

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM567195

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	Intellectual Property Security Agreement		
CONVEYING PARTY DATA			
Name	Formerly	Execution Date	Entity Type
Misonix Opco, Inc.		09/27/2019	Corporation: NEW YORK
RECEIVING PARTY DATA			
Name:	SWK Funding LLC		
Street Address:	14755 Preston Road, Suite 105		
City:	Dallas		
State/Country:	TEXAS		
Postal Code:	75254		
Entity Type:	Limited Liability Company: DELAWARE		
PROPERTY NUMBERS Total: 20			
Property Type	Number	Word Mark	
Registration Number:	2812718	MISONIX	
Registration Number:	3373435	SONICONE	
Registration Number:	3775329	SONASTAR	
Registration Number:	3583091	OSTEOSCULPT	
Registration Number:	4715865	BONESCALPEL	
Registration Number:	4506761	SONICONE PLUS	
Registration Number:	5281793	BETTER MATTERS	
Registration Number:	5281796	MISONIX BETTER MATTERS	
Registration Number:	5162349	SONICVAC	
Serial Number:	88458797	NEXUS	
Serial Number:	88458830	NEXUS	
Serial Number:	88458987	NEXUS	
Serial Number:	88708790	NEXUS	
Serial Number:	88708890	NEXUS	
Serial Number:	88709046	NEXUS	
Registration Number:	1082387	SONURGY	
Registration Number:	1136653	FIBRA-SONICS	
Registration Number:	1197145	ASTRAMAX	
Registration Number:	1195124	MYSTAIRE	

OP \$515.00 2812718

Property Type	Number	Word Mark
Serial Number:	87517998	MISONIX

CORRESPONDENCE DATA

Fax Number: 6175236850
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: 617-523-2700
Email: susan.dinicola@hklaw.com,tatyana.bloom@hklaw.com
Correspondent Name: Holland & Knight LLP
Address Line 1: 10 St. James Avenue
Address Line 4: Boston, MASSACHUSETTS 02116

NAME OF SUBMITTER:	Susan C. DiNicola
SIGNATURE:	/Susan C. DiNicola/
DATE SIGNED:	03/16/2020

Total Attachments: 18

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of September 27, 2019 (as may be amended, restated, supplemented, or otherwise modified from time to time, this “**Agreement**”), made by MISONIX OPCO, INC., a New York Corporation (the “**Grantor**”), in favor of SWK FUNDING LLC, a Delaware limited liability company, as collateral agent (in such capacity, “**Agent**”) for the Lenders (as defined below) party to the Credit Agreement (as defined below).

W I T N E S S E T H:

WHEREAS, pursuant to that certain Amended and Restated Credit Agreement, dated on or about the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”), by and among SOLSYS MEDICAL, LLC, a Delaware limited liability company (“**Borrower**”), Agent and the financial institutions party thereto from time to time as lenders (each a “**Lender**” and collectively, the “**Lenders**”), Agent and Lenders have agreed to make certain financial accommodations available to Borrower, and Borrower has granted a security interest to Agent, for the benefit of Lenders, in, among other things, all right, title and interest of Borrower in, to and under all of Borrower’s Intellectual Property (as defined below), whether now existing or hereafter arising or acquired as security for the Obligations;

WHEREAS, the Borrower is affiliated with the Grantor, and the Borrower and the Grantor are engaged in interrelated businesses, and the Grantor will derive substantial direct and indirect benefit from extensions of credit under the Credit Agreement; and

WHEREAS, the Grantor is the owner of the entire right, title and interest in, to and under the Intellectual Property listed on Schedule I hereto as applicable.

NOW, THEREFORE, in consideration of the premises and to induce Agent and Lenders to enter into the Credit Agreement, the Grantor hereby agrees with Agent as follows:

1. Defined Terms.

(a) Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided in the Credit Agreement.

(b) Definitions of Certain Terms Used Herein. As used herein, the following terms shall have the following meanings:

“**Copyrights**” shall mean all of the Grantor’s (or if referring to another Person, such other Person’s) now existing or hereafter acquired right, title, and interest in and to: (i) copyrights, rights and interests in copyrights, works protectable by copyright, all applications, registrations and recordings relating to the foregoing as may at any time be filed in the United States Copyright Office or in any similar office or agency of the United States, any State thereof, any political subdivision thereof or in any other country, and all research and development relating to the foregoing; and (ii) all renewals of any of the foregoing.

