

\* H Q H 3 R U W D O V \$ ) U D P H Z R U N I R U , Q W H J U D W L  
) X Q F W L R Q D O D Q G 6 W U X F W X U D O ( Y L G H Q F H L Q V  
9 D U L D Q W & O D V V L I L F D W L R Q

7 R E L D V % U • Q , J H R Q D . L 6 K \ \ H R Q . L & K L D U D . O 6 F R O W H U - 0 \ H D W U L Q H 0  
- R K D Q Q H V 8 Q W K X U 6 W \* H I D Q V N I L O R X D U G R 3 H U H 0 B I D I O P D D F Q W H S K D Q L H  
6 F K R U J 5 H E H N N D 6 ' H R Q J M L H 5 L X O H A ( 3 H 6 X N Y K D Q 6 L X F Q D Q M D \ , 2 D M D M  
+ H O E L J - H Q 4 3 D Q U N ) D U I R O Q W H : R O O P Y L V G K - \$ : ( O O L E . X U J D Q R Y  
' D Y L G % D 6 P P H U = X & K U I L V W L D Q 0 % R R C H O C H R D C H O F K V I L P R 0 D Q W H J D ] ] D  
6 D Q G U L Q H & H B D W G L L H F N \$ O D L Q D , Y D O D I L X N \$ Q Q H 0 H V H N L R Q L F D # H R I G  
6 F K X V W L P E H U O \ \* R R G - V L S H H G L R Q J \$ P C E H U ) U H 8 R G U Q H O L X V X ' C R V I L F D  
0 R Q W D Q \$ S F W L K X U : X O D W H I Q D 7 U I 6 W L G Y H G Q ) U 8 0 1 0 L F O K G H U 7 E Q H I Q \$ O H G R  
6 H U U D Q R W H P % R U S Y W H R Y 6 K D S U N W D Y % R X P D Q M L D Q S F E X U 3 D O H V O L H  
' D Q Y R \ H ' D P L H Q / H G 7 X J H U H 5 % D ( Y F I L O L Q H ( 2 + D \$ 0 E I H X N + H L G O H E D X J K  
. D W K U \ Q 2 H V M H Q R U / + R B I P V T X D O H 6 W D U L D Q R U H Z H V : L D O H Q F V Y D Q  
( Q J H O H Q D W K H U L Q H % - H D R Z H O R X I U R \$ % H O N E F H Q W 6 W R U H K D G Z O D W ] H U  
\$ P \ 5 D P V H \ L V D 0 D Q D 6 X G I L W K D 0 D 3 O C S D N R I Q J ) R [ I U H \ 1 R H E H C O A  
& K X Q J \$ Q Q D S X U Q D 3 R 6 K Q D / X V N 6 W L 6 D S J H K 0 5 X J J L H U V R D F H \  
& R K H Q / D F H \ 6 P L 6 W 6 Y L D % R 2 H M F Y L D : L O P \$ 0 W 0 0 - H Q Q H 3 U H Q W W L K F H U  
& K D 1 L N L W D % X 6 G L L Q D 3 + R P P \$ H U G U R P . U D P H W O R V \* 9 D Q R \ 4 L D Q J  
= K D Q J 0 L F K D H O 1 R W \$ Q D O H R O 3 D O R W L W N - ' D S O \ I U H G / \* H R 6 X H L - \$  
= D U D W H \$ Q G U H D V % U X 6 Q N H S K X V Q ) 7 U 5 D N G H O 1 6 V 0 ; 0 R K D Q Q H V 5 / H P N H  
' H Q Q L V / D O

' H S D U W P H Q W R I 1 H X U R O R J \ 7 K H 8 Q L Y H U V L W \ R I 7 H [ D V + H D O W K 6 F L H Q F H & I  
8 6 \$

& R O R J Q H & H Q W H U I R U \* H Q R P L F V & & \* 8 Q L Y H U V L W \ R I & R O R J Q H & R O R J Q H  
, Q V W L W X W H R I + X P D Q \* H Q H W L F V 8 Q L Y H U V L W \ R I / H L S ] L J 0 H G L F D O & H Q W H U  
' H S D U W P H Q W R I 3 K D U P D F R O R J \ D Q G & K H P L F D O % L R O R J \ D Q G W K H & H Q W H U  
9 D U L D Q W V & ) ( 5 9 ( P R U \ 8 Q L Y H U V L W \ 6 F K R R O R I 0 H G L F L Q H \$ W O D Q W D  
' H S D U W P H Q W R I ( S L O H S V \ \* H Q H W L F V D Q G 3 H U V R Q D O L ] H G 7 U H D W P H Q W ' D Q  
' H Q P D U N

' H S D U W P H Q W R I \* H Q H W L F V 8 Q L Y H U V L W \ + R V S L W D O R I & R S H Q K D J H Q 5 L J V K  
\* H Q R P L F 0 H G L F L Q H , Q V W L W X W H D Q G ( S L O H S V \ & H Q W H U & O H Y H O D Q G & O L Q L  
8 Q L Y H U V L G D G G H O ' H V D U U R O O R & H Q W U R G H \* H Q P W L F D \ \* H Q Y P L F D , Q V W L  
0 H G L F L Q D ) D F X O W D G G H 0 H G L F L Q D & O t Q L F D \$ O H P D Q D 6 D Q W L D J R G H

' H S D U W P H Q W R I 1 H X U R V F L H Q F H 3 K \ V L R O R J \ D Q G 3 K D U P D F R O R J \ 8 Q L Y H U V L W  
, Q V W L W X W H R I 5 H J L R Q D O + H D O W K 5 H V H D U F K 8 Q L Y H U V L W \ R I 6 R X W K H U Q ' H  
' L Y L V L R Q R I 1 H X U R O R J \ & K L O G U H Q V + R V S L W D O R I 3 K L O D G H O S K L D 3 K L O D C  
' H S D U W P H Q W R I % L R P H G L F D O D Q G + H D O W K , Q I R U P D W L F V & K L O G U H Q V + R V  
7 K H ( S L O H S V \ 1 H X U R \* H Q H W L F V , Q L W L D W L Y H ( 1 \* , 1 & K L O G U H Q V + R V S L W D O

' H S D U W P H Q W R I 1 H X U R O R J \ 8 Q L Y H U V L W \ R I 3 H Q Q V \ O Y D Q L D 3 H U H O P D Q 6 F  
6 W D Q O H \ & H Q W H U I R U 3 V \ F K L D W U L F 5 H V H D U F K % U R D G , Q V W L W X W H R I 0 , 7  
' H S D U W P H Q W R I 1 H X U R E L R O R J \ % H K D Y L R U D Q G % L R F K H P L V W U \ & H O O % L  
' L V R U G H U V 6 W R Q \ % U R R N 8 Q L Y H U V L W \ 6 W R Q \ % U R R N 1 < 8 6 \$

, Q V W L W X W H I R U 1 H X U R V F L H Q F H D Q G & D U G L R Y D V F X O D U 5 H V H D U F K 8 Q L Y H  
6 F K R R O R I + H D O W K D Q G : H O O E H L Q J D Q G 5 R \ D O + R V S L W D O I R U & K L O G U H Q 8  
' H S D U W P H Q W R I 1 H X U R O R J \ D Q G ( S L O H S W R O R J \ + H U W L H , Q V W L W X W H I R U 8  
7 • E L Q J H Q 7 • E L Q J H Q \* H U P D Q \

8 Q L Y H U V L W p & { W H ' D ] X U & 1 5 6 8 0 5 , Q V H U P 8 , Q V W L W X W H R I 0 R  
3 K D U P D F R O R J \ 9 D O E R Q Q H 6 R S K L D \$ Q W L S R O L V ) U D Q F H  
' / X [ H P E R X U J & H Q W U H I R U 6 \ V W H P V % L R P H G L F L Q H 8 Q L Y H U V L W \ R I / X [ H P E R X U  
' / X [ H P E R X U J

' H S D U W P H Q W R I 1 H X U R O R J \ 0 D \ R & O L Q L F L Q ) O R U L G D - D F N V R Q Y L O O H ) O  
' U D Y H W 6 \ Q G U R P H ) R X Q G D W L R Q & K H U U \ + L O O 1 - 8 6 \$  
) D P L O L H 6 & 1 \$ ) R X Q G D W L R Q F \* H W W \ V E X U J 3 \$ 8 6 \$

' H S D U W P H Q W R I 3 H G L D W U L F V 8 Q L Y H U V L W \ R I 7 H [ D V 6 R X W K Z H V W H U Q 0 H G L F  
9 D Q G H U E L O W % U D L Q , Q V W L W X W H 9 D Q G H U E L O W 8 Q L Y H U V L W \ 1 D V K Y L O O H  
6 / & \$ & R Q Q H F W 7 H P S H U H Q F H + L O O ' U L Y H ) U L V F R 7 ; 8 6 \$

' H S D U W P H Q W R I % L R O R J L F D O 6 F L H Q F H V % U L G J H , Q V W L W X W H 8 6 & 0 L F K H O V  
% L R V F L H Q F H 8 Q L Y H U V L W \ R I 6 R X W K H U Q & D O L I R U Q L D / R V \$ Q J H O H V & \$  
% L R 0 D U L Q 3 K D U P D F H X W L F D O , Q F 1 R Y D W R & \$ 8 6 \$  
, Q Q R Y D W L Y H \* H Q R P L F V , Q V W L W X W H 8 Q L Y H U V L W \ R I & D O L I R U Q L D % H U N H O  
1 + 6 6 R X W K ( D V W \* H Q R P L F 0 H G L F L Q H 6 H U Y L F H \* X \ \ V D Q G 6 W 7 K R P D V \ V 1 + 6

6 ( 5 7 8  
( S L O H S V \ 3 U R J U D P 1 H X U R O R J \ H S D U W P H Q W + R V S L W D O 5 X E H U , Q W H U Q D F L  
5 H V H D U F K D Q G & R X Q V H O L Q J ' H S D U W P H Q W 5 H V H D U F K & H Q W U H I R U 0 H G L F

NOTE: This preprint reports new research that has not been certified by peer review and should not be used to guide clinical practice.









































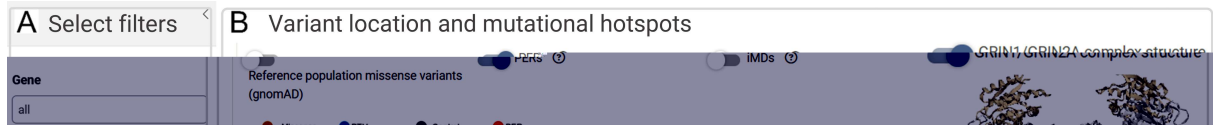












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