PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
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| NATURE OF CONVEYANCE: | NUNC PRO TUNC ASSIGNMENT |
| EFFECTIVE DATE: | 05/17/2010 |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------|----------------|
| CHENGCAI CHU | 12/24/2014 |
| CHUNLAI LI | 12/24/2014 |

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 2

| Property Type | Number | | | |
|---------------------|--------------|--|--|--|
| Application Number: | 13698370 | | | |
| PCT Number: | CN2011000852 | | | |

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| NAME OF SUBMITTER: | RICHARD T. TIMMER |
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| DATE SIGNED: | 03/27/2015 |
| | |

Total Attachments: 4

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PATENT REEL: 035274 FRAME: 0151

WORLDWIDE ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in fulfillment of a pre-existing obligation of assignment, we, Chengcai Chu and Chunlai Li at the INSTITUTE OF GENETICS AND DEVELOPMENTAL BIOLOGY, No. 1 West Beichen Road, Chaoyand District, Beijing, Peoples Republic of China 100101, the undersigned inventors have sold and assigned, and by these presents hereby sells and assigns, as indicated below, unto

INSTITUTE OF GENETICS AND DEVELOPMENTAL BIOLOGY

No. 1 West Beichen Road Chaoyand District Beijing, Peoples Republic of China 100101

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the inventions in "Plastidial Nucleotide Sugar Epimerases", including all improvements to said invention ("Invention")

as set forth in this US Patent Application and the PCT Patent Application identified below,

| | executed | concu | rrently | here | with | | | | | | | | |
|-------------|-----------|----------|---------|-------|------|------|-------|-----|------|------|-----|-----|---|
| | executed | on | | | | | | | | | | | |
| \boxtimes | US Serial | No. 13 | 3/698,3 | 370 f | iled | on N | lay | 16. | 201 | 1 ar | nd: | | |
| \boxtimes | PCT Seri | al No. I | PCT/C | N20 | 11/0 | 008 | 52 fi | led | on I | Vlav | 16 | 201 | 1 |

which claims priority to Serial No. CN201010178405.6, filed on May 17, 2010.

including all provisional, non-provisional, divisional, renewal, substitute, continuation, continuations-in-part, international and Convention applications based in whole or in part upon said Inventions or upon said Applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said Inventions or upon said Applications and every priority right that is or may be predicated upon or arise from said Inventions, said Applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said Inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; said assignment including the right to bring legal proceedings and obtain any relief to which the undersigned would have been entitled if this assignment had not been made, in respect of any infringements of the undersigned's rights in relation to said inventions, Applications and Letters Patent which occur before or after the date of this assignment; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other

1

PATENT REEL: 035274 FRAME: 0152

right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said Inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said Inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be of said Inventions, and to testify in any proceedings relating to said Inventions, patent applications, Letters Patent, and to bind our heirs, legal representatives, and assigns, promptly to communicate to said Assignee or its representatives any facts known to us relating to said Inventions, to testify in any interference or legal proceedings involving said Inventions, the location of that testimony to be in the country in which we reside or in the nearest country in which such testimony is legal should our country of residence prohibit such testimony, to execute any additional papers which may be requested to confirm the right of the Assignee, its representatives, successors or assigns to secure patent or similar protection for said inventions and to vest in the Assignee complete title to said Inventions and Letters Patent, without further compensation, but at the expense of said Assignee, its successors, assigns and other legal representatives.

The undersigned hereby grant an authorized representative of Assignee the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office or the Patent Office of any other country for recordation of this Assignment.

This assignment is deemed to be effective at least as early as of May 17, 2010.

| Chengcai Chu <u>Chengcai Chu</u> Name of Inventor | Clargeat Che Signature of Inventor |
|--|---|
| Name of Inventor | Signature of Inventor |
| Witnessed By: <u> </u> | 4134 |
| | Witnessed By: <u> </u> |
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| Date: December 24th, 2014 | Date: December 24th, 2014 |

| Chuntai Li <u>Chwnlai Li</u> | chuntar Li |
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