“**Copyright Licenses**” shall mean all written agreements naming the Grantor as licensor or licensee, granting any right under any Copyright, including the grant of rights to manufacture, distribute, exploit and sell materials derived from any Copyright (other than agreements relating to widely-available software subject to “shrink-wrap” or “click-through” software licenses).

“**Credit Agreement**” shall have the meaning assigned to such term in the recitals of this Agreement.

“**Intellectual Property**” shall mean all present and future: trade secrets, know-how and other proprietary information; Trademarks, internet domain names, service marks, trade dress, trade names, business names, designs, logos, slogans (and all translations, adaptations, derivations and combinations of the foregoing) indicia and other source and/or business identifiers, and the goodwill of the business relating thereto and all registrations or applications for registrations which have heretofore been or may hereafter be issued thereon throughout the world; Copyrights (including Copyrights for computer programs, but excluding commercially available off-the-shelf software and any Intellectual Property rights relating thereto) and all tangible and intangible property embodying the Copyrights, unpatented inventions (whether or not patentable); Patents; industrial design applications and registered industrial designs; license agreements related to any of the foregoing and income therefrom, books, records, writings, computer tapes or disks, flow diagrams, specification sheets, computer software, source codes, object codes, executable code, data, databases and other physical manifestations, embodiments or incorporations of any of the foregoing; the right to sue for all past, present and future infringements of any of the foregoing; all other intellectual property; and all common law and other rights throughout the world in and to all of the foregoing.

“**IP Collateral**” shall have the meaning assigned to such term in Section 2 hereof.

“**Licenses**” shall mean, collectively, the Trademark Licenses, the Patent Licenses, and the Copyright Licenses.

“**Patents**” shall mean all of the Grantor’s (or if referring to another Person, such other Person’s) now existing or hereafter acquired right, title and interest in and to: (i) all patents, patent applications, inventions, invention disclosures and improvements, and all applications, registrations and recordings relating to the foregoing as may at any time be filed in the United States Patent and Trademark Office or in any similar office or agency of the United States, any state thereof, any political subdivision thereof or in any other country, and all research and development relating to the foregoing; and (ii) the reissues, divisions, continuations, renewals, extensions and continuations-in-part of any of the foregoing.

“**Patent Licenses**” shall mean all agreements, whether written or oral, providing for the grant by or to the Grantor of any right to manufacture, develop, market, use or sell any products derived, in whole or in part, from any invention covered by a Patent or any similar agreement related to any other use of any invention covered by a Patent.

“**Trademarks**” shall mean all of the Grantor’s (or if referring to another Person, such other Person’s) now existing or hereafter acquired right, title, and interest in and to: (i) all of the Grantor’s (or if referring to another Person, such other Person’s) trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, logos, other business identifiers, all applications, registrations and recordings relating to the foregoing as may at any time be filed in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof, any political subdivision thereof or in any other country, and all research and development relating to the foregoing; (ii) all renewals thereof; and (iii) all designs and general intangibles of a like nature.

“**Trademark Licenses**” shall mean, collectively, each agreement, whether written or oral, providing for the grant by or to the Grantor of any right to use any Trademark.

(c) **Other Definitional Provisions.**

(i) The words “hereof,” “herein” and “hereunder” and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement, and section and paragraph references are to this Agreement unless otherwise specified.

(ii) The meanings given to terms defined herein shall be equally applicable to both the singular and plural forms of such terms.

2. **Grant of Security Interest.** To secure the payment and performance of the Obligations, the Grantor hereby confirms and acknowledges that it has granted (and, to the extent not previously granted under the Guarantee and Collateral Agreement, does hereby grant) to Agent, for the benefit of Lenders, a lien and security interest in the Grantor’s entire right, title and interest in its Intellectual Property and all proprietary rights relating to or arising from such Intellectual Property, in each case whether now owned or hereafter acquired by the Grantor, and including, without limitation, the Grantor’s right, title and interest in and to the Intellectual Property and proprietary rights identified on Schedule I attached hereto and made a part hereof, and the right to sue for past, present and future infringements and dilutions, and all rights corresponding thereto throughout the world, and the entire goodwill of the Grantor’s business connected with and symbolized by such Intellectual Property and all income, fees, royalties, proceeds and other payments at any time due or payable with respect to any of the foregoing (referred to collectively as the “**IP Collateral**”); provided, that the IP Collateral shall not include the Excluded Property (as defined in the Guarantee and Collateral Agreement).

