8\$2\$%(\*3(\$:!.%++)\*(T!32-!=\$22%\$%(327.@!(.7#2\$736!.-\$(21@!6321'31!.-\$(21@!32-!  
+\*))B\*.3-\$21!  
!

? '9%725(%@(2\* /" +0%#

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" #.!.7\$%\$)2!\* .8):.!32!3'(#)\*! +\*\$)\*!(!)+?'6\$73(\$2K\*\$\*.%!73\*.B'6!7)2%\$-.\*3(\$2)32-!  
3-#.\*.27.!(!).(\$736!%(32-3\*-%(\$!%!\* .7)88.2-!(!#3(!7)B'(#)\*%!\*.:\$.=(#!.!3'(#)\*%#\$+!7\*\$(\*\$3!  
%(3(-!\$2!(\$%\$!.\$2!)\*.\*!(!)7)2B\*\$8!.37#!\$2-\$:-'36!#3%@!)!#3%2)(@!%3(\$%B\$.-!37#!7\*\$(\*\$)2;!!<  
3!-.7\$%\$)2!\$%!83-!(!)\*.8):.!32!3'(#)\*@!366!3'(#)\*%!%#)'6-!7)2%.2(!\$2!=\$(\$21!)(#!3(!\* .8):36@!  
\$276'-\$21!(#.!.!76'-.-!3'(#)\* \$;!!U+)2!31\*..8.2(@!3'(#)\*%!%#)'6-!38.2-!(!#3'(#)\*!6\$%(!32-!  
7)2(\*\$?'()\*!-.(3\$6%!3%!2.-.!. ;!  
!

&29!-\$%+('.%!)!-\$%31\*..8.2(%!38)2!B7(#)\*%!\* .13\*-\$21!3'(#)\*%#\$+):36%#)'6-!?!  
3--.\*%.-!?'9!(#.!.%.+.7(\$:!.+3\*(8.2(!7#3\$\*)!\*!3%%)7\$3(!.%.3\*7#!-.32;!!<2!%'7#!32!B)2%(327.@!  
3'(#)\*%!%#)'6-!+63\$2#!.\*.3%)2!B)\*!\* .8):\$21!32!3'(#)\*!32-!+\*):\$-!3!-.(3\$6.-G%(\$B\$736)2  
(#3(!-7\$%\$)2!36)21!=\$#!%++)\*(\$21!)-7'8.2(3(B)B!3++6\$73?6.;!!  
!

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\$!L)1,.\*#!(,11%0)75#)(\$T!P\*97W1!7;!11%0)75!\$%&'(.10(7,U!LR<N!  
)00\$#TVV\$%&'(.10(7,\*0)(. #275:V#(0\*#V+\*;1%0V;(' \*#V#0)76#1\$\*75!\$%&'(.10(7)7\$\* H7J.)1502\$+!

\$"



## Addendum A: Authorship Agreement Flow Chart

Establish Authorship  
Agreement written by

# Addendum B: Authorship Dispute Resolution Flow Chart

**\*Notes**  
Research misconduct is defined as plagiarism, falsification, and or fabrication.



