## 506337342 11/04/2020

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6384095

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

#### **CONVEYING PARTY DATA**

| Name          | Execution Date |
|---------------|----------------|
| CAYLA W. DEAN | 10/15/2020     |

### **RECEIVING PARTY DATA**

| Name:           | ALEXANDER V. SOLOVIEV |
|-----------------|-----------------------|
| Street Address: | 1733 ROYAL PALM WAY   |
| City:           | HOLLYWOOD             |
| State/Country:  | FLORIDA               |
| Postal Code:    | 33020                 |

#### **PROPERTY NUMBERS Total: 4**

| Property Type       | Number       |
|---------------------|--------------|
| Application Number: | 62654952     |
| Patent Number:      | 10687481     |
| PCT Number:         | US2019026087 |
| PCT Number:         | US2019026127 |

#### **CORRESPONDENCE DATA**

Fax Number:

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.

**Phone:** 9544834034

Email: soloviev@nova.edu

Correspondent Name: ALEXANDER V. SOLOVIEV Address Line 1: 1733 ROYAL PALM WAY

Address Line 4: HOLLYWOOD, FLORIDA 33020

| NAME OF SUBMITTER: ALEXANDER V. SOLOVIEV                |            |
|---|------------|
| SIGNATURE: /Alexander Soloviev/                         |            |
| DATE SIGNED:  | 11/04/2020 |
| This document serves as an Oath/Declaration (37 CFR 1.6 |            |

#### **Total Attachments: 9**

source=Assignment\_Soloviev\_Dean\_signed#page1.tif source=Assignment\_Soloviev\_Dean\_signed#page2.tif source=Assignment\_Soloviev\_Dean\_signed#page3.tif

PATENT 506337342 REEL: 054268 FRAME: 0756

source=Notice#page1.tif
source=Soloviev and Dean Disclosure released#page1.tif
source=Soloviev and Dean Disclosure released#page2.tif
source=Soloviev and Dean Disclosure released#page3.tif
source=Soloviev and Dean Disclosure released#page4.tif
source=Soloviev and Dean Disclosure released#page5.tif

### ASSIGNMENT

For valuable consideration, the receipt of which is hereby acknowledged, each of the following Assignor and Assignee:

| Assignor Name   | Assignor Address                           |
|-----------------|--|
| 1 Cayla W. Dean | 4B Country Club Hls, Tuscaloosa, AL, 35401 |

(referred to hereinafter collectively as "ASSIGNOR") hereby assign to the following:

|   | <u>Assignee Name</u>  | Assignee Address                         |
|---|-----------------------|--|
| 1 | Alexander V. Soloviev | 1733 Royal Palm Way, Hollywood, FL 33020 |

(referred to hereinaster collectively as "ASSIGNEE") and its successors and assigns, the Assignor's entire right, title and interest throughout the world in the inventions and improvements which are the subject of the following one or more applications for patent in the United States:

|   | Serial No.        | Filing Date   | <u>Title</u>  |
|---|-------------------|---------------|---|
| 1 | 62/654,952        | April 9, 2018 | CHANGING CLIMATE USING DOWNWELLING  |
| 2 | 10,687,481        | June 23, 2020 | METHOD AND MEANS FOR STORING HEAT IN THE SEA FOR LOCAL WEATHER MODIFICATION |
| 3 | PCT/US2019/026087 | April 5, 2019 | METHOD AND MEANS FOR STORING HEAT IN THE SEA FOR LOCAL WEATHER MODIFICATION |
| 4 | PCT/US2019/026127 | April 5, 2019 | METHOD AND MEANS FOR STORING HEAT IN THE SEA FOR LOCAL WEATHER MODIFICATION |

WHEREAS, the "Assigned Property" shall mean (i) the above-identified United States provisional patent application Serial No. 62/654,952 (the "Application"), the above-mentioned United States patent Serial No. 10,687,481 (the "Patent"), and the International Patent System applications Serial No. PCT/US2019/026087 and Serial No. PCT/US2019/026127 (the "PCT Applications"), (ii) all inventions disclosed in the Application, the Patent, the PCT Applications, (iii) any and all applications for patent throughout the world directed to the subject matter of the Application, the Patent, and the PCT Applications, (iv) the right of priority arising from the Application, the Patent, and the PCT Applications or from such other applications, under the Paris Convention for the Protection of Industrial Property or under relevant laws, treaties, conventions or bilateral and multilateral agreements, in any jurisdiction, (v) any and all patents throughout the world resulting from the Application, the Patent, and the PCT Applications, or such other application(s) for patents, and (vi) any and all claims against third parties in connection with any of the rights assigned by this Agreement;

3

AND WHEREAS, ASSIGNEE is desirous of acquiring ASSIGNOR's entire right, title, and interest in and to and resulting from said Assigned Property and in general all property rights included therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR does hereby irrevocably and unconditionally assign and transfer unto ASSIGNEE ASSIGNOR's entire right, title and interest in and to and resulting from the Assigned Property, and hereby authorizes and requests the Commissioner of Patents to issue said patent to ASSIGNEE for the sole use and benefit of ASSIGNEE.

