

MATERIAL TRANSFER AGREEMENT

This Agreement, dated and effective October 2, 2006, is between Scarab Genomics LLC, 1202 Ann Street, Madison, WI 53713 (“Scarab”) and Massachusetts Institute of Technology (“Recipient”).

Scarab holds an exclusive license from WARF, Wisconsin Alumni Research Foundation, the designated patent management organization for the University of Wisconsin, to U.S. Pat. No. 6,989,265 and related patent applications that Scarab states cover the Material identified below.

Acknowledging the adequacy of the consideration exchanged, the parties agree to the following terms.

1. Scarab is providing a sample of the Material to Dr. [Natalie Kuldell](#) (Recipient Scientist) solely for the Research undertaken under the direct supervision of Recipient Scientist at Recipient institution. Recipient agrees to receive the Material subject to the following obligations and provisions. Scarab may also disclose Confidential Information about the Material under Section 11 of this Agreement.
2. The Material Scarab is transferring to Scientist consists of *E. coli* strain(s) [MDS12](#), [MDS41](#), [MDS42](#), [MDS43](#) and [parent strain MG1655](#), each having a genome smaller than the genome of the native parent strain and that has been genetically engineered to improve its properties as a host for a wide range of applications. For purposes of this Agreement, “Material” includes in addition all progeny, derivatives and modified strains of the *E. coli* strain received from Scarab, including those modified by the Recipient to include the genetic material or any part thereof of the *E. coli* strain, progeny, unmodified derivatives and Material contained in Modifications (substances that contain and/or incorporate the Materials).
3. Recipient may not transfer the Material to anyone outside Recipient Scientist’s laboratory.
4. Recipient may not use the Material for any commercial purpose.
5. **Described below is the Research.**

Research: evaluation of the Material as a host in testing:

[To develop a series of teaching labs for sophomore undergraduates enrolled in Course 20, subject 109 \(“Lab Fundamentals of Biological Engineering”\).](#)

Notwithstanding anything contained in the description of Research above, Recipient may not make any intentional modifications to the chromosome of the Material or transfer any part of the chromosome of the Material to another strain, notwithstanding any emergent changes that the chromosome makes to itself.

6. The Research may not exceed the scope defined above.
7. Recipient may discover beneficial changes to existing protocols for use of the Material including without limitation changes to the existing protocols for transformation, growth, fermentation, harvesting, lysis, and purification (“Protocol Changes”). Recipient will inform Scarab about Protocol Changes and grant Scarab a fully paid up, royalty-free worldwide non-exclusive license without limitation of field to use Protocol Changes for internal research only.
8. The Recipient is free to file patent application(s) claiming inventions made by the Recipient through the use of the Material but agrees to notify Scarab upon filing a patent application claiming Modifications or method(s) of use(s) of the Material. For inventions that could not have been made but

for the direct use of the Material (“Invention(s)”), Recipient agrees to notify Scarab, in confidence, consistent with the terms of Section 11 of this Agreement. Recipient shall grant Scarab a six (6) month option for the first right to negotiate a royalty-bearing license (the “Option Right”) to any Inventions.

Scarab may exercise the Option Right upon written notice to Recipient received by Recipient within six (6) months after Recipient notifies Scarab of such patent application filing for an Invention (the “Option Period”). If Scarab does not elect to exercise the Option Right, or fails to exercise the Option Right during the Option Period, Recipient shall be free to license its rights under an Invention to any third party and the Option Right shall terminate. If Scarab does elect to exercise the Option Right, Recipient and Scarab shall negotiate in good faith a license agreement containing commercially reasonable terms and conditions. If Recipient and Scarab are unable to reach agreement within ninety (90) days after Scarab has exercised the Option Right, the Option Period shall terminate.

Recipient grants Scarab a non-exclusive license to use any Invention for internal research purposes only.

