Subject: RE: QUICK TURN DARPA REQUEST - Press Release
From: Heath Packard <heath.packard@islandconservation.org>
Date: 7/13/2017 11:16 AM
To: "Eisemann, John D - APHIS" <John.D.Eisemann@aphis.usda.gov>, Jason Delborne <jadelbor@ncsu.edu>, "Piaggio, Antoinette J - APHIS" <Toni.J.Piaggio@aphis.usda.gov>
CC: "jrgodwinnc@gmail.com" <godwin@ncsu.edu>, Paul Thomas <paul.thomas@adelaide.edu.au>, David Threadgill <dwthreadgill@tamu.edu>, "<Keith.Hayes@data61.csiro.au>" <Keith.Hayes@data61.csiro.au>, Karl Campbell <karl.campbell@islandconservation.org>, Royden Saah <royden.saah@islandconservation.org>, Alun Lloyd <alun_lloyd@ncsu.edu>, "Shiels, Aaron B - APHIS" <Aaron.B.Shiels@aphis.usda.gov>, "Keirn, Gail M - APHIS" <Gail.M.Keirn@aphis.usda.gov>, "Clark, Larry - APHIS" <Larry.Clark@aphis.usda.gov>, Sally Esposito <sally.esposito@islandconservation.org>

Some thoughts for you, John et al.

"An international, multi-institution and interdisciplinary team led by Dr. John Godwin of North Carolina State University aims to develop and test mammalian gene drive systems in rodents. The genetic technique targets population-specific alleles, ~~that work on "private alleles" in the target population~~ - ~~that is, the a~~ unique forms of a gene ~~that are specific to~~ found only in a particular invasive populations. If successful, the work will expand the tools available to manage invasive species that threaten biodiversity and human food security, and serve as potential reservoirs of infectious diseases affecting native animals and humans populations. The team plans to develop mathematical models of how drives would function in mice, and then perform highly-contained, biosecure live testing in ~~biosecure and contained~~ simulated natural environments that mimic real-world conditions to gauge the robustness, spatial limitation, and reversibility of the drives. The team's plans also include rigorous social engagement efforts and risk assessments to further assess the suitability of these potential tools."

Sally cc'd here.

Best,

Heath Packard
Director of Marketing & Communications
Island Conservation
360.584.3051 (mobile)
heath.packard1 (skype)

From: Eisemann, John D - APHIS [mailto:John.D.Eisemann@aphis.usda.gov]
Sent: Thursday, July 13, 2017 6:58 AM
To: Jason Delborne <jadelbor@ncsu.edu>; Piaggio, Antoinette J - APHIS <Toni.J.Piaggio@aphis.usda.gov>
Cc: jrgodwinnc@gmail.com <godwin@ncsu.edu>; Paul Thomas <paul.thomas@adelaide.edu.au>; David Threadgill <dwthreadgill@tamu.edu>; <Keith.Hayes@data61.csiro.au> <Keith.Hayes@data61.csiro.au>; Karl Campbell <karl.campbell@islandconservation.org>; Royden Saah <royden.saah@islandconservation.org>; Alun Lloyd <alun_lloyd@ncsu.edu>; Shiels, Aaron B - APHIS <Aaron.B.Shiels@aphis.usda.gov>; Heath Packard <heath.packard@islandconservation.org>; Keirn, Gail M - APHIS <Gail.M.Keirn@aphis.usda.gov>; Clark, Larry - APHIS <Larry.Clark@aphis.usda.gov>
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I might also add 'international' to the list of institutions. Also, do we want to add a word (or 2) to the last sentence that mentions the concept of detecting the gene in the population. I know that is not the focus of the work, but detectability and surveillance are the concepts/buzz words of the day.

John D. Eisemann
Manager, Technology Transfer Program
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From: Jason Delborne [mailto:jadelbor@ncsu.edu]
Sent: Thursday, July 13, 2017 7:51 AM
To: Piaggio, Antoinette J - APHIS <Toni.J.Piaggio@aphis.usda.gov>
Cc: John Godwin <godwin@ncsu.edu>; Paul Thomas <paul.thomas@adelaide.edu.au>; David Threadgill <dwthreadgill@tamu.edu>; <Keith.Hayes@data61.csiro.au> <Keith.Hayes@data61.csiro.au>; Karl Campbell <karl.campbell@islandconservation.org>; J Royden Saah <royden.saah@islandconservation.org>; Alun Lloyd <alun_lloyd@ncsu.edu>; Shiels, Aaron B - APHIS <Aaron.B.Shiels@aphis.usda.gov>; Eisemann, John D - APHIS <John.D.Eisemann@aphis.usda.gov>; Heath Packard <heath.packard@islandconservation.org>; Keirn, Gail M - APHIS <Gail.M.Keirn@aphis.usda.gov>; Clark, Larry - APHIS <Larry.Clark@aphis.usda.gov>
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John,

It's disappointing to see no mention of risk assessment explicitly or any social science activities whatsoever in the description. I know that most of the latter are planned for Phase 2, which is not yet funded, but it's a missed opportunity. Alternatively, maybe you could check with Renee about whether they are including a separate paragraph about LEEDR activities that go across the projects?

