OP \$415.00 90622979

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 ETAS ID: TM685782

NATURE OF CONVEYANCE: SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
Roswell Biotechnologies, Inc.		11/01/2021	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	Western Alliance Bank, an Arizona corporation
Street Address:	55 Almaden Boulevard, Suite 100
City:	San Jose
State/Country:	CALIFORNIA
Postal Code:	95113
Entity Type:	Corporation: ARIZONA

PROPERTY NUMBERS Total: 16

Property Type	Number	Word Mark
Serial Number:	90622979	
Serial Number:	90619099	ME SURVEILLANCE
Serial Number:	90619095	MESEQ
Serial Number:	90619085	ME DISCOVERY PLATFORM
Serial Number:	90619078	DIGITAL MEETS MOLECULE
Serial Number:	90619069	MOLECULAR ELECTRONICS COMPANY
Serial Number:	90619055	DIGITAL MEETS SINGLE MOLECULES
Serial Number:	90408445	ME BREATHALYZER
Serial Number:	90408239	VIROMETER
Serial Number:	90408229	THE NATURE INSPIRED CHIP
Serial Number:	88609475	ROSWELL BIOTECHNOLOGIES
Serial Number:	88609455	INTELLIGENT SIMPLICITY
Serial Number:	88609439	END GAME SEQUENCING
Serial Number:	88609428	ENDSEQ
Serial Number:	88609460	SUPERSEQ
Serial Number:	88609504	ROSWELL BIOTECHNOLOGIES

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

TRADEMARK

900654211 REEL: 007484 FRAME: 0037

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

Phone: 7033826485

Email: DHall@vlplawgroup.com

Correspondent Name: Davis Hall

Address Line 1: 12703 Hitchcock Court
Address Line 4: Reston, VIRGINIA 20191

NAME OF SUBMITTER:	Davis Hall
SIGNATURE:	/DavisHall/
DATE SIGNED:	11/04/2021

Total Attachments: 9

source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page1.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page2.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page3.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page4.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page5.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page6.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page7.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page8.tif source=(WAL-Roswell) EXECUTED A&R Intellectual Property Security Agreement_11-1-21#page8.tif

AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT

This AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of November 1, 2021 (the "Agreement"), between WESTERN ALLIANCE BANK, an Arizona corporation ("Lender") and ROSWELL BIOTECHNOLOGIES, INC. ("Grantor"), is made with reference to the Loan and Security Agreement, dated as of July 22, 2019 (as amended from time to time, the "Loan Agreement"), between Lender and Grantor. Terms defined in the Loan Agreement have the same meaning when used in this Agreement. This Agreement amends and restates in its entirety that Intellectual Property Security Agreement dated as of July 30, 2021.

For good and valuable consideration, receipt of which is hereby acknowledged, Grantor hereby covenants and agrees as follows:

To secure the Obligations under the Loan Agreement effective as of the date hereof until the IP Release Milestone has been achieved, Grantor hereby grants to Lender a security interest in all right, title, and interest of Grantor in any of the following, whether now existing or hereafter acquired or created in any and all of the following property (collectively, the "Intellectual Property Collateral"):

- (a) any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof (collectively, the "Copyrights"), including the Copyrights described in Exhibit A;
- (b) any and all trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks (collectively, the "Trademarks"), including the Trademarks described in Exhibit B;
- (c) any and all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same (collectively, the "Patents"), including the Patents described in Exhibit C;
 - (d) trade secrets;
 - (f) design rights;
- (g) claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;
- (h) licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights;
 - (i) amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and
- (j) proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

The rights and remedies of Lender with respect to the security interests granted hereunder are in addition to those set forth in the Loan Agreement, and those which are now or hereafter available to Lender as a matter of law or equity. Each right, power and remedy of Lender provided for herein or in the Loan Agreement, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein, and the exercise by Lender of any one or more of such rights, powers or remedies does not preclude the simultaneous or later exercise by Lender of any other rights, powers or remedies.

