

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5104415

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                  |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                      |
| <b>CONVEYING PARTY DATA</b>   |                                 |
| <b>Name</b>   | <b>Execution Date</b>           |
| ANDREW MAXWELL PHINEAS JONES  | 07/19/2018                      |
| KEVIN FRANK PIUNNO  | 07/19/2018                      |
| MUKUND SHUKLA   | 07/16/2018                      |
| <b>RECEIVING PARTY DATA</b>   |                                 |
| <b>Name:</b>  | UNIVERSITY OF GUELPH            |
| <b>Street Address:</b>  | 50 STONE ROAD                   |
| <b>City:</b>  | GUELPH                          |
| <b>State/Country:</b>   | CANADA                          |
| <b>Postal Code:</b>   | N1G 2W1                         |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                 |
| <b>Property Type</b>  | <b>Number</b>                   |
| <b>Application Number:</b>  | 16002053                        |
| <b>CORRESPONDENCE DATA</b>  |                                 |
| <b>Fax Number:</b>  | (416)361-1398                   |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |                                 |
| <b>Phone:</b>   | 416-364-7311                    |
| <b>Email:</b>   | astoddart@bereskinparr.com      |
| <b>Correspondent Name:</b>  | BERESKIN & PARR LLP             |
| <b>Address Line 1:</b>  | 40 KING STREET WEST, 40TH FLOOR |
| <b>Address Line 4:</b>  | TORONTO, CANADA M5H3Y2          |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 6580-P52761US01                 |
| <b>NAME OF SUBMITTER:</b>   | NICHOLAS AITKEN                 |
| <b>SIGNATURE:</b>   | /NICHOLAS AITKEN/               |
| <b>DATE SIGNED:</b>   | 08/22/2018                      |
| <b>Total Attachments: 4</b>   |                                 |
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| source=Assignment#page4.tif   |                                 |

6580-P52761CA00  
6580-P52761US00  
6580-P52761US01

**ASSIGNMENT / DECLARATION**

WHEREAS, **ANDREW MAXWELL PHINEAS JONES**, whose full post office address is **445 Geddes Street, Elora, ON N0B 1S0 Canada**, **KEVIN FRANK PIUNNO**, whose full post office address is **208-240 Waterloo Avenue, Guelph, ON N1H 3J5 Canada**, and **MUKUND SHUKLA**, whose full post office address is **1035 Victoria Road South, Apt. #129, Guelph, ON N1L 0H5 Canada** (hereinafter "the Assignors") are the inventors of an invention disclosed in Canadian patent application no. **3,007,538**, filed on **June 7, 2018**, United States provisional patent application no. **62/516,800**, filed on **June 8, 2017** and United States patent application no. **16/002,053**, filed on **June 7, 2018** (hereinafter "the Applications").

AND WHEREAS, **UNIVERSITY OF GUELPH** whose full post office address is **50 Stone Road, Guelph, ON N1G 2W1 Canada**, **ATTENTION: CATALYST CENTRE**, (hereinafter "the Assignee"), has acquired from the Assignors, their entire right, title and interest in and to the invention, in all countries of the world, including their rights to the Applications, and all related applications and patents thereon, including any and all, international, national and regional phase applications based on the Applications, and other counterpart applications in all countries, and any and all substitutes, divisionals, continuations and continuations-in-part, and any Letters Patent that may be obtained therefor, and in any and all reissues, extensions, renewals and reexaminations of such applications and patents, including the right to claim priority to the Applications, and to all related applications and patents thereon filed by the Assignors or Assignee, including the benefit of any right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and the benefit of

any right of priority provided by any convention or treaty under domestic or foreign law, and to invoke and claim any such right of priority without further written or oral authorization from the Assignors.

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of all of which is hereby acknowledged, the Assignors hereby confirm that, as of the filing date of the Applications, they have assigned, and effective as of the filing date of the Applications, do hereby sell and assign, transfer and set over to the Assignee, all their right, title and interest for Canada, the United States of America, its territories, dependencies and possessions, and for all other countries in the world, in and to the invention, including their rights to the Applications, and all related applications and patents thereon, including the right to claim priority to the Applications and to all related applications and patents thereon, to be held and enjoyed by the Assignee, its assigns and successors, as fully and entirely as the same would have been held and enjoyed by them, had this Assignment not been made.

The Assignors hereby confirm that the Applications were made or were authorized to be made by themselves and that they believe themselves to be the original inventors or joint inventors of claimed inventions in the Applications.

The Assignors shall without further consideration do all such things and execute all such documents as may be necessary or desirable to obtain and maintain the Applications for the invention, and all related applications and patents thereon, in any and all countries, and to vest title thereto in the Assignee, its successors, assigns and legal representatives or nominees.

The Assignors authorize and empower Bereskin & Parr LLP/S.E.N.C.R.L., s.r.l., whose complete address is Scotia Plaza, 40 King Street West, 40th Floor, Toronto, Ontario M5H 3Y2, to insert on this Assignment any further identification,

to prepare any translation which may be necessary or desirable in order to comply with the rules for recordation of this document in any country and to correct any clerical error in this Assignment.

The Commissioner of Patents & Trademarks is hereby authorized and requested to issue any Letters Patent for the Applications, and all related applications thereon, to the Assignee, for its sole use and benefit; and for the use and benefit of its successors and assigns, to the full end of the term for which Letters Patent may be granted, as fully and entirely as the same would have been held by the Assignors had this Assignment and sale not been made.

If a provision of this Assignment is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability in that jurisdiction of any other provision of this Assignment, or the validity or enforceability in other jurisdictions of that or any other provision of this Assignment.

The Assignors hereby acknowledge that any willful false statement made in this assignment/declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

For the purpose of all legal proceedings this Assignment will be deemed to have been performed in the Province of Ontario and will be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

The Parties confirm their express wish that this Assignment be drawn up in the English language. *Les parties confirment leur volonté expresse que cette cession soit rédigée en langue anglaise.*


SIGNED AT Guelph, ON, this 19 day of July, 2018.

  
Witness

  
ANDREW MAXWELL PHINEAS JONES

SIGNED AT Guelph, ON, this 19 day of July, 2018.

  
Witness

  
KEVIN FRANK PIUNNO

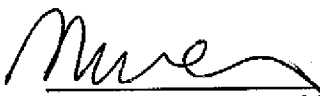
SIGNED AT Guelph, ON, this 16 day of July, 2018.

  
Witness

  
MUKUND SHUKLA

SIGNED AT Guelph, ON, this 16 day of July, 2018.

  
Witness

  
UNIVERSITY OF GUELPH  
Name: Sherri Cox  
Title: Executive Director  
Research Innovation and Knowledge  
Mobilisation