3. **Protection of Intellectual Property by Grantor.** The Grantor shall, at its sole cost, expense and risk, in connection with the operation of its business, comply with the requirements set forth in Section 5.7 of the Guarantee and Collateral Agreement in respect to the Intellectual Property.

4. **Representations and Warranties.** The Grantor represents and warrants that:

(a) Schedule I is a true, correct and complete list of all registered or applied-for Intellectual Property in which the Grantor purports to have an ownership or license interest.

(b) The Grantor has the legal right and authority to enter into this Agreement and perform its terms.

(c) If the Grantor amends its name, the Grantor shall provide copies of such amendment documentation to Agent and shall re-register the Grantor’s Intellectual Property with the appropriate Governmental Authority and shall execute and deliver such agreements or documentation as Agent shall request to maintain a perfected first priority security interest in such Intellectual Property subject to Permitted Liens.

5. **No Violation of Credit Agreement.** The representations, warranties or covenants contained herein are supplemental to those representations, warranties and covenants contained in the other Loan Documents, and shall not be deemed to modify any such representation, warranty or covenant contained in any other Loan Document.

6. Agreement Applies to Future Intellectual Property.

(a) The provisions of this Agreement shall automatically apply to any such additional property or rights described in Section 2 above, all of which shall be deemed to be and treated as “IP Collateral” within the meaning of this Agreement.

(b) Upon the request of Agent, the Grantor shall execute and deliver, and have recorded, any and all agreements, instruments, documents and papers as Agent may reasonably request to evidence Agent’s security interest in any IP Collateral and the goodwill of the Grantor relating thereto or represented thereby (including, without limitation, filings with the United States Patent and Trademark Office or any similar office), and the Grantor hereby constitutes Agent as its attorney-in-fact to execute and file all such writings for the foregoing purposes, all acts of such attorney being hereby ratified and confirmed; provided, however, that Agent’s taking of such action shall not be a condition to the creation or perfection of the security interest created hereby.

7. Grantor’s Rights to Enforce Intellectual Property. Prior to Agent’s giving of notice to the Grantor following the occurrence and during the continuance of an Event of Default, the Grantor shall have the exclusive right to sue for past, present and future infringement of the IP Collateral, including the right to seek injunctions and/or money damages, in an effort by the Grantor to protect the IP Collateral against encroachment by third parties, provided, however, that:

(a) Any money damages awarded or received by the Grantor on account of such suit (or the threat of such suit) shall constitute IP Collateral.

(b) Any damages recovered in any action pursuant to this Section, net of costs and attorneys’ fees reasonably incurred, shall be applied in accordance with the Credit Agreement and the Guarantee and Collateral Agreement.

(c) Following the occurrence and during the continuance of any Event of Default, Agent, by notice to the Grantor may terminate or limit the Grantor’s rights under this Section 7.

8. Agent’s Actions to Protect Intellectual Property. Pursuant to and in accordance with the Credit Agreement, Agent, acting in its own name or in that of the Grantor, may (but shall not be required to) act in the Grantor’s place and stead and/or in Agent’s own right with respect to the rights and obligations of the Grantor under Section 3, Section 6 and Section 7 hereof.

9. Rights Upon Default. Upon the occurrence and during the continuance of any Event of Default, Agent may exercise all rights and remedies as provided for in the Credit Agreement.

10. Agent as Attorney In Fact.

(a) The Grantor hereby irrevocably constitutes and designates Agent as its attorney-in-fact to:

(i) Following the occurrence and during the continuance of an Event of Default, supplement and amend from time to time Schedule I of this Agreement to include any new or additional Intellectual Property of the Grantor.

(ii) Exercise any of the rights and powers referenced herein in accordance with this Agreement.

- (b) The grant of a power of attorney, being coupled with an interest, shall be irrevocable until the Obligations are paid in full.
- (c) Agent shall not be obligated to do any of the acts or to exercise any of the powers authorized by Section 8, Section 9 or Section 10 of this Agreement, but if Agent elects to do any such act or to exercise any of such powers, it shall not be accountable for more than it actually receives as a result of such exercise of power, and shall not be responsible to the Grantor for any act or omission to act, except to the extent Agent acted with gross negligence or willful misconduct as determined by a court of competent jurisdiction.

