



Karl Deisseroth, MDPhD
D.H. Chen Professor, Stanford University
Department of Bioengineering
Department of Psychiatry and Behavioral Sciences
Howard Hughes Medical Institute

HHMI

DATE: September 6, 2017

Andrew Varga, MD, PhD
Icahn School of Medicine at Mount Sinai
One Gustave L. Levy Place
Annenberg 21-44
New York, NY 10029

Re: Material Transfer Agreement for Transfer of Material to Academic, Non-Profit Organizations

Dear Dr. Varga,

I would like to make available to you the Biological Materials described on the attached page for the experiments we have discussed.

Do not distribute the Biological Material, including any progeny and unmodified derivative that is substantially based on or incorporates an essential element of the Biological Material, to any other individual or entity without my prior consent. Please refer any request for the Biological Material to me. I agree to make the Biological Material available, under a separate Agreement, to other scientists who wish to replicate the research. The Biological Material is provided for teaching and nonclinical, bona fide research purposes. THIS BIOLOGICAL MATERIAL IS NOT FOR USE IN HUMANS.

You will notify me of any inventions resulting from your use of the Biological Material, and you understand that the Biological Material is experimental in nature, and is provided without any representations or warranties whatsoever. Stanford University, its affiliates, students and employees will not be liable for damages that may arise from your acceptance, use, storage or disposal of the Biological Material.

If you agree to the above conditions, please sign and return both pages of this letter to me, and the vector core will provide the Biological Material to you.

All the best,

Karl Deisseroth, MD PhD

AGREED AND ACCEPTED:

Date 9/7/17



Karl Deisseroth, MDPhD
D.H. Chen Professor, Stanford University
Department of Bioengineering
Department of Psychiatry and Behavioral Sciences
Howard Hughes Medical Institute