Notwithstanding the foregoing, the security interest granted hereunder shall automatically and without further action by the parties hereto terminate if and on such date as Borrower achieves the IP Release Milestone (as defined in the Loan Agreement).

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INTENDING TO BE LEGALLY BOUND, the undersigned have executed this Agreement as of the date first written above.

GRANTOR:

By:

ROSWELL BIOTECHNOLOGIES, INC., a

Delaware corporation

DocuSigned by: Paul W. Mola

Name: Paul W. Mola

Title: Chief Executive Officer and President

Address for Notices:

Attn: Paul Mola, CEO and President 11095 Flintkote Ave, Suite A San Diego, CA 92121

LENDER:

WESTERN ALLIANCE BANK, an Arizona

corporation

By:

DocuSigned by:

Brian Kirkpatrick

-- CF1BBDDFCE954AD...

Name: Brian Kirkpatrick

Title: Vice President

Address for Notices:

Attn: 55 Almaden Boulevard, Suite 100

San Jose, California 95113

Tel: (408) 556-6501 Fax:(408) 282-1681

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EXHIBIT A

COPYRIGHTS

Please Check if No Copyrights Exist ⊠

Type of Work	Title:	International Standard Serial Number (ISSN)	Registration Number	<u>Filing</u> <u>Date</u>	Pre - registered?

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EXHIBIT B

TRADEMARKS

Please Check if No Trademarks Exist \square

Mark / Title:	U.S. Serial Number	U.S. Registration Number	USPTO Reference Number	Filing Date:
	90622979			4-4-2021
ME SURVEILLANCE	90619099		***************************************	4-1-2021
MESEQ	90619095		***************************************	4-1-2021
ME DISCOVERY PLATFORM	90619085			4-1-2021
DIGITAL MEETS MOLECULE	90619078			4-1-2021
MOLECULAR ELECTRONICS COMPANY	90619069			4-1-2021
DIGITAL MEETS SINGLE MOLECULES	90619055			4-1-2021
ME BREATHALYZER	90408445			12-23-2020
VIROMETER	90408239			12-23-2020
THE NATURE INSPIRED CHIP	90408229		***************************************	12-23-2020
ROSWELL BIOTECHNOLOGIES	88609475			9-9-2019
INTELLIGENT SIMPLICITY	88609455		***************************************	9-9-2019
END GAME SEQUENCING	88609439			9-9-2019
ENDSeq	88609428	***************************************		9-9-2019
SUPERSeq	88609460			9-9-2019
ROSWELL BIOTECHNOLOGIES	88609504	6212312		9-9-2019 12-1-2020

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EXHIBIT C

PATENTS

Please Check if No Patents Exist \square

	Patent			
<u>Title</u>	No.	App. No.	Issued	Issue Date
METHOD OF MAKING A MULTI-ELECTRODE STRUCTURE USABLE IN MOLECULAR SENSING DEVICES	9956743	13/996,477	Issued	5/1/2018
METHOD OF MAKING A MULTI-ELECTRODE STRUCTURE USABLE IN MOLECULAR SENSING DEVICES	10597767	15/050,270	Issued	3/24/2020
SUPERHYDROPHOBIC AND SUPEROLEOPHOBIC NANOSURFACES	9829456	15/220,307	Issued	11/28/2017
ARYL COMPOUNDS AND POLYMERS AND METHODS OF MAKING AND USING THE SAME	10036064	15/336,557	Issued	7/31/2018
SINGLE-SIDED FLOW CELL MOUNT WITH ELECTRICAL, THERMAL, AND FLUIDIC INTERFACE	10227694	15/728,400	Issued	3/12/2019
POTENTIOSTATIC CONTROL OF SOLUTION POTENTIAL	10125420	15/728,412	Issued	11/13/2018
SENSOR CHAMBER TEMPERATURE FEEDBACK CONTROL DERIVED FROM CONCURRENT COLLECTED DATA QUALITY	10151722	15/796,080	Issued	12/11/2018
DIFFERENTIAL SIGNALING FOR A MOLECULAR BIOSENSOR	10569506	15/944,356	Issued	2/25/2020
IMPEDANCE CHARACTERIZATION VIA TWO-LEVEL SIGNALS	10584410	15/979,135	Issued	3/10/2020
NONLINEAR IMPEDANCE CHANGE DNA SEQUENCING		16/011,065		
BIO-MOLECULAR ELECTRONIC CIRCUITRY	10508296	16/015,028	Issued	12/17/2018
METHOD TO CONTROL THE NANOWIRE LENGTH IN THE PILIN IN VITRO ASSEMBLY	10648941	16/015,049	Issued	5/12/2020
ELECTRONIC LABEL-FREE DNA AND GENOME SEQUENCING		16/070,133	***************************************	
ELECTRONIC LABEL-FREE DNA AND GENOME SEQUENCING		16/073,693		
MULTI-ELECTRODE MOLECULAR SENSING DEVICES AND METHODS OF MAKING THE SAME	10712334	16/073,706	Issued	7/14/2020
METHOD OF MAKING MULTI-ELECTRODE MOLECULAR SENSING DEVICES	10737263	16/076,673	Issued	8/11/2020
MULTI-ELECTRODE MOLECULAR SENSING DEVICES AND METHODS OF MAKING THE SAME	10378103	16/152,190	Issued	8/13/2019

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<u>Title</u>	Patent No.	App. No.	Issued	Issue Date
MULTI-ELECTRODE MOLECULAR SENSING DEVICES AND METHODS OF MAKING THE SAME	10526696	16/250,929	Issued	1/7/2020
MULTI-ELECTRODE MOLECULAR SENSING DEVICES AND METHODS OF MAKING THE SAME		16/321,784		
NUCLEIC ACID SEQUENCING DEVICE CONTAINING GRAPHENE		16/463,195		
SYNTHETIC (POLY)HETEROCYCLIC AROMATIC BRIDGES	10902939	16/477,106	Issued	1/26/2021
POLYCYCLIC AROMATIC BRIDGES FOR MOLECULAR ELECTRONIC SENSORS		16/479,257		
SUPERHYDROPHOBIC AND SUPEROLEOPHOBIC NANOSURFACES		16/639,716		
ENZYMATIC CIRCUITS FOR MOLECULAR SENSORS	11100404	16/652,672	Issued	8/24/2021
ENZYMATIC CIRCUITS FOR MOLECULAR SENSORS		16/684,338		
ENZYMATIC CIRCUITS FOR MOLECULAR SENSORS	11090903	16/689,946	Issued	8/17/2021
ENZYMATIC CIRCUITS FOR MOLECULAR SENSORS		16/696,604		*******************
BINDING PROBE CIRCUITS FOR MOLECULAR SENSORS		16/696,790	Published	
TUNABLE NANOPILLAR AND NANOGAP ELECTRODE STRUCTURES AND METHODS THEREOF		16/731,749		
METHOD, APPARATUS AND SYSTEM FOR SINGLE- MOLECULE POLYMERASE BIOSENSOR WITH TRANSITION METAL NANOBRIDGE		16/741,278		
SINGLE-DNA-BRIDGE BIOSENSORS AND STORAGE DEVICES COMPRISING SIZE-RESTRICTED, VERTICAL NANOCONE ELECTRODES, STRUCTURES AND METHODS		16/775,097		
NEAR-ROOM-TEMPERATURE PROCESSABLE AMORPHOUS SEMICONDUCTOR NANO-RIBBON BRIDGE BIOSENSORS AND MEMORY DEVICES	11143617	16/831,722	Issued	10/12/2021
SHAPE-ALTERED GRAPHENE NANOBRIDGE ARRAY (OPTIONALLY COMPRISING A DNA CONNECTION BRIDGE), TRANSFER-ALIGNED FOR BIOMOLECULAR SENSING AND INFORMATION STORAGE		16/840,755		
POLYMERASES FOR SEQUENCING USING MOLECULAR ELECTRONICS	10913966	16/878,484	Issued	2/9/2021
DNA SEQUENCER WITH SPLIT HEXAGONAL ELEMENT		16/885,952		
DIELECTROPHORETIC TRAPPING OF BIOMOLECULES IN MOLECULAR SENSORS		16/912,580		
NANOSCALE GAP FORMATION BY ETCHING CMOS VIA-DIELECTRIC INTERFACE		17/107,662		

Title	Patent No.	App No	Issued	Issue Date
FLUIDIC ACTUATORS AND FLOWCELLS FOR SENSORS		17/135,375		
METHOD OF WETTING SURFACE NANO-FEATURES VIA CONTROLLEDCONDENSATION		17/138,314		
ELECTROCHEMICAL FOULING TO PREVENT NANOELECTRODE SENSOR REUSE		17/354,900		
MICROFLUIDIC FLOW WITH VAPOR GAP INCLUSIONS FOR LOW-NOISEAPPLICATIONS		17/373,763		
FLOW CELL REAGENT HOMOGENIZATION VIA ELECTRIC FIELD MODULATION		17/374,973		
GATELESS TO MULTI-GATED MOLECULAR BIOSENSORS COMPRISING WIDTHREDUCED,ENZYME ATTACHABLE NANOBRIDGES		17/387,897		
BIOMOLECULAR SENSORS AND METHODS		17/465,804		
BIOMOLECULAR SENSORS AND METHODS		17/476,424		
NANOPARTICLE FABRICATION		17/476,427		
NANOPARTICLE FABRICATION	<u> </u>	17/483,710		
MOLECULAR SENSORS AND RELATED METHODS		17/598,854		
Molecular Electronics for Multiplex Viral Detection in the Field		17/602,999		
METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE MOLECULAR ELECTRONICS SENSOR ARRAYS	D913,523	29/723,554	Issued	3/15/2021
MASSIVELY PARALLEL DNA SEQUENCING APPARATUS		63/008,641		
MASSIVELY PARALLEL DNA SEQUENCING APPARATUS		63/009,948		
MULTI-ELECTRODE MOLECULAR SENSING DEVICES AND METHODS OF MAKING THE SAME		63/009,956		
MODIFIED NUCLEOTIDE TRIPHOSPHATES FOR MOLECULAR ELECTRONIC SENSORS		63/020,452		
System, Method and Apparatus for Molecular Electronic Applications		63/028,796		
SOLID STATE SEQUENCING DEVICES COMPRISING TWO-DIMENSIONAL LAYER MATERIALS		63/028,914		
METHODS AND SYSTEMS FOR DNA DATA STORAGE		63/039,337		
METHODS AND SYSTEMS FOR DNA DATA STORAGE	<u> </u>	63/042,487		
POLYCYCLIC AROMATIC BRIDGES FOR MOLECULAR ELECTRONIC SENSORS		63/052,428		