AND ASSIGNOR FURTHERMORE authorizes ASSIGNEE, or anyone it may properly designate, to insert on each page of this instrument (where indicated) the filing date and application number of said Application when known;

AND ASSIGNOR AGREES, FURTHERMORE, upon request of ASSIGNEE, and without further remuneration, but at no expense to ASSIGNOR, that ASSIGNOR or ASSIGNOR'S heirs, executors, or administrators will provide all reasonable assistance to obtain, maintain, and assert the fullest measure of legal protection that ASSIGNEE desires to obtain or assert for the Assigned Property, including executing any and all papers desired by ASSIGNEE for the filing and granting of patent rights in the Assigned Property, the perfecting of title in ASSIGNEE, and in enforcing any rights in the Assigned Property.

This instrument is executed by, and shall be binding upon ASSIGNOR, and ASSIGNOR's heirs, executors and administrators, for the uses and purposes above set forth and referred to and shall inure to the benefit of ASSIGNEE or anyone it may properly designate.

If any provision of this assignment is held by any court to be unenforceable, such provision shall be interpreted to accomplish the objectives of the original provision to the fullest extent allowed by law and the remainder of this assignment shall remain in full force and effect.

This assignment shall be construed, governed, interpreted, and applied in accordance with the laws of the State of Florida, United States of America.

# NOW, THEREFORE, ASSIGNOR and ASSIGNEE agree as follows:

- 1. If any income is ever received from commercialization or use of the Invention, ASSIGNEE will first reimburse Nova Southeastern University, Inc. for all past patent expenses, the total of which is \$3,027.92 (according to the Nova Southeastern University Memorandum NSU18-01 dated February 15, 2019).
- 2. Thereafter, ASSIGNEE shall equally share with ASSIGNOR, all gross income, forty-seven and five tenths (47.5%) percent to ASSIGNEE and forty-seven and five tenths (47.5%) percent to ASSIGNOR, including but not limited to gross proceeds, royalties,

compensation, or other payment received in exchange for an interest in or a tight to use, sell, manufacture, distribute, or license the Invention.

- 3. The remaining five (5%) of the gross income, ASSIGNEE shall pay to Nova Southeastern University, Inc.
- 4. This ASSIGMENT is valid only if signed by both parties: the ASSIGNOR and the ASSIGNEE.

EXECUTED as of the date(s) set forth below on behalf of the ASSIGNOR and the ASSIGNEE:

| Assignor    | ASSIGNOR        |  |
|-------------|-----------------|--|
| Name        | Cayla W. Dean   |  |
| Signature   | CaylaDe         |  |
| Date Signed | 15 October 2020 |  |

| Assignee    | ASSIGNEE              |  |  |
|-------------|-----------------------|--|--|
| Name        | Alexander V. Soloviev |  |  |
| Signature   | A.Co                  |  |  |
| Date Signed | 140ctober 2020        |  |  |



### UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

NOVEMBER 3, 2020

PTAS

ALEXANDER V. SOLOVIEV 1733 ROYAL PALM WAY HOLLYWOOD, FL 33020 506332295

UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 11/01/2020 REEL/FRAME: 054234/0027

NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

NOVA SOUTHEASTERN UNIVERSITY, INC. DOC DATE: 02/15/2019

ASSIGNEE:

SOLOVIEV, ALEXANDER V. 1733 ROYAL PALM WAY HOLLYWOOD, FLORIDA 33020

**ASSIGNEE:** 

DEAN, CAYLA W.
4B COUNTRY CLUB HLS
TUSCALOOSA, ALABAMA 35401

APPLICATION NUMBER: 62654952 FILING DATE: 04/09/2018

PATENT NUMBER: ISSUE DATE:

TITLE: CHANGING CLIMATE USING DOWNWELLING

ASSIGNMENT RECORDATION BRANCH PUBLIC RECORDS DIVISION



Translational research and economic development
Research and technology transfer

3301 College Avenue

Fort Lauderdale, Florida 33314-7796

PHONE: (954) 262-7507 FAX: (954) 262-2658

EMAIL: margules@nova.edu

WEB: nova.edu/rtt

GARY MARGULES, Sc.D. Vice President

#### MEMORANDUM

TO: Alexander V. Soloviev \* Yim a-madi and Ground Mail

Cayla W. Dean

FROM: Gary S. Margales (M)

DATE: February 18, 2019

SUBJECT: Release of U.S. Provisional Patent Application No.

62/654,952 entitled "Changing Climate Using

Downwelling' flied on April 9, 2018

OUR REF: NSU18-01

After careful internal review, Nova Southeastern University wishes not to retain title to the subject invention, but instead wishes to release and re-assign full ownership of the patent application listed in Exhibit B attached hereto, to you, the inventors, under the terms and conditions attached in Exhibit A, Re-Assignment and Release Agreement. Please note that as co-inventors you have equal rights to the invention. To date we have spent \$3027.92.