11. **Agent's Rights.** Upon an Event of Default and during the continuance thereof, any use by Agent of the IP Collateral, as authorized hereunder in connection with the exercise of Agent's rights and remedies under this Agreement and under the Credit Agreement shall be coextensive with the Grantor's rights thereunder and with respect thereto and without any liability for royalties or other related charges.

12. **No Limitation; Loan Documents.** This Agreement has been executed and delivered by the Grantor for the purpose of recording the security interest granted to Agent with respect to the IP Collateral with the United States Patent and Trademark Office, the United States Copyright Office, as well as with any similar office or department of any other foreign or domestic Governmental Authority. The security interest granted hereby has been granted as a supplement to, and not in limitation of, the security interest granted to Agent, for the benefit of Lender, under the Guarantee and Collateral Agreement and the other Loan Documents. The other Loan Documents (and all rights and remedies of the Grantor, Agent, and Lenders thereunder) shall remain in full force and effect in accordance with their terms.

13. **Termination; Release of Trademark Collateral.** This Agreement and all obligations of the Grantor and Agent hereunder shall terminate on the date upon which the Obligations are performed in full and paid in full. Upon termination of this Agreement, Agent shall, at the expense of the Grantor, take such actions required by the Credit Agreement or the Guarantee and Collateral Agreement or as otherwise reasonably requested by the Grantor to release its security interest in the IP Collateral.

14. **Binding Effect; Benefits.** This Agreement shall be binding upon the Grantor and its successors and assigns, and shall inure to the benefit of Agent, Lenders and their respective successors and assigns.

15. **GOVERNING LAW.** THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO ITS CHOICE OF LAW PROVISIONS THAT WOULD REQUIRE THE APPLICATION OF THE LAWS OF ANY OTHER JURISDICTION.

16. **Copy of Agreement.** The Grantor acknowledges receipt of a signed copy of this Agreement.

[Remainder of page intentionally blank; signature page follows.]

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be executed by its duly authorized representatives as of the date first above written.

GRANTOR:

MISONIX OPCO, INC.,
a New York Corporation

By: _____

Name: Joseph Dwyer

Title: Chief Financial Officer

[Signature Page to Intellectual Property Security Agreement]

#70440724

TRADEMARK
REEL: 006892 FRAME: 0055

AGENT:

SWK FUNDING LLC,

By: SWK Holdings Corporation,
its sole Manager.

By: 
Name: Winston Black
Title: Managing Director

INTELLECTUAL PROPERTY
(Misonix OpCo, Inc.)

A. Issued Patents (United States):

Patent Number	Description of Invention
6,492,762	Ultrasonic transducer, transducer array, and fabrication method
6,787,974	Ultrasound transducer unit and planar ultrasound lens
6,461,314	Intrabody hifu applicator
6,454,730	Thermal film ultrasonic dose indicator
6,799,729	Ultrasonic cleaning & atomized probe
6,379,371	Flat ultrasonic bone cutting blade with liquid cooling
6,443,969	Flat ultrasonic bone cutting blade with liquid cooling
6,736,814	Ultrasonic probe with bipolar cautery
7,776,027	Ultrasonic probe with motion-responsive power shut-off
8,444,629	Ultrasonic probe with motion-responsive power shut-off
9,775,666	Automatic interruption stopping of us waveform
6,648,839	Ultrasonic probe with bipolar or monopolar cautery
7,442,168	Ergonomic handpiece with vibration damping
6,902,536	Ultrasonic probe with width- adjustable cautery applicator
7,223,267	Ultrasonic probe with detachable cautery forceps
7,717,913	Ultrasonic probe with width- adjustable cautery applicator
7,931,611	Ultrasonic debridement probe
8,343,178	Ultrasonic blunt blade method
8,814,870	Hook-shaped ultrasonic cutting blade
8,025,672	Ultrasonic debridement probe with healing mode
9,693,792	Probe w active pain sup.

8,353,912	Ultrasonic discectomy method and tool
8,659,208	Digital waveform generator
9,070,856	Digital waveform generator
8,109,925	Ultrasonic breast fibroid treatment
9,636,187	Surgical shield
8,698,377	Composite ultrasonic imaging and treatment transducer
9,517,053	Composite ultrasonic imaging and treatment transducer
D627,463	Debrider with scoop head
8,690,783	HIFU probe with focusing lens
10,039,566	HIFU probe with focusing lens
8,894,673	Ultrasonic osteotome especially for skull and spine
9,421,028	Ultrasonic osteotome especially for skull and spine
D700,327	Ultrasonic osteotome design 1
D715,434	Ultrasonic osteotome design 2
D715,936	Ultrasonic osteotome design 3
D715,435	Ultrasonic osteotome design 4
D715,436	Ultrasonic osteotome design 5
D680,218	Bone-cutting blade with single serrated edge (design)
D667,117	Bone-cutting blade with two serrated edges (design)
D644,326	Debrider head with 2 scoops
D699,839	Surgical shield
10,076,349	Ultrasonic drill
D685,087	Laparoscopic cannula with distal end offset or window
D741,481	Hook blade with serrations
10,206,704	spine surgery methods
9,211,137	Ultrasonic probe with irrigant outlets in probe shank
9,387,005	Flat blade with large shallow recess(es) for coolant
9,788,852	Large shallow recesses in flats of blade serving as reservoirs
9,320,528	Ultrasonic blade with micro-pores for coolant conduction
10,219,822	Ultrasonic blade with micro-pores for coolant conduction
10,182,837	Reinforced sheath connector for use with bent probes
9,622,766	Probe with head traversing window in deflectable sheath

9,949,751	Ultrasonic debridement probe head with rake-like teeth
10,092,741	Monitoring nerves, blood vessels during ultrasonic surgery
9,872,697	High Efficiency Wound Debridement Probe
	Biofilm prevention & multiple spaced section ports
10,092,308	Biofilm prevention/reduction
10,117,666	ULTRASONIC INSTRUMENT AND METHOD USING SAME
D408,529	CANNULA FOR ULTRASONIC PROBE
10,299,809	METHOD FOR REDUCING BIOFILM FORMATION
8,430,897	ULTRASONIC WOUND DEBRIDER PROBE AND METHOD OF USE
9,119,658	HOOK SHAPED ULTRASONIC CUTTING BLADE
5,306,261	Catheter with collapsible wire guide
5,371,429	Electromechanical transducer device
5,397,293	Ultrasonic device with sheath and transverse motion damping
5,419,761	Liposuction apparatus and associated method
5,443,456	Catheter with collapsible wire guide
5,465,468	Method of making an electromechanical transducer device
5,527,273	Ultrasonic lipectomy probe and method for manufacture
5,769,211	Medical handpiece with autoclavable switch
6,869,439	Ultrasonic dissector

B. Patent Applications (United States):

Patent Number	Description of Invention
16/032,813	Imaging elements on outer probe casing; therapy transducer inside + movable
16/116,255	Ultrasonic drill
16/268,198	spine surgery methods
13/930,148	Eccentric-head ultrasonic probe with vibration damping
15/423,234	Reinforced sheath connector for use with bent probes
15/936,785	Ultrasonic probe with end-of-life indicator
14/264,705	Light source on handpiece: induction power, removable
16/126,649	Monitoring nerves, blood vessels during ultrasonic surgery
14/795,667	Probe with meltable plastic part as end-of-life indicator
15/873,607	Debrider w/Cup-shaped Head w/Serrated Rim
14/938,280	Bone stimulation to promote healing
16/269,229	Biofilm prevention/reduction

