



## Supplementary Materials for

### **Core commitments for field trials of gene drive organisms**

Kanya C. Long, Luke Alphey, George J. Annas, Cinnamon S. Bloss, Karl J. Campbell, Jackson Champer, Chun-Hong Chen, Amit Choudhary, George M. Church, James P. Collins, Kimberly L. Cooper, Jason A. Delborne, Owain R. Edwards, Claudia I. Emerson, Kevin Esvelt, Sam Weiss Evans, Robert M. Friedman, Valentino M. Gantz, Fred Gould, Sarah Hartley, Elizabeth Heitman, Janet Hemingway, Hirotaka Kanuka, Jennifer Kuzma, James V. Lavery, Yoosook Lee, Marce Lorenzen, Jeantine E. Lunshof, John M. Marshall, Philipp W. Messer, Craig Montell, Kenneth A. Oye, Megan J. Palmer, Philippos Aris Papatianos, Prasad N. Paradkar, Antoinette J. Piaggio, Jason L. Rasgon, Gordana Rašić, Larisa Rudenko, J. Royden Saah, Maxwell J. Scott, Jolene T. Sutton, Adam E. Vorsino, Omar S. Akbari\*

\*Corresponding author. Email: oakbari@ucsd.edu

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Author affiliations

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Table 1 with full references

## **Author affiliations**

Kanya C. Long<sup>1</sup>, Luke Alphey<sup>2</sup>, George J. Annas<sup>3</sup>, Cinnamon S. Bloss<sup>1,4</sup>, Karl J. Campbell<sup>5</sup>, Jackson Champer<sup>6</sup>, Chun-Hong Chen<sup>7</sup>, Amit Choudhary<sup>8,9,10</sup>, George M. Church<sup>11</sup>, James P. Collins<sup>12</sup>, Kimberly L. Cooper<sup>13</sup>, Jason A. Delborne<sup>14,15</sup>, Owain R Edwards<sup>16</sup>, Claudia I. Emerson<sup>17</sup>, Kevin Esvelt<sup>18</sup>, Sam Weiss Evans<sup>19</sup>, Robert M. Friedman<sup>20</sup>, Valentino M. Gantz<sup>13</sup>, Fred Gould<sup>15,21</sup>, Sarah Hartley<sup>22</sup>, Elizabeth Heitman<sup>23,24</sup>, Janet Hemingway<sup>25</sup>, Hirotaka Kanuka<sup>26</sup>, Jennifer Kuzma<sup>15,27</sup>, James V. Lavery<sup>28</sup>, Yoosook Lee<sup>29</sup>, Marce Lorenzen<sup>21</sup>, Jeantine E. Lunshof<sup>11,30,31</sup>, John M. Marshall<sup>32</sup>, Philipp W. Messer<sup>6</sup>, Craig Montell<sup>33</sup>, Kenneth A. Oye<sup>34</sup>, Megan J. Palmer<sup>35</sup>, Philippos Aris Papathanos<sup>36</sup>, Prasad N. Paradkar<sup>37</sup>, Antoinette J. Piaggio<sup>38</sup>, Jason L. Rasgon<sup>39</sup>, Gordana Rašić<sup>40</sup>, Larisa Rudenko<sup>41</sup>, J. Royden Saah<sup>5,21</sup>, Maxwell J. Scott<sup>21</sup>, Jolene T. Sutton<sup>42</sup>, Adam E. Vorsino<sup>43</sup>, Omar S. Akbari<sup>13†</sup>

- <sup>1</sup> Herbert Wertheim School of Public Health and Human Longevity Science, University of California San Diego, La Jolla, CA 92093, USA
- <sup>2</sup> Arthropod Genetics Group, The Pirbright Institute, Pirbright, Woking, GU24 0NF, UK
- <sup>3</sup> Department of Health Law, Policy and Management, Boston University School of Public Health, Boston, MA 02118
- <sup>4</sup> T. Denny Sanford Institute for Empathy and Compassion, University of California San Diego, La Jolla, CA 92093, USA
- <sup>5</sup> Island Conservation, Puerto Ayora, Galápagos Islands, Ecuador; School of Agriculture and Food Sciences, The University of Queensland, Gatton, Australia
- <sup>6</sup> Department of Computational Biology, Cornell University, Ithaca, NY 14853, USA
- <sup>7</sup> National Institute of Infectious Diseases and Vaccinology, National Health Research Institutes, Miaoli, Taiwan
- <sup>8</sup> Chemical Biology and Therapeutics Science, Broad Institute of MIT and Harvard, Cambridge, MA 02142, USA
- <sup>9</sup> Department of Medicine, Harvard Medical School, Boston, MA 02115, USA
- <sup>10</sup> Divisions of Renal Medicine and Engineering, Brigham and Women's Hospital, Boston, MA 02115, USA
- <sup>11</sup> Wyss Institute for Biologically Inspired Engineering, Harvard University, Boston, MA 02115, USA
- <sup>12</sup> School of Life Sciences, Arizona State University, Tempe, AZ 85287, USA
- <sup>13</sup> Division of Biological Sciences, Section of Cell and Developmental Biology, University of California, San Diego, La Jolla, CA 92093, USA
- <sup>14</sup> Department of Forestry and Environmental Resources, North Carolina State University, Raleigh, NC 27695, USA
- <sup>15</sup> Genetic Engineering and Society Center, North Carolina State University, Raleigh NC, USA 27695, USA
- <sup>16</sup> Commonwealth Scientific and Industrial Research Organization, Perth, WA 6014, Australia
- <sup>17</sup> McMaster University, Institute on Ethics & Policy for Innovation, Department of Philosophy, Hamilton, ON L8S 4L8, Canada
- <sup>18</sup> Media Laboratory, Massachusetts Institute of Technology, Cambridge, MA 02139, USA
- <sup>19</sup> Program on Science, Technology and Society, Harvard University, Cambridge, MA 02138, USA
- <sup>20</sup> J. Craig Venter Institute, La Jolla, CA 92037, USA
- <sup>21</sup> Department of Entomology and Plant Pathology, North Carolina State University, Raleigh NC, USA 27695, USA
- <sup>22</sup> Department of Science, Innovation, Technology and Entrepreneurship, University of Exeter Business School, Exeter, UK
- <sup>23</sup> Program in Ethics in Science and Medicine, University of Texas Southwestern, Dallas, TX 75390, USA
- <sup>24</sup> John D. Bower School of Population Health, University of Mississippi Medical Center, Jackson, MS 39216, USA
- <sup>25</sup> Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA, UK
- <sup>26</sup> Center for Medical Entomology, The Jikei University School of Medicine, Tokyo, Japan
- <sup>27</sup> School of Public and International Affairs, North Carolina State University, Raleigh NC, USA
- <sup>28</sup> Hubert Department of Global Health, Rollins School of Public Health and Center for Ethics, Emory University, Atlanta, GA 30322, USA
- <sup>29</sup> Florida Medical Entomology Laboratory, University of Florida, Vero Beach, FL 32962, USA
- <sup>30</sup> Department of Global Health and Social Medicine, Harvard Center for Bioethics, Harvard Medical School, Boston, MA 02115, USA
- <sup>31</sup> Department of Genetics, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands
- <sup>32</sup> Division of Epidemiology & Biostatistics, School of Public Health, University of California, Berkeley, CA 94720, USA

