

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | |
|--|-------------------------------|---------------|----------------|---------------------|------------|-----------------|------------|---------------|------------|--------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Paul Dastoor</td> <td>04/16/2012</td> </tr> <tr> <td>Warwick Belcher</td> <td>04/16/2012</td> </tr> <tr> <td>Xiaojing Zhou</td> <td>04/16/2012</td> </tr> <tr> <td>Glenn Bryant</td> <td>04/16/2012</td> </tr> </tbody> </table> | | Name | Execution Date | Paul Dastoor | 04/16/2012 | Warwick Belcher | 04/16/2012 | Xiaojing Zhou | 04/16/2012 | Glenn Bryant | 04/16/2012 |
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| Paul Dastoor | 04/16/2012 | | | | | | | | | | |
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| Xiaojing Zhou | 04/16/2012 | | | | | | | | | | |
| Glenn Bryant | 04/16/2012 | | | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | | | |
| Name: | Newcastle Innovation Ltd. | | | | | | | | | | |
| Street Address: | Industry Development Centre | | | | | | | | | | |
| Internal Address: | University Drive | | | | | | | | | | |
| City: | Callaghan, New South Wales | | | | | | | | | | |
| State/Country: | AUSTRALIA | | | | | | | | | | |
| Postal Code: | 2308 | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13992790</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 13992790 | | | | | | |
| Property Type | Number | | | | | | | | | | |
| Application Number: | 13992790 | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | |
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| ATTORNEY DOCKET NUMBER: | P50297US00 | | | | | | | | | | |
| NAME OF SUBMITTER: | G. Peter Nichols | | | | | | | | | | |
| Signature: | /G. Peter Nichols/ | | | | | | | | | | |

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Date:

06/10/2013

Total Attachments: 2

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RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below:

| | |
|--|--|
| 1. Name of conveying Party(ies): <p style="text-align: center;">Paul Dastoor Warwick Belcher Xiaojing Zhou Glenn Bryant</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> | 2. Name and Address of receiving Party(ies): <p>Name: Newcastle Innovation Ltd.</p> <p>Street Address: Industry Development Centre, University Drive</p> <p>City: Callaghan</p> <p>Country: New South Wales, Australia</p> <p>Zip: 2308</p> <p>Additional name(s) and addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> |
| 3. Nature of Conveyance/Execution Date(s): <p>Execution Date(s): Paul Dastoor: April 16, 2012 Warwick Belcher: April 16, 2012 Xiaojing Zhou: April 16, 2012 Glenn Bryant: April 16, 2012</p> <p> <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Security Agreement <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other: _____ </p> <p style="text-align: right;"> <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name </p> | 4. Application or Patent Number(s). <input type="checkbox"/> This document is being filed together with a new application. <p>A. Patent Application No.(s): 13/992,790 filed June 10, 2013</p> <p>B. Patent No.(s):</p> <p>Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> |
| 5. Name and address of party to whom correspondence concerning document should be mailed: <p style="text-align: center;">BRINKS HOFER GILSON & LIONE PO BOX 10395 CHICAGO, IL 60610 Phone: (312) 321-4200 Fax: (312) 321-4299</p> | 6. Total no. of applications & patents involved: <u>1</u> 7. Total Fee (37 CFR 1.21(h) & 3.41) \$ <u>40.00</u> <input type="checkbox"/> Authorize charge by credit card <input checked="" type="checkbox"/> Authorize charge to Deposit Account No. 23-1925 <input type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title) |
| 9. Signature: _____ <p style="text-align: center;">Signature G. Peter Nichols Name of Person Signing</p> | 8. Payment Information: <p>a. <input type="checkbox"/> Credit Card: Last 4 Numbers Expiration Date</p> <p>b. <input checked="" type="checkbox"/> Charge fee and/or any Deficiencies to Deposit Account Number 23-1925 Authorized User Name: Brinks Hofer Gilson & Lione</p> <p style="text-align: right;">June 10, 2013 Date</p> <p>Total no. of pages including coversheet, attachments and documents: <u>2</u></p> |

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, PO Box 1450, Alexandria, VA 22313-1450

PATENT
REEL: 030576 FRAME: 0758

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned,

DASTOOR, Paul
BELCHER, Warwick
ZHOU, Xiaojing
BRYANT, Glenn

who are joint inventors with MULLER, Elmar; HALLIDAY, Pieter, Stephanus, Jacobus and MORGAN, Clifford, Gordon

hereby sell, assign and transfer to

NEWCASTLE INNOVATION LTD

of Industry Development Centre, University Drive, Callaghan, New South Wales 2308, Australia

(hereinafter called the Assignee)

the entire right, title, and interest in and to any and all improvements which are disclosed in the PCT International Application designating the United States entitled

DETONATION OF EXPLOSIVES

which application was filed on 9 December 2011, under No. PCT/IB2011/055573

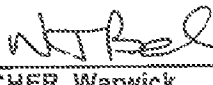
including any and all applications for United States Letters Patent based thereon and any and all United States Letters Patents which may be granted therefor and any and all extensions, divisions, reissues, substitutes, renewals or continuations thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property.


It is hereby authorized and requested that the Commissioner of Patents issue any and all of said Letters Patent, when granted, to said Assignee.


Further, it is agreed that, when requested, without charge to but at the expense of said Assignee, the undersigned will execute all divisional, continuing, substitute, renewal, and reissue patent applications; execute all rightfully other papers; and generally do everything possible which said Assignee shall consider desirable for aiding in securing and maintaining proper patent protection.

Signed at NEWCASTLE this 16th day of APRIL 2012

INVENTOR(S): 
DASTOOR, Paul


BELCHER, Warwick


ZHOU, Xiaojing


BRYANT, Glenn

WITNESSES: 