HHMI

1. AAV-EF1a-DIO-EYFP
2. AAV-EF1a-DIO-mCherry
3. AAV-EF1a-DIO-hChr2(H134R)-EYFP
4. AAV-EF1a-DIO-hChr2(H134R)-mCherry
5. AAV-EF1a-DIO-eNpHR 3.0-EYFP
6. AAV-EF1a-DIO-ChETA-EYFP
7. AAV-CaMKIIa-EYFP
8. AAV-CaMKIIa-mCherry
9. AAV-CaMKIIa-hChr2(H134R)-EYFP
10. AAV-CaMKIIa-hChr2(H134R)-mCherry
11. AAV-CaMKIIa-eNpHR 3.0-EYFP
12. AAV-hSyn-hChr2(H134R)-EYFP
13. AAV-hSyn-hChr2(H134R)-mCherry
14. AAV-hSyn-eNpHR 3.0-EYFP
15. AAV-CaMKIIa-C1V1 (t/t)-TS-EYFP
16. AAV-CaMKIIa-C1V1 (t/t)-TS-mCherry
17. AAV-Ef1a-DIO C1V1 (t/t)-TS-EYFP
18. AAV-Ef1a-DIO C1V1 (t/t)-TS-mCherry
19. AAV-CaMKIIa-hChr2 (C128S/D156A)-EYFP
20. AAV-CaMKIIa-hChr2 (C128S/D156A)-mCherry
21. AAV-Ef1a-DIO hChr2 (C128S/D156A)-EYFP
22. AAV-Ef1a-DIO hChr2 (C128S/D156A)-mCherry
23. AAV-CaMKIIa-hChr2 (et/tc)-EYFP
24. AAV-CaMKIIa-hChr2 (et/tc)-mCherry
25. AAV-CaMKII-hChr2 (E123A)-EYFP
26. AAV-CaMKII-hChr2 (E123A)-mCherry
27. AAV-EF1a-DIO hChr2 (et/tc)-EYFP
28. AAV-EF1a-DIO hChr2 (et/tc)-mCherry
29. AAV-EF1a-DIO hChr2 (E123A)-EYFP
30. AAV-EF1a-DIO hChr2 (E123A)-mCherry
31. AAV-EF1a-DIO eNpHR 3.0-mCherry
32. AAV-CaMKIIa-eNpHR 3.0-mCherry
33. AAV-hSyn-eNpHR 3.0-mCherry
34. AAV-hSyn hChr2 (E123A)-EYFP
35. AAV-hSyn-EYFP
36. AAV-Ef1a-mCherry-IRES-WGA-Cre
37. AAV-GFAP-hChr2(H134R)-EYFP
38. AAV-GFAP-hChr2(H134R)-mCherry
39. AAV-CaMKIIa-eArch 3.0-EYFP
40. AAV-CaMKIIa-RCaMP 2
41. AAV-Ef1a-DIO eArch 3.0-EYFP
42. AAV-CaMKIIa-eArch 3.0-EYFP
43. AAV-hSyn-mCherry
44. AAV-Ef1a-DIO-hChr2(T159C)-EYFP
45. AAV-Ef1a-DIO-hChr2(T159C)-mCherry
46. AAV-hSyn-eArch3.0-EYFP
47. AAV-CaMKIIa-C1V1(E162T)-p2A-EYFP
48. AAV-CaMKII-hChr2 (T159C)-p2A-EYFP
49. AAV-CaMKII-hChr2 (et/tc)-p2A-EYFP
50. AAV-Ef1a-mCherry
51. AAV-CaMKII-hChr2 (T159C)-p2A-mCherry
52. AAV-CaMKII-hChr2 (et/tc)-p2A-mCherry
53. AAV-CaMKIIa-C1V1 (E162T)-TS-p2A-EYFP
54. AAV-CaMKIIa-C1V1 (E162T)-TS-p2A-mCherry
55. AAV-CaMKIIa-C1V1 (t/t)-TS-p2A-EYFP
56. AAV-CaMKIIa-C1V1 (t/t)-TS-p2A-mCherry
57. AAV-Ef1a-DIO hChr2 (et/tc)-p2A-EYFP
58. AAV-Ef1a-DIO hChr2 (et/tc)-p2A-mCherry
59. AAV-Ef1a-DIO C1V1 (E162T)-TS-p2A-EYFP
60. AAV-Ef1a-DIO C1V1 (E162T)-TS-p2A-mCherry
61. AAV-Ef1a-DIO C1V1 (t/t)-TS-p2A-EYFP
62. AAV-Ef1a-DIO C1V1 (t/t)-TS-p2A-mCherry
63. AAV-hSyn-C1V1(t/t)-TS-EYFP
64. AAV-hSyn-C1V1(t/t)-TS-p2A-EYFP
65. AAV-CaMKIIa-IC++-TS-EYFP
66. AAV-EF1a-DIO IC++-TS-eYFP-WPRE
67. AAV-hSyn-IC++-TS-EYFP
68. AAV-CaMKIIa-SwiChr++-TS-EYFP
69. AAV-EF1a-DIO SwiChr++-TS-EYFP
70. AAV-hSyn-SwiChr++-TS-EYFP
71. pAAV-Ef1a-Cre-WPRE
72. pAAV-Ef1a-Flpo-WPRE
73. pAAV-Ef1a-fDIO-EYFP
74. pAAV-hSyn-Con/Fon EYFP
75. pAAV-hSyn-Con/Foff EYFP
76. pAAV-hSyn-Coff/Fon EYFP
77. AAV-CaMKIIa-GCaMP 6s
78. AAV-CaMKIIa-GCaMP 6m
79. AAV-CaMKIIa-GCaMP 6f
80. AAV-hSyn-GCaMP 6s
81. AAV-hSyn-GCaMP 6m
82. AAV-hSyn-GCaMP 6f
83. pAAV-EF1a-mCherry-IRES-Flpo-WPRE
84. pAAV-EF1a-mCherry-IRES-Cre-WPRE
85. pAAV-nEF-Con/Fon hChr2(H134R)-EYFP
86. pAAV-nEF-Con/Foff hChr2(H134R)-EYFP
87. pAAV-nEF-Coff/Fon hChr2(H134R)-EYFP
88. pAAV-hSyn-Con/Fon hChr2(H134R)-EYFP
89. pAAV-hSyn-Con/Foff hChr2(H134R)-EYFP
90. pAAV-hSyn-Coff/Fon hChr2(H134R)-EYFP
91. pAAV-EF1a-fDIO-hChr2(H134R)-EYFP
92. AAV-CaMKIIa-OptoA1-EYFP
93. AAV-hSyn-OptoA1-EYFP
94. AAV-Ef1a-DIO-OptoA1-EYFP
95. AAV-Ef1a-DIO OptoA1-mCherry
96. AAV-CaMKIIa-OptoB2-EYFP
97. AAV-hSyn-OptoB2-EYFP
98. AAV-Ef1a-DIO-OptoB2-EYFP
99. AAV-Ef1a-DIO OptoB2-mCherry
100. AAV-CaMKIIa-OptoD1-EYFP
101. AAV-hSyn-OptoD1-EYFP
102. AAV-Ef1a-DIO-OptoD1-EYFP
103. AAV-Ef1a-DIO OptoD1-mCherry
104. AAV-CaMKIIa-hChr2(C128A/H134R)-p2A-EYFP
105. AAV-Ef1a-DIO-hChr2(C128A/H134R)-p2A-EYFP
106. AAV-CaMKIIa-bReaChES-TS-EYFP
107. AAV-Ef1a-DIO bReaChES-TS-EYFP
108. AAV-D2SP-eYFP
109. AAV-D2SP-eChr2-eYFP
110. AAV-D2SP-GCaMP 6m
111. AAV-Ef1a-DIO-GCaMP 6s
112. AAV-Ef1a-DIO-GCaMP 6m
113. AAV-Ef1a-DIO-GCaMP 6f
114. AAV-CaMKIIa-eYFP-NRN
115. AAV-cFos-ERT2-Cre-ERT2-PEST
116. AAV-cFos-hChr2-eYFP-PEST
117. AAV-Ef1a-DIO RCaMP2
118. AAV-hSyn-eNPAC 2.0
119. AAV-nEF-DIO eNPAC 2.0
120. AAV-hSyn-DO GCaMP 6m
121. AAV-hSyn-bReaches-TS-eYFP
122. AAV-CaMKIIa-ChETA-eYFP

AGREED AND ACCEPTED:

Andreas Varga

Date:

9/7/17