- <sup>33</sup> Neuroscience Research Institute and Department of Molecular, Cellular and Developmental Biology, University of California Santa Barbara, Santa Barbara, CA, 93106, USA
- <sup>34</sup> Center for International Studies, Massachusetts Institute of Technology, Cambridge, MA 02139, USA
- <sup>35</sup> Department of Bioengineering, Stanford University, Stanford, CA 94305, USA
- <sup>36</sup> Department of Entomology, Robert H. Smith Faculty of Agriculture, Food and Environment, Hebrew University of Jerusalem, Rehovot 7610001, Israel
- <sup>37</sup> CSIRO Health and Biosecurity, Australian Centre for Disease Preparedness, Geelong, VIC 3220, Australia
- <sup>38</sup> United States Department of Agriculture, Animal Plant Health Inspection Services, Wildlife Services, National Wildlife Research Center, Fort Collins, CO, 80521, USA
- <sup>39</sup> Department of Entomology, The Center for Infectious Disease Dynamics, and the Huck Institutes of the Life Sciences, The Pennsylvania State University, W127 Millennium Science Complex, University Park, PA 16802, USA
- <sup>40</sup> Mosquito Control Laboratory, QIMR Berghofer Medical Research Institute, Herston, QLD 4006, Australia
- <sup>41</sup> Program on Emerging Technologies, Massachusetts Institute of Technology, Cambridge, MA, USA
- <sup>42</sup> University of Hawaii at Hilo, Hilo, HI 96720, USA
- <sup>43</sup> United States Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office, Honolulu, HI 96850, USA

† To whom correspondence should be addressed: Omar S. Akbari, Division of Biological Sciences, Section of Cell and Developmental Biology, University of California, San Diego, La Jolla, CA 92093, USA, Ph: 858-246-0640, Email: [oakbari@ucsd.edu](mailto:oakbari@ucsd.edu)

## Disclosure statements

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**Table 1 with full references**

Approach	Examples	Temporal Dynamics	Geographic Reach
Gene Drives (16, 17)	Linked-homing <sup>#</sup> (2, 4, 18–21), Medea (22–24), CleaveR(25, 26), TARE/TADE <sup>#</sup> (27, 28)	Self-propagating (low threshold)	Non-localized
	Translocations(29, 30), Underdominance <sup>#</sup> (31), UD <sup>MEL</sup> * (32), Tethered Homing (33)	Majority wins* (high threshold)	Localized
	Daisy <sup>#</sup> (34), split-homing <sup>#</sup> (1, 3, 35–37), Homer (38, 39), killer rescue (40, 41)	Self-limiting (temporally limited)	
Non-Drives	SIT <sup>#</sup> (42), RIDL <sup>#</sup> (43), fsRIDL <sup>#</sup> (44), pgSIT <sup>#</sup> (45)		

**Table 1. Characteristics and examples of engineered population control technologies.** Two broad types of engineered approaches exist to modify populations—one requires gene drive and the other relies on non-drive technologies. Multiple examples of these types of systems exist, which can have varied temporal dynamics including: Self-propagating with a low threshold (predicted to spread from a small release), to majority wins with a high threshold (predicted to spread into a population only when the transgene is present at >50%), to self-limiting which are temporally limited (can only spread or persist in population for a short period). These systems can fall under two broad categories from non-localized (predicted to spread beyond boundaries) to localized (predicted to spread within a localized population). For more details on the various examples and terminology see associated references. <sup>#</sup>Can be used for population suppression in some forms. \*While UD<sup>MEL</sup> does have a high threshold it does not always fall under “majority wins” temporal dynamics. Abbreviations: Medea, maternal effect dominant embryonic arrest; TARE/TADE, toxin-antidote recessive embryo/toxin-antidote dominant embryo; CleaveR, Cleve and Rescue; UD<sup>MEL</sup>, maternal effect lethal underdominance; SIT, sterile insect technique; RIDL, release of insects carrying a dominant lethal; fsRIDL, female-specific release of insects carrying a dominant lethal; pgSIT, precision-guided sterile insect technique.

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