I assume you will work with Patti (GES) and an NCSU communications person to coordinate. At the NCSU level, let's make sure that community and stakeholder engagement get mentioned as part of the project.

Jason

———————————————————

Jason Delborne | Associate Professor of Science, Policy, and Society | North Carolina State University | Forestry & Environmental Resources | Genetic Engineering & Society Center | Jordan Hall Addition 5221, Campus Box 8008 | Raleigh, NC 27695 | office: 919.515.0106 | cell: 919.980.2867 | jason_delborne@ncsu.edu

NC STATE

> On Jul 13, 2017, at 9:03 AM, Piaggio, Antoinette J - APHIS <Toni.J.Piaggio@aphis.usda.gov> wrote:
>
> Hi John,
>
> Your edits are much appreciated. I have three comments and have included our public affairs person, Gail Keirn for her expertise.
>
> 1) Should we change "private alleles" to "locally fixed alleles" or "local alleles" or "population specific alleles"

2) Yes to adding biosecure please
3) Do you want to be specific that the live testing is with target-island wild mice or no?

Thank you!

Toni Piaggio, Ph.D.
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Sent: Thursday, July 13, 2017 5:22 AM
To: Paul Thomas <paul.thomas@adelaide.edu.au>; David Threadgill <dwthreadgill@tamu.edu>; <Keith.Hayes@data61.csiro.au> <Keith.Hayes@data61.csiro.au>; Karl Campbell <karl.campbell@islandconservation.org>; Royden Saah <royden.saah@islandconservation.org>; Jason Delborne <jadelbor@ncsu.edu>; Alun Lloyd <alun_lloyd@ncsu.edu>; Piaggio, Antoinette J - APHIS <Toni.J.Piaggio@aphis.usda.gov>; Shiels, Aaron B - APHIS <Aaron.B.Shiels@aphis.usda.gov>; Eisemann, John D - APHIS <John.D.Eisemann@aphis.usda.gov>; Heath Packard <heath.packard@islandconservation.org>
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Hi All,

Please see the message from the DARPA program officer Renee Wegrzyn I'm forwarding below here. This is a heads-up, but also wanted to hit on a couple of other important things here.

The first key point is her request to embargo any press releases until after the DARPA announcement (this point in all caps).

Second, I have had a first stab at edits from what Renee sent me and have included that below (my edits to this point in red) - will continue on that, but wanted to get it out to you folks. They would like this back to them by COB Thursday (EST), so please send me suggestions if you have them at your earliest convenience. It's a really short blurb and so difficult to pack too much into it, but will try to incorporate what I can.

One other note: As noted before, we have the signed, 'executed' agreement in hand and are working on the subcontracting now.

Thanks, John

"A multi-institution and interdisciplinary team led by Dr. John Godwin of North Carolina State University aims to develop and test mammalian gene drive systems in rodents that work on "private alleles" in the target population - that is, a unique forms of a gene specific to invasive populations. If successful, the work will expand the tools available to manage invasive species that threaten biodiversity and serve as potential reservoirs of infectious diseases affecting native animal and human populations. The team plans to develop mathematical models of how drives

would function in mice, and then perform live testing in (add 'biosecure' here?) simulated natural environments that mimic real-world conditions to gauge the robustness,spatial limitation, and reversibility of the drives."

On Wed, Jul 12, 2017 at 10:44 PM, Wegrzyn, Renee <renee.wegrzyn@darpa.mil> wrote:

> Dear John,
>
> We are getting close to public announcement of the teams that are funded under the Safe Genes program - hopefully within about a week. If you plan to send out a press release to coincide with that announcement, now is the time to start preparing. However, PLEASE EMBARGO ALL PRESS RELEASES UNTIL DARPA IS READY TO ANNOUNCE. We will send follow-on emails to coordinate shortly.
>
> For now, it would be helpful if you would review the following blurb for accuracy and content. It is difficult to summarize a 4-year effort in a few sentences so we appreciate any feedback that you have (preferably by COB Thursday).
>
> * A North Carolina State University (NCSU) team led by Dr. John Godwin aims to develop and test a mammalian gene drive system in rodents that works on "private alleles" in the target species-that is, a unique form of a gene specific to a species. If successful, the work will expand the tools available to manage invasive species that threaten biodiversity and serve as potential reservoirs of infectious diseases affecting native animal and human populations. The team plans to develop mathematical models of how drives would function in mice, and then perform live testing in simulated natural environments that mimic real-world conditions to gauge the robustness of the drives.
>
> We are excited to announce the efforts more broadly and are glad to have you as a part of it. Please let me know if you have any questions or concerns.
>
> Best regards,
>
> Renee
>
> Renee D Wegrzyn, PhD
> Program Manager
> DARPA Biological Technologies Office
> renee.wegrzyn@darpa.mil

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