505529944 06/18/2019

PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| PHILIP A. REA | 06/10/2019 |

RECEIVING PARTY DATA

| Name: | THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA |
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| State/Country: | PENNSYLVANIA |
| Postal Code: | 19104 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15602757 |

CORRESPONDENCE DATA

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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| NAME OF SUBMITTER: | KATHLEEN D. RIGAUT | |
|--------------------|----------------------|--|
| SIGNATURE: | /Kathleen D. Rigaut/ | |
| DATE SIGNED: | 06/18/2019 | |

Total Attachments: 3

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PATENT 505529944 REEL: 049497 FRAME: 0081

PENN DOCKET NO.: 16-7874

PATENT Inventor: Philip A. Rea et al. Application No. 15/602,757

ASSIGNMENT

WHEREAS, I, Philip A. Rea, residing at 2941 Berkley Road, Ardmore, PA 19003, hereinafter referred to as the ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number 16-7874 (hereinafter "the invention"), assigned Application No. 15/602,757, filed May 23, 2017, which is entitled "TRANSGENIC PLANTS EXHIBITING ENHANCED PHYTOCHELATIN-BASED HEAVY METAL TOLERANCE AND METHODS OF USE THEREOF" (hereinafter "the subject application"), and which claims priority to U.S. Provisional Patent Application No. 62/340,931, filed May 24, 2016 ("the priority application").

WHEREAS, The Trustees Of The University Of Pennsylvania, hereinafter referred to as the ASSIGNEE, having a place of business at 3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in, to, and under the invention, and all applications for industrial property protection, including without limitation, all applications for patents, utility models, inventors' certificates, and designs that have been filed, and that may hereafter be filed, in any country, that disclose, describe, and/or claim the invention, including, without limitation, the subject application and the priority application, and all extensions, renewals, and reissues of such applications, including all divisions and continuations in whole or in part; all patents granted on such applications in any country, and all extensions, renewals, and reissues of such patents, including all divisions and continuation in whole or in part; the right to file such applications in any country; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY covenant and agree that I have full right to convey my entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to

PENN DOCKET NO.: 16-7874

PATENT Inventor: Philip A. Rea et al. Application No. 15/602,757

aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

| Executed this | 10 th | day of | June | , year of | 2019 . |
|------------------------------|------------------|--------------|--------|-----------|--------|
| Mom ou | , PHIL REA | | | | |
| Philip A. Rea | | | - | | |
| ****** | ***** | ****** | ****** | ******* | ****** |
| WITNESS | | | | | |
| SIGNED at | I | Philadelphia | | PA | |
| | | (City) | | (State) | |
| Peter M. Stoke | 'S | | | | |
| Name | | | | | |
| Aler Sta | ` ` | | | | |
| Signature | | | | | |
| June 10 th , 2019 |) | | | | |
| Date | | | | | |

| PENN DUCKET NO.: 16-7874 | PATENT Inventor: Philip A. Rea et al. Application No. 15/602,757 |
|--------------------------------------|--|
| This assignment is accepted on behal | f of The Trustees of the University of Pennsylvania by: |
| Date | Jennifer Langenberger Director, Intellectual Property |

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