Products and the importation requirement is satisfied. *See, e.g.*, *Wiper Devices*, Inv. No. 337-TA-881, Initial Determination at 5 (*in rem* jurisdiction exists when importation requirement is satisfied).

B. Serendia Has Standing in the Commission

1. Legal Standard

Standing to initiate a Section 337 investigation requires that at least one complainant be the owner or exclusive licensee of the intellectual property, or here an asserted patent. 19 C.F.R. § 210.12(a)(7). If a complainant is not the original owner of a patent, the complainant must establish that it has all substantial rights in the patent. *Lone Star Silicon Innovation LLC v. Nanya Tech Corp*., 925 F.3d 1225, 1229 (Fed. Cir. 2019). Whether the provisions of an agreement that confers patent rights transfers all 'substantial rights is a legal question under the law of the U.S. Court of Appeals for the Federal Circuit. *Immunex Corp. v. Sandoz, Inc*., 964 F.3d 1049, 1060 (Fed. Cir. 2020). As the Complainant, Serendia has the burden to prove it has standing. *Certain Communications or Computing Devices*, Inv. No. 337-TA-925, Order No. 34, 2015 WL 41224302 at *2 (May 21, 2015). Serendia has so proven it has standing. Undisputed, certified assignment documents that reflect Serendia's ownership in the Asserted Patents were filed with the Complaint. (*See* CX-0766 ('836 patent), CX-0767 ('379 patent), CX-0768 ('444 patent), CX- 0769 ('536 patent), CX-0770 ('774 patent), and CX-0771 ('812 patent).). Those documents also prove that Serendia has "substantial rights" in the Asserted Patents contrary to Respondents' arguments. *Speedplay, Inc. v. Bebop, Inc.*, 211 F.3d 1245, 1250 (Fed. Cir. 2000). (*See* RPBr. at 3-4; *see also accord* SPBr. at 1, 12-14; SBr. at 1, 12-14.l *see also* Respondents' Motion to Terminate for Lack of Standing and Complainant's Opposition to Termination

Motion.).[15] The certified patent assignments also demonstrate, as Serendia outlines, the chain of

---

[15] Respondents filed Respondents' Motion to Terminate ("Motion to Terminate") Investigation Pursuant to Commission Rule 210.21(a)(1) for Lack of Standing Because Serendia, LLC Lacks All Substantial Rights in the Asserted Patents, an Adverse Inference Pursuant to Commission Rule 210.33, or, in the Alternative, to Amend the Procedural Schedule and Permit Additional Fact Discovery regarding Standing and Domestic Industry, Motion Docket No. 1356-017 (Sept. 15, 2023). Respondents contended that Serendia is only the "nominal" Complainant. Respondents claimed that Serendia concealed SynKloud Technology, LLC's ("SynKloud") role, and that they did not become aware of SynKloud's role as a patent monetization entity that [redacted] until after the close of fact discovery. (Motion to Terminate at 1.). Based upon their assertions that Serendia did not disclose information to them about SynKloud and [redacted], Respondents asked that: (1) the Investigation be terminated because [redacted] and has substantial rights in the Asserted Patents and the litigation and its outcome (*id.* at 2); and (2) Serendia be sanctioned for violating discovery rules by "actively concealing" [redacted] (*id.* at 25) through an adverse inference that SynKloud has substantial rights in the Asserted Patents (*id*. at 2); and alternatively, (3) that the Procedural Schedule and Target Date be changed to allow Respondents additional time for discovery (*id*.). Specifically, Respondents allege that in addition to concealing SynKloud's role, Serendia failed to answer discovery questions, failed to produce documents such as the Rescission Agreement, and provided incomplete or inaccurate deposition testimony, such as Dr. Na's, in which Dr. Na claimed he did not know [redacted]. (*Id.* at 6.). Respondents submitted some 20 exhibits to support their Motion to Terminate.

On September 27, 2023, Serendia responded by filing Complainant's Opposition to Respondents' Motion to Terminate the Investigation under Commission Rule 210.21(a)(1) for Lack of Standing, an Adverse Inference Pursuant to Commission Rule 210.33, or, in the Alternative, to Amend the Procedural Schedule and Permit Additional Fact Discovery regarding Standing and Domestic Industry ("Opposition to Motion to Terminate"). (Doc. ID No. 804953 (Sept. 27, 2023).). In its Opposition to Motion to Terminate, Serendia addressed and refuted each of Respondents claims about discovery abuse by detailing answers to interrogatories and discovery documents it produced that provide information about SynKloud. (Opp'n to Motion to Terminate at 10 (interrