Subject: Technology Transfer Agreements with the University of Michigan

Action Requested: Approval of Technology Transfer Agreements

Preamble:

Statutory conflicts of interest situations were identified by the Office of Technology Transfer ("OTT") while reviewing technology transfer agreements that then triggered a review by the Medical School Conflict of Interest Board and/or the UMOR Conflict of Interest Review Committee. Plans for management of the possible risks associated with the conflicts of interest will be developed and approved by the Board and/or Committee and may require agreement by the parties involved.

These proposed technology transfer agreements ("Agreements") fall under the State of Michigan Conflict of Interest Statute because employees of the University of Michigan ("University") have outside activities, relationships, or interests in the companies described in Attachment A. The law permits such Agreements provided they are disclosed to the Board of Regents ("Regents") of the University and approved in advance by a 2/3 vote.

Background:

These companies were formed to commercialize University technologies and desire to option, license, or reassign the University’s rights associated with them. OTT selected these companies as University partners and negotiated the terms of the proposed agreements in accordance with University policy and its accepted licensing principles.

Agreement Terms Include:

The University will retain ownership of the optioned, licensed, or reassigned technologies and may continue to further develop and use them internally. No use of University services or facilities, nor any assignment of University employees, is obligated or contemplated under the Agreements. Standard disclaimers of warranties and indemnification apply, and the Agreements may be amended by consent of the parties, such as adding related technology. University procedures for approval of these changes will be followed and additional conflict of interest review will be done as appropriate. Terms specific to each Agreement are described in Attachment A.
Net Effect:

OTT has negotiated and finalized the terms of the option, license, or reassignment agreements for patents, technology, or content related to University OTT files for particular fields of use. The companies will obtain the right to evaluate, use, and/or commercialize the University technologies. The net effects specific to each Agreement are described in Attachment A.

Recommendations:

These matters have been reviewed and approved by the Medical School Conflict of Interest Board and/or the UMOR Conflict of Interest Review Committee. In light of this disclosure and our finding that the Agreements were negotiated in conformance with standard University practices, I recommend that the Board of Regents approve the Agreements between the University and the companies outlined in Attachment A.

Respectfully submitted,

[Signature]

Rebecca Cunningham
Vice President for Research

May 2021
Attachment A

Agreement #1

License Agreement between the University and Courage Therapeutics, Inc.  
Reviewed by the UMOR Conflict of Interest Review Committee

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Inventors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-392</td>
<td>Analogues of AgRP for the Treatment of Anorexia Nervosa, Cachexia, and other Disorders of Food Intake and Energy Homeostasis</td>
<td>Roger Cone, Patrick Sweeney, Savannah Williams</td>
</tr>
<tr>
<td>2019-393</td>
<td>Treatment of Anorexia Nervosa and other Disorders of Eating and Energy Homeostasis with MC3R Agonists</td>
<td>Roger Cone, Patrick Sweeney</td>
</tr>
<tr>
<td>2021-198</td>
<td>D-TRP8-G-MSH Variant Peptides</td>
<td>Roger Cone, Luis Eduardo Diaz Gimenez, Savannah Williams, Tomi Sawyer</td>
</tr>
<tr>
<td>2021-285</td>
<td>Setmalanotide Variant Peptides</td>
<td>Roger Cone, Luis Eduardo Diaz Gimenez, Savannah Williams, Tomi Sawyer</td>
</tr>
</tbody>
</table>

**Background**

Courage Therapeutics, Inc. was formed to develop and commercialize peptides and small molecules for the treatment of various types of eating disorders, such as anorexia nervosa and obesity and desires to license the University’s rights associated with the technology listed above.

**Net Effects**

- Worldwide exclusive
- Patents
- All fields of use
- Right to commercialize

**Agreement Terms**

- Courage Therapeutics, Inc. will:
  - Obtain the right to grant sublicenses
  - Pay a royalty on sales
  - Pay an upfront fee
  - Reimburse patent costs

- The University will:
  - Receive equity in Courage Therapeutics, Inc.
  - Retain the right to purchase more equity in Courage Therapeutics, Inc.

**University Employee; University Title; Relationship with Courage Therapeutics, Inc.**

- Roger Cone; Vice Provost and Director of the Biosciences Initiative, Office of the Provost and Executive Vice President for Academic Affairs, Director and Research Professor, Life Sciences Institute; Partial Owner
License Agreement between the University and EIQ, Inc.  
Reviewed by the Medical School Conflict of Interest Board

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Inventors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-275</td>
<td>Automated Anatomic and Regional Location of Disease Features in Colonoscopy Videos</td>
<td>Sayedmohammadreza Soroushmehr; Heming Yao; Ryan William Stidham; Kayvan Najarian; Jonathan Gryak</td>
</tr>
<tr>
<td>2021-281</td>
<td>Automated Detection of Areas of Interest in Colonoscopy Videos</td>
<td>Heming Yao; Ryan William Stidham; Kayvan Najarian; Jonathan Gryak</td>
</tr>
<tr>
<td>2021-282</td>
<td>Anatomic Localization in Colonoscopy Videos</td>
<td>Heming Yao; Ryan William Stidham; Kayvan Najarian; Jonathan Gryak</td>
</tr>
</tbody>
</table>

**Background**

EIQ, Inc. was formed to commercialize an automated colonoscopy scoring product called EndoscopIQ initially developed at Prenovo (formerly known as Prehab Technologies, LLC) and develop other tools utilizing the Mayo Scoring System and desires to license the University’s rights associated with the technology listed above.

**Net Effects**

- Worldwide non-exclusive for 2021-281, 2021-282
- Patents and copyrights
- All fields of use
- Right to commercialize

**Agreement Terms**

EIQ, Inc. will:

- Obtain the right to grant sublicenses
- Reimburse patent costs

The University will:

- Receive equity in EIQ, Inc.

The University may:

- Retain the right to purchase more equity in EIQ, Inc.

**University Employee; University Title; Relationship with EIQ, Inc.**

- Stewart Wang; Professor, Surgery; Board of Directors Member
- June Sullivan; Admin. Manager Assoc. Healthcare, General Surgery Administration; Board of Directors Member
### Agreement #3

**Option Agreement between the University and Entos, Inc.**

Reviewed by the UMOR Conflict of Interest Review Committee

| Office of Technology Transfer Intellectual Property File Information |
|---|---|---|
| Number | Title | Inventors |
| 2021-331 | Sterically Hindered Esters for Pain Management | Tim Cernak |

**Background**

Entos, Inc. was formed to accelerate molecular discovery with physics-based machine learning and desires to option the University’s rights associated with the technology listed above.

**Net Effects**

- Worldwide exclusive
- Invention
- For human and veterinarian use
- Evaluation rights

<table>
<thead>
<tr>
<th>Agreement Terms</th>
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<tbody>
<tr>
<td>Entos, Inc. will:</td>
</tr>
<tr>
<td>- Reimburse patent costs</td>
</tr>
</tbody>
</table>

**University Employee: University Title: Relationship with Entos, Inc.**

- Timothy Cernak; Assistant Professor, Medicinal Chemistry; Partial Owner

### Agreement #4

**License Agreement between the University and Entos, Inc.**

Reviewed by the UMOR Conflict of Interest Review Committee

| Office of Technology Transfer Intellectual Property File Information |
|---|---|---|
| Number | Title | Inventors |
| 2021-183 | phactor™ - A Software for High-Throughput Experimentation in Chemistry | Tim Cernak, Babak Mahjour |

**Background**

Entos, Inc. was formed to accelerate molecular discovery with physics-based machine learning and desires to license the University’s rights associated with the technology listed above.

**Net Effects**

- Worldwide non-exclusive
- Copyrights
- All fields of use
- Right to commercialize

<table>
<thead>
<tr>
<th>Agreement Terms</th>
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</thead>
<tbody>
<tr>
<td>Entos, Inc. will:</td>
</tr>
<tr>
<td>- Pay a royalty on sales</td>
</tr>
<tr>
<td>- Pay an upfront fee</td>
</tr>
</tbody>
</table>

**University Employee: University Title: Relationship with Entos, Inc.**

- Timothy Cernak; Assistant Professor, Medicinal Chemistry; Partial Owner
License Agreement between the University and Entos, Inc.
Reviewed by the UMOR Conflict of Interest Review Committee

<table>
<thead>
<tr>
<th>Office of Technology Transfer Intellectual Property File Information</th>
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<tbody>
<tr>
<td>Number</td>
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<tr>
<td>--------</td>
</tr>
<tr>
<td>2019-334</td>
</tr>
</tbody>
</table>

**Background**

Entos, Inc. was formed to accelerate molecular discovery with physics-based machine learning and desires to license the University’s rights associated with the technology listed above.