The next significant patent prosecution deadline is shown below.

## April 11, 2019, PCT International Patent Application <u>deadline</u>, NSU18-01

Should you agree to the Re-Assignment and Release Agreement, and decide to gain title to the patent application the patent case must be transferred from Fleit Gibbons Gutman Bongini & Bianco P.L. to another patent attorney of your choice. If you decide to sign the Re-Assignment and Release Agreement, please return the signed agreement to me and inform me of your patent attorney as soon as possible so that the transfer can occur well in advance to April 11th filing deadline.

Please note that our decision does not reflect unfavorably on your invention's scientific value but reflects more on commercial and business related factors.

We appreciate your cooperation throughout the year. Working with you has been a rewarding experience.

**PATENT** 

REEL: 054268 FRAME: 0762

Alexander V. Soloviev and Cayla W. Dean February 18, 2019 Pg. 2

Please inform us as to your decision and if you wish to retain title, sign and date the Re-Assignment and Release Agreement attached (Exhibit A). If we do not receive the signed Re-Assignment and Release Agreement and transfer instructions from you, the patent application will be abandoned. If you have any questions, please feel free to call or write to me or Katherine Rose.

Enclosures: Exhibits A and B

ce: Richard Dodge, Ph.D. Paul Bianco, Ph.D. Katherine Rose, Esq. NSU18-01

### EXHIBIT A RE-ASSIGNMENT AND RELEASE AGREEMENT

This Re-Assignment and Release Agreement is entered into on the date of the last signature below, by and between Nova Southeastern University, a not-for-profit corporation organized under the laws of the State of Florida, having a principal place of business at 3301 College Avenue, Fort Lauderdale, FL 33314 ("NSU") and Dr. Alexander V. Soloviev ("Dr. Soloviev") and Dr. Cayla W. Dean ("Dr. Dean").

WHEREAS, Dr. Soloviev is an employee of NSU and Dr. Dean was a graduate student and employee of NSU; and

WHEREAS, Dr. Soloviev and Dr. Dean conceived of an invention entitled, "Artificial Downwelling on the Israeli Coast of the Mediterranean Sea to Increase Winter Rains in the Levant" (NSU18-01) at NSU; and

WHEREAS, pursuant to the NSU Patent and Copyright Policy, and pursuant to employment agreements, Dr. Soloviev and Dr. Dean completed an Invention Disclosure Form and assigned ownership of the invention to NSU; and

WHEREAS, NSU filed the provisional patent application listed in Exhibit B, attached hereto and incorporated by reference on April 9, 2018 ("the Invention"); and

WHEREAS, on or before April 11, 2019, a PCT application or regular U.S. Utility Application must be filed in order to preserve the patent rights and priority date; and

WHEREAS NSU no longer wishes to own the invention and prosecute the patent application; and

WHEREAS, NSU wishes to re-assign and release ownership of the patent application to Dr. Soloviev and Dr. Dean subject to the following terms and conditions;

NOW, THEREFORE, the parties agree as follows:

- NSU hereby releases its interest in the Invention and assigns all right, title and interest in the Invention to its co-inventors – Dr. Soloviev and Dr. Dean
- 2. Dr. Soloviev and Dr. Dean shall reimburse NSU for all past patent expenses, the total of which is \$3,027.92, if any income is ever

received from commercialization or use of the Invention. In that event, NSU shall first be reimbursed for expenses paid.

- Thereafter, Dr. Soloviev and Dr. Dean shall pay to NSU five (5%) percent of all gross income including but not limited to gross proceeds, royalties, compensation or other payments received for the commercialization or use of the Invention or received in exchange for an interest in or a right to use, sell, manufacture, distribute, or license the Invention.
- 4. Each and all of the covenants, terms, provisions, obligations and agreements herein contained shall be binding upon, and inure to the benefit of, the parties hereto and their heirs, legal representatives, legatees, successors, and assigns.
- 5. This Agreement is governed by the laws of the State of Florida. United States of America, as applicable to agreements negotiated, executed, and performed within Broward County, Florida. The parties agree to the exclusive jurisdiction of the state and federal courts located in Florida. Venue or any proceeding arising hereunder shall be in Broward County, Florida.

mova bouthkastérn university, inc.

Gary S. Margules, Sc.D.

Vice President

Office of Research and Technology Transfer

|                          | EXMIRIT B PATENT APPLICATION   |   |  |
|--------------------------|--|---|--|
| MSV Ref. No.<br>NSV18-01 | CHANGING CLIMATE USING DOWNWELLING<br>Inventors: Alexander V. Soloviev and Cayla W. Dean | US Provisions<br>Patent Application<br>62/654,952<br>Filed: April 9, 2018 |  |

PATENT REEL: 054268 FRAME: 0766

**RECORDED: 11/04/2020**