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<u>Title</u>	Patent No.	App. No.	Issued	Issue Date
SUPERHYDROPHOBIC AND SUPEROLEOPHOBIC NANOSURFACES		63/063,565		
SUPERHYDROPHOBIC AND SUPEROLEOPHOBIC NANOSURFACES		63/065,493		
SINGLE MOLECULE NANOPARTICLE NANOWIRE FOR MOLECULAR ELECTRONIC SENSING		63/073,625		
SINGLE MOLECULE NANOPARTICLE NANOWIRE FOR MOLECULAR ELECTRONIC SENSING		63/078,894		
BINDING PROBE CIRCUITS FOR MOLECULAR SENSORS		63/080,673		
BINDING PROBE CIRCUITS FOR MOLECULAR SENSORS		63/085,874		
PROCESSIVE ENZYME MOLECULAR ELECTRONIC SENSORS FOR DNA DATA STORAGE		63/123,025		
METHODS, APPARATUS AND SYSTEMS FOR AMPLIFICATION-FREE DNA DATA STORAGE		63/128,300		
METHODS, APPARATUS AND SYSTEMS FOR AMPLIFICATION-FREE DNA DATA STORAGE		63/128,409		
METHOD FOR IDENTIFYING AND QUANTIFYING ORGANIC AND BIOCHEMICAL SUBSTANCES		63/136,747		
CONDUCTIVE SYNTHETIC PEPTIDES FOR MOLECULAR ELECTRONICS		63/136,754		
Molecular Electronics for Automated Wastewater Monitoring for SARS-CoV-2 Virus		63/136,805		
METHOD, APPARATUS AND SYSTEM FOR SINGLE- MOLECULE POLYMERASE BIOSENSOR WITH TRANSITION METAL OR SILICON NANOBRIDGE		63/137,223		
Breathalyzer for SARS-CoV-2 Viral Particles		63/137,237		
SYSTEM, METHOD AND APPARATUS FOR PERSONAL VIROMETER		63/137,249		
NUCLEOTIDES FOR SINGLE MOLECULE SEQUENCING USING MOLECULAR ELECTRONIC SENSOR		63/137,257		
SIMPLIFIED PLATFORM FOR DETECTION OF POLYMERASE OR TAGGED NUCLEOTIDES WITH PRIMER AND TEMPLATE USING MOLECULAR ELECTRONIC SENSOR		63/137,271		
HEXAGONAL FLOW CELL WITH INTEGRATED CMOS SENSOR ARRAY		63/137,277		
System, Apparatus and Method for Molecular Diagnostic		63/137,286		
Molecular Electronic Sensors for Precision Telemedicine Diagnostics		63/137,303		

Title	Patent No.	App. No.	Issued	Issue Date
SURFACE FUNCTIONALIZATION OF ELECTRODES FOR SEQUENCING APPLICATIONS		63/137,328		
CRISPR Enzyme Circuits for Molecular Electronic Sensors		63/137,340		
CO-EXPRESSION OF CONDUCTIVE PEPTIDE AND METAL-BINDING PEPTIDE ALONG WITH DNA POLYMERASE FOR DIRECT ONE-STEP BIOSENSOR FUNCTIONALIZATION		63/137,349		
WIDTH-REDUCED SEMICONDUCTOR NANORIBBON BRIDGES ON-SUBSTRATE OR ON-CHIP FOR MOLECULAR BIOSENSING		63/137,368		
MOLECULAR ELECTRONIC SENSORS FOR DETECTING SARS-COV-2 VIRUS		63/137,414		
MOLECULAR ELECTRONIC SENSORS FOR GENETIC ANALYSIS BY HYBRIDIZATION		63/137,451		
MOLECULAR ELECTRONIC SENSORS FOR GENETIC ANALYSIS BY PRIMER EXTENSION		63/137,469		
METHODS FOR BONDING MOLECULES TO RUTHENIUM SURFACES		63/137,492		
METHODS FOR BONDING MOLECULES TO RUTHENIUM SURFACES		63/137,508		
MOLECULAR ELECTRONIC SENSORS FOR MULTIPLEX GENETIC ANALYSIS USING DNA REPORTER TAGS		63/137,530		
METHOD, SYSTEM AND APPARATUS FOR AUTOMATED BASE-CALLER WITH DEEP LEARNING		63/142,701		
Method and Apparatus for Molecular Electronic Detection		63/166,932		
Molecular Electronics Actuator and Sensor Devices for Single Cell Manipulation and Analysis		63/180,493		
MOLECULAR ELECTRONICS SENSORS ON A SCALABLE CMOS CHIP: A PLATFORM FOR SINGLE- MOLECULE MEASUREMENTS OF BINDING KINETICS AND ENZYME ACTIVITY		63/211,532		
METHOD, SYSTEM AND APPARATUS FOR BASECALLING		63/233,290		
METHOD, SYSTEM AND APPARATUS FOR BASE CALLING		63/254,522		

RECORDED: 11/04/2021