**Net Effects**
- Worldwide non-exclusive
- Patents
- All fields of use
- Right to practice the claims of the patent for internal use

**Agreement Terms**

Entos, Inc. will:
- Pay a royalty on sales
- Pay an annual license fee and/or fee per project

**University Employee; University Title; Relationship with Entos, Inc.**
- Timothy Cernak; Assistant Professor, Medicinal Chemistry; Partial Owner
## Agreement #6

License Agreement between the University and GeneToBe LLC
Reviewed by the Medical School Conflict of Interest Board

### Office of Technology Transfer Intellectual Property File Information

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Inventors</th>
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</thead>
<tbody>
<tr>
<td>2020-043</td>
<td>SGLT Inhibitor Drug for Treating Cystic Fibrosis Complications</td>
<td>Yuqing Chen, Jifeng Zhang, Jie Xu, Fei Sun, Xiubin Jiang, Jian-Ping Jin</td>
</tr>
<tr>
<td>2021-252</td>
<td>SGLT Inhibitor Drug for Treating Pulmonary Diseases</td>
<td>Yuqing Chen, Jie Xu, Michael Lannuzzi, Charles Bisgaier</td>
</tr>
</tbody>
</table>

### Background

GeneToBe LLC was formed to commercialize technology on sodium glucose co-transporter (SGLT) inhibitors to treat pulmonary diseases and desires to license the University’s rights associated with the technology listed above.

### Net Effects

- Worldwide exclusive
- Patents
- All fields of use
- Right to commercialize

### Agreement Terms

**GeneToBe LLC will:**

- Obtain the right to grant sublicenses
- Pay a royalty on sales
- Reimburse patent costs

**The University may:**

- Receive equity in GeneToBe LLC
- Retain the right to purchase more equity GeneToBe LLC

### University Employee; University Title; Relationship with GeneToBe LLC

- Yuqing Chen; Professor, Internal Medicine-Cardiovascular Medicine; Partial Owner
License Agreement between the University and GrayRain, LLC Reviewed by the UMOR Conflict of Interest Review Committee

Office of Technology Transfer Intellectual Property File Information

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Inventors</th>
</tr>
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<tbody>
<tr>
<td>7363</td>
<td>Electric Medical Record DataSifter</td>
<td>Ivaylo Dinov, Simeone Marino, John Vandervest</td>
</tr>
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</table>

**Background**

GrayRain, LLC was formed to commercialize and further develop a software tool to create a synthetic data set alternative to electronic medical records/electronic health records (EMR/EHR) data warehouses and desires to license the University’s rights associated with the technology listed above.

**Net Effects**

- Worldwide exclusive
- Copyrights and Patents
- All fields of use
- Right to commercialize

**Agreement Terms**

GrayRain, LLC will:

- Obtain the right to grant sublicenses
- Pay a royalty on sales
- Reimburse patent costs

The University may:

- Receive equity in GrayRain, LLC
- Retain the right to purchase more equity GrayRain, LLC

**University Employee; University Title; Relationship with GeneToBe LLC**

- Ivaylo Dinov; Professor, Nursing; Partial Owner
- Simeone Marino; Research Computer Specialist, Nursing; Partial Owner
## Background

HumanShape, LLC was formed to commercialize and develop software, models, know-how and consulting around custom anthropometric measurement and modeling and desires to license the University’s rights associated with the technology listed above.

<table>
<thead>
<tr>
<th>Net Effects</th>
<th>Agreement Terms</th>
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<tr>
<td>● Worldwide exclusive license for 2021-211</td>
<td>HumanShape, LLC will:</td>
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<tr>
<td>● Worldwide non-exclusive license for 2019-247</td>
<td>● Obtain the right to grant sublicenses</td>
</tr>
<tr>
<td>● Copyrights</td>
<td>● Pay a royalty on sales</td>
</tr>
<tr>
<td>● All fields of use</td>
<td>The University may:</td>
</tr>
<tr>
<td>● Right to commercialize</td>
<td>● Receive equity in HumanShape, LLC</td>
</tr>
<tr>
<td></td>
<td>● Retain the right to purchase more equity in HumanShape, LLC</td>
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</table>

### University Employee; University Title; Relationship with HumanShape, LLC

- Matthew Reed; Research Professor, University of Michigan Transportation Research Institute (UMTRI); Partial Owner
- Byoung-Keon Park; Assistant Research Scientist, UMTRI; Partial Owner
License Agreement between the University and Lympharma LLC.
Reviewed by the Medical School Conflict of Interest Board

Office of Technology Transfer Intellectual Property File Information

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Inventors</th>
</tr>
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<tbody>
<tr>
<td>5651</td>
<td>Antitumor Compounds</td>
<td>Brian Ross, Marcian Van Dort, Christopher Whitehead</td>
</tr>
<tr>
<td>6123</td>
<td>Dual-Inhibitor Antitumor Compounds</td>
<td>Brian Ross, Marcian Van Dort</td>
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<tr>
<td>7058</td>
<td>Bifunctional MEK/PI3K Inhibitors for Therapeutic Application</td>
<td>Brian Ross, Marcian Van Dort</td>
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<tr>
<td>7617</td>
<td>Method for Improving Solubility and Bioavailability of Compounds</td>
<td>Brian Ross, Marcian Van Dort</td>
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</tbody>
</table>

**Background**

Lympharma LLC was formed to commercialize cancer therapeutics and desires to license the University’s rights associated with the technology listed above.

**Net Effects**
- Worldwide exclusive
- Patents
- For therapeutics
- Right to commercialize

**Agreement Terms**

Lympharma LLC will:
- Obtain the right to grant sublicenses
- Pay a royalty on sales
- Reimburse patent costs

The University may:
- Receive equity in Lympharma LLC.
- Retain the right to purchase more equity in Lympharma LLC.

**University Employee; University Title; Relationship with Lympharma LLC.**
- Brian Ross; Professor, Radiology; Partial Owner
**Agreement #10**

License Agreement between the University and Mbrace, Inc.
Reviewed by the UMOR Conflict of Interest Review Committee

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<tr>
<th>Office of Technology Transfer Intellectual Property File Information</th>
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<tr>
<td><strong>Number</strong></td>
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<tr>
<td>2021-166</td>
</tr>
</tbody>
</table>

**Background**

Mbrace, Inc. was formed to commercialize novel biochar products and desires to license the University’s rights associated with the technology listed above.

**Net Effects**
- Worldwide exclusive
- Patents and copyrights
- All fields of use
- Right to commercialize

**Agreement Terms**

Mbrace, Inc. will:
- Obtain the right to grant sublicenses
- Pay a royalty on sales
- Reimburse patent costs

The University may:
- Receive equity in Mbrace, Inc.
- Retain the right to purchase more equity in Mbrace, Inc.

**University Employee; University Title; Relationship with Mbrace, Inc.**
- Jose Alfaro; Clinical Assistant Professor, Environment and Sustainability; Partial Owner
**Agreement #11**

Amendment to License Agreement between the University and Precision Trauma, LLC
Reviewed by the Medical School Conflict of Interest Board

<table>
<thead>
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<th>Office of Technology Transfer Intellectual Property File Information</th>
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<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
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</tr>
<tr>
<td>2019-226</td>
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</tbody>
</table>

**Background**
Precision Trauma, LLC was formed to commercialize hemorrhage-control solutions. The University has equity in Precision Trauma, LLC that was obtained through a license agreement established on September 10, 2020. No University employees had a relationship with Precision Trauma, LLC at that time. Precision Trauma, LLC now desires to amend the license agreement to add the University’s rights associated with the technology listed above.

<table>
<thead>
<tr>
<th>Net Effects</th>
<th>Agreement Terms</th>
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</thead>
<tbody>
<tr>
<td>● Worldwide exclusive</td>
<td>Precision Trauma, LLC will:</td>
</tr>
<tr>
<td>● Patents</td>
<td>○ Obtain the right to grant sublicenses</td>
</tr>
<tr>
<td>● All fields of use</td>
<td>○ Pay a royalty on sales</td>
</tr>
<tr>
<td>● Right to commercialize</td>
<td>○ Reimburse patent costs</td>
</tr>
</tbody>
</table>

The University will:
○ Pay an upfront fee

<table>
<thead>
<tr>
<th>University Employee; University Title; Relationship with Precision Trauma, LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Kevin Ward; Professor, Emergency Medicine; Partial Owner</td>
</tr>
</tbody>
</table>