16/126,737	Biofilm prevention/reduction
14/939,668	Minimally invasive ultrasonic surgery for spine and orthopedic procedures
15/147,323	Probe grounded to reduce leakage
15/221,271	Removal of biofilm from prostheses & tools
15/664,663	Reduction in electrical interference
15/450,818	METHOD OF REDUCING OR REMOVING BIOFILM
16/243,816	Robotic Surgery, Constant Speed, Voltage Feed
62/660,625	Drill w/applied force interruption, liquid thru tip
16/169,569	Fluid Handling Assembly & Tube Set
13/307,691	ULTRASONIC SURGICAL INSTRUMENT, ASSOCIATED SURGICAL METHOD AND RELATED MANUFACTURING METHOD
16/392,244	ULTRASONIC SURGICAL INSTRUMENT, ASSOCIATED SURGICAL METHOD AND RELATED MANUFACTURING METHOD
11/371,708	Method for the treatment of peyronie's disease
13/838,247	Ultrasonic Treatment Method and Apparatus with Active Pain Suppression
13/411,839	PROTECTIVE SLEEVE AND ASSOCIATED SURGICAL METHOD
14/038,394	ULTRASONIC SURGICAL INSTRUMENT WITH DUAL END EFFECTOR
14/041,605	ULTRASONIC SURGICAL APPARATUS WITH POWER REDUCTION
11/158,883	Fluid containment apparatus for surgery and method of use
14/109,512	PROTECTIVE SLEEVE AND ASSOCIATED SURGICAL METHOD
14/109,417	PROTECTIVE SLEEVE AND ASSOCIATED SURGICAL METHOD
14/211,656	SHEATH COUPLING MEMBER AND ASSOCIATED INSTRUMENT ASSEMBLY
06/731,772	ULTRASONIC LITHOTRIPTOR PROBE
06/830,752	VENTED ULTRASONIC TRANSDUCER FOR SURGICAL HANDPIECE
07/632,679	ULTRASONIC DEVICE HAVING WIRE SHEATH
07/737,424	ULTRASONIC NEEDLE WITH SLEEVE THAT INCLUDES A BAFFLE
07/737,425	APPARATUS FOR ELIMINATING AIR BUBBLES IN AN ULTRASONIC SURGICAL
08/319,677	NEEDLE FOR ULTRASONIC SURGICAL PROBE
08/319,727	NEEDLE FOR ULTRASONIC SURGICAL PROBE
08/371,145	BUBBLE CONTROL DEVICE FOR AN ULTRASONIC SURGICAL PROBE
09/109,617	ULTRASONIC PROBE WITH ISOLATED AND TEFLON COATED OUTER CANNULA
09/632,060	ELECTRICAL CONNECTOR
10/137,470	Device and method for ultrasonic tissue excision with tissue selectivity
11/511,870	Ultrasonic debrider probe and method of use
12/125,622	Ultrasonic Dissector
29/081,180	CANNULA FOR ULTRASONIC PROBE

29/092,122	HANDPIECE HOUSING FOR ULTRASONIC THERAPY

C. Issued Patents (Non-United States):

Country	Patent Number	Description of Invention
CAN	2,362,241	Ultrasonic probe with low-friction bushings
EUR	1,161,187	Ultrasonic probe with low-friction bushings
JAPAN	4,699,667	Flat ultrasonic bone cutting blade with liquid cooling
CAN	2,389,551	Flat ultrasonic bone cutting blade with cooling
EUR	1,311,197	Flat ultrasonic bone cutting blade with cooling
JAPAN	4,429,020	Ultrasonic probe with bipolar or monopolar cautery
CAN	2475771	Ultrasonic probe with bipolar or monopolar cautery
EUR	1478294	Ultrasonic probe with bipolar or monopolar cautery
JAPAN	4,429,160	Ergonomic handpiece with vibration damping
CAN	2,480,773	Ergonomic handpiece with vibration damping
EUR	1492592	Ergonomic handpiece with vibration damping
CAN	2,492,075	Ultrasonic probe with motion-responsive power shut-off
EUR	1538999	Ultrasonic probe with motion-responsive power shut-off
CAN	2,602,485	Ultrasonic debridement probe
CAN	2,655,068	Hook-shaped ultrasonic cutting blade
EUR	2.032.043	Hook-shaped ultrasonic cutting blade
CAN	2,661,917	Ultrasonic debridement probe with healing mode
EUR	2059179	Ultrasonic debridement probe with healing mode
EUR	2.234.556	Ultrasonic debridement probe with scalloped head
CAN	2,711,770	Ultrasonic debridement probe with scalloped head
CAN	136404	Debrider with scoop head
EUR	001736091-0001	Debrider with scoop head
JAPAN	1413340	Debrider with scoop head
JAPAN	6129855	Ultrasonic osteotome especially for skull and spine

CHINA	201280055896.2	Ultrasonic osteotome especially for skull and spine
CAN	145187	Osteotome blade shapes
EUR	2021808-001-005	Osteotome blade shapes
CAN	141672	Bone-cutting blades with 1 or 2 serrated edges (design)
EUR	1899238	Bone-cutting blade with 1 or 2 serrated edges (design)
JAPAN	1445133	Bone-cutting blade with single serrated edge (design)
JAPAN	1446424	Bone-cutting blade with two serrated edges (design)
CAN	141360	Debrider head with 2 scoops
EUR	1903303	Debrider head with 2 scoops
JAPAN	1437930	Debrider head with 2 scoops
CHINA	ZL2014800251826	ULTRASONIC SURGICAL DRILL & ASSOCIATED SURGICAL METHOD
CAN	147210	Laparoscopic cannula with distal end offset or window
EUR	2096008	Laparoscopic cannula with distal end offset or window
JAPAN	1471069	Laparoscopic cannula with distal end offset or window
CAN	152513	Serrated hook blade
EUROPE	2293001-0001	Serrated hook blade
JAPAN	6450380	IRRIGATION OUTLET(S) IN SHANK
JAPAN		LARGE SHALLOW RECESSES ON SIDE OF BLADE
CHINA	ZL2014800414518	MICROPOROUS BLADE
HONG KONG	HK1223007	MICROPOROUS BLADE
JAPAN	6362700	SEMI RIGID SHEATH FLEXING TO INCREASE DEBRIDING DEPTH
CHINA	ZL201480058010.9	Probe with head traversing window in deflectable sheath