9. Recipient agrees to cease any use of the Material for any purpose upon ninety (90) days written notice from Scarab, at which time all of the Materials and Modifications and Information will be returned to Scarab or entirely destroyed unless provision for their preservation is expressly made by written agreement with Scarab.

10. Recipient agrees to:

- (i) Hold the Material in a secure location.
- (ii) Limit access to the Material to those directly under Recipient Scientist’s supervision who have been notified in writing to all conditions stated in this Agreement.
- (iii) Record and retain records of those who have access to the Material.

11. For the purposes of this Agreement, "Confidential Information" refers to information of any kind disclosed by one Party (“the Disclosing Party”) to the other Party (“the Receiving Party”) that by appropriate marking is identified as confidential and proprietary at the time of disclosure. In the event that information is provided visually or orally, obligations of confidence shall attach only to that information which is identified at the time of disclosure as confidential in nature and promptly confirmed in writing by the Disclosing Party as being confidential and subject to this Agreement. All Information and Material supplied by Scarab to Recipient may be submitted as Confidential Information that shall be deemed to belong to Scarab and to have been disclosed or provided to Recipient in confidence. Recipient agrees to use reasonable efforts to preserve the confidential status of the Material and Information. These confidentiality obligations do not apply to any information that:

- (i) was known to Receiving Party prior to the receipt of the Material or Information or that is developed independently of the Material and Information;
- (ii) becomes known to the public not as a result of any action or inaction by Receiving Party;
- (iii) Receiving Party acquires from a third party who has the right to disclose to Receiving Party;
or
- (iv) Receiving Party is obligated to produce pursuant to an order of a court of competent jurisdiction or a valid administrative or Congressional subpoena, provided (i) that the Receiving Party promptly notifies the Disclosing Party and (ii) cooperates reasonably with the Disclosing Party’s efforts to contest or limit the scope of such order.

Obligations of confidentiality with respect to Confidential Information provided under this Agreement will expire three (3) years after the date of this Agreement.

12. It is understood that under this Agreement, no implied or express license is granted by Scarab to Recipient for any of the Material or Information related to the Material.

13. Recipient acknowledges that the Material is experimental and is supplied to Recipient WITHOUT ANY WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF TITLE, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTIES REGARDING INFRINGEMENT OF THIRD PARTY RIGHTS. Recipient agrees to rely solely upon its own opinion of the Material with regard to their safety and suitability for any purpose.

14. Recipient agrees to waive all claims against Scarab except as may be limited by state law governing Recipient. Recipient agrees to defend and indemnify Scarab, its employees and agents from all claims asserted by any third party and any damages and recoveries resulting there from arising from the Recipient's use, storage, or handling of the Material unless such claims are due to the negligence or willful misconduct of Scarab. Scarab makes no representation that the use of the Material will not infringe any patent or proprietary rights of any third parties.

15. Recipient understands that Scarab will charge Recipient a fee of \$500 with respect to the transfer of the Material. Such fee, if any, is intended to reimburse Scarab with respect to the preparation and transfer of the Material. Despite the payment of any such fee, the transfer of the Material will not be construed as a sale of the Material to Recipient.

16. Results obtained by Recipient upon evaluation of the Material will be promptly disclosed to Scarab.

17. This Agreement represents the entire understanding between the parties with respect to the subject matter hereof and may only be changed in a writing signed by both parties. The parties indicate their acceptance of the terms of this Agreement by their signatures below. Each individual signing for a corporate entity hereby personally warrants his or her legal authority to bind that entity. This Agreement may be signed in separate counterparts and also accepted by facsimile in lieu of original signatures.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

By: _____

Date: _____

Name: Patrick Fitzgerald

Title: Director, Office of Sponsored Programs

SCARAB GENOMICS, LLC

By: _____

Date: _____

Name: Frederick R. Blattner

Title: President and CEO

As Recipient Scientist conducting research using the Material, I understand and agree to the conditions on the use of the Material by me and those performing research under my direction.

By: _____

Date: _____

Dr. Natalie Kuldell