D. Patent Applications (Non-United States):

Country	Application Number	Description of Invention
EUR	15173566.9	Hook-shaped ultrasonic cutting blade
CAN	2,799,717	Composite ultrasonic imaging and treatment transducer

CAN	2,799,760	HIFU with lens; imaging elements on outer probe casing; therapy transducer inside + movable; Fresnel lens
CAN	2,851,267	Ultrasonic osteotome especially for skull and spine
EUR	12837901.3.0	Ultrasonic osteotome especially for skull and spine
CAN	2,820,572	Time-reversal manufacturing of ultrasonic probes
EUR	11846265.4	Time-reversal manufacturing of ultrasonic probes
CAN	2,906,512	Ultrasonic drill
EUR	14767324.8	Ultrasonic drill
JAPAN	2016-501240	Ultrasonic drill
CAN	2,916,967	Eccentric-head ultrasonic probe with vibration damping
CHINA	201480043638.1	Eccentric-head ultrasonic probe with vibration damping
HONG KONG VIA CHINA	16111843.8	Eccentric-head ultrasonic probe with vibration damping
EUR	14818585.3	Eccentric-head ultrasonic probe with vibration damping
JAPAN	2016-523829	Eccentric-head ultrasonic probe with vibration damping
CAN	2,916,838	Ultrasonic probe with irrigant outlets in probe shank
CHINA	201480042110.2	Ultrasonic probe with irrigant outlets in probe shank
HONG KONG VIA CHINA	16111189	Ultrasonic probe with irrigant outlets in probe shank
EUR	14816983.2	Ultrasonic probe with irrigant outlets in probe shank
CAN	2,916,914	Flat blade with large shallow recess(es) for coolant
CHINA	201480043643.2	Flat blade with large shallow recess(es) for coolant
HONG KONG VIA CHINA	16111842.9	Flat blade with large shallow recess(es) for coolant
EUR	14817142.4	Flat blade with large shallow recess(es) for coolant
CAN	2,917,015	Ultrasonic blade with micro-pores for coolant conduction

JAPAN	2016-523885	Ultrasonic blade with micro-pores for coolant conduction
CAN	2,921,617	Probe with head traversing window in deflectable sheath
EUR	14838072.8	Probe with head traversing window in deflectable sheath
CAN	2,925,451	Ultrasonic probe with end-of-life indicator
CHINA	201480060740.2	Ultrasonic probe with end-of-life indicator
EUR	14847151.9	Ultrasonic probe with end-of-life indicator
JAPAN	2016-517348	Ultrasonic probe with end-of-life indicator
CAN	2,938,109	Ultrasonic debridement probe head with rake-like teeth
CHINA	201580017003.9	Ultrasonic debridement probe head with rake-like teeth
HONG KONG	17105187.3	Ultrasonic debridement probe head with rake-like teeth
EUR	15746296.1	Ultrasonic debridement probe head with rake-like teeth
JAPAN	2016-550183	Light source on handpiece: induction power, removable
CAN	2,947,279	Light source on handpiece: induction power, removable
China	201580031790.2	Light source on handpiece: induction power, removable
HONG KONG VIA CHINA	17110662.7	Light source on handpiece: induction power, removable
EUR	15785631.1	Monitoring nerves, blood vessels during ultrasonic surgery
JAPAN	2016-565223	Monitoring nerves, blood vessels during ultrasonic surgery
CAN	2,988,741	Ultrasonic Surgery w/Nerve, Blood Monitoring
CHINA	2016800451554	Ultrasonic Surgery w/Nerve, Blood Monitoring
HONG KONG VIA CHINA	18112126	Ultrasonic Surgery w/Nerve, Blood Monitoring
JAPAN	2017-564047	Ultrasonic Surgery w/Nerve, Blood Monitoring

EUROPE	16808086.9	Probe with meltable plastic part as end-of-life indicator
CAN	2,992,055	Probe w/Meltable Plastic Component
CHINA	2016800474486	Probe w/Meltable Plastic Component
HONG KONG VIA CHINA	18109518	Probe w/Meltable Plastic Component
JAPAN	2018-500727	Probe w/Meltable Plastic Component
EUR	16821973.1	Debrider w/Cup-shaped Head w/Serrated Rim
CAN	2,992,121	Debrider w/Cup-shaped Head w/Serrated Rim
CHINA	201680041420.1	Debrider w/Cup-shaped Head w/Serrated Rim
HONG KONG VIA CHINA	18109516.6	Debrider w/Cup-shaped Head w/Serrated Rim
JAPAN	2018-501284	Debrider w/Cup-shaped Head w/Serrated Rim
EUR	16824918.3	VacCurette Probe
PCT	US17/029124	Probe Grounded to Reduce Leakage
CAN	3,023,055	Probe Grounded to Reduce Leakage
CHINA	2017800368674	Probe Grounded to Reduce Leakage
JAPAN	2018-558162	Probe Grounded to Reduce Leakage
EUR	17793008.8	Probe Grounded to Reduce Leakage
PCT	US17/041953	Removal of Biofilm from Prostheses & Tools
CAN	3,032,078	Removal of Biofilm from Prostheses & Tools
CHINA	2017800462089	Removal of Biofilm from Prostheses & Tools
JAPAN	2019-504026	Removal of Biofilm from Prostheses & Tools
EUR	17834961.9	Removal of Biofilm from Prostheses & Tools
PCT	US17/044676	Reduction in electrical interference
CAN	3,032,805	Reduction in electrical interference
CHINA	2017800479018	Reduction in electrical interference

JAPAN	2019-505395	Reduction in electrical interference
EUROPE	17837470.8	Reduction in electrical interference
PCT	US18/020877	METHOD OF REDUCING OR REMOVING BIOFILM
PCT	US19/013010	Robotic Surgery, Constant Speed, Voltage Feed
PCT	US18/057070	FLUID HANDLING ASSEMBLY AND TUBE SET

E. Trademarks:

Country	Mark	Application No.	Registration No.	Application Date	Issue Date
US	MISONIX	76500292	2,812,718	3/25/2003	2/10/2004
EUROPE	MISONIX	12143533	4,479,036	6/8/2005	4/5/2015
JAPAN	MISONIX	2005-67630	5,069,488	7/22/2005	8/10/2007
US	SonicOne	76647416	3,373,435	9/26/2005	2/22/2008
US	SONASTAR	77410974	3,775,329	3/3/2008	4/13/2010
US	OSTEOSCULPT	77529601	3,583,091	7/23/2008	3/3/2009
US	BONESCALPEL	86374807	4,715,865	8/22/14	4/7/2015
US	SONICONE PLUS	85778417	4,506,761	11/13/12	4/1/2014
US	BETTER MATTERS	86/756,216	5,281,793	9/14/15	9/5/2017
US	MISONIX BETTER MATTERS	86/757,542	5,281,796	9/15/15	9/5/2017
US	SONICVAC	86/849,744	5,162,349	12/15/15	3/14/2017
US	nexUS (PENDING)	87/518,119		7/6/2017	
US	MISONIX	87/517,998	5,931,329	7/6/2017	1/30/2018
US	NEXUS	88/458,797*	None	6/4/2019	None
US	NEXUS	88/458,830*	None	6/4/2019	None
US	NEXUS	88/458,987*	None	6/4/2019	None
US	(Design Only)	88/708,790	None	11/27/2019	None
US	(Design Only)	88/708,890	None	11/27/2019	None
US	NEXUS	88/709,046	None	11/27/2019	None
US	SONURGY	73/128,805	1,082,387	5/27/1980	6/8/1982
US	FIBRA-SONICS	73/205,280	1,136,653	5/27/1980	6/8/1982
US	ASTRAMAX	73/263,560	1,197,145	5/27/1980	6/8/1982
US	MYSTAIRE	73/325,805	1,195,124	5/27/1980	6/8/1982

* Excluded Property under clause (ii) of the definition thereof in the Amended and Restated Guarantee and Collateral Agreement.

F. Copyrights:

None

G. Domain Names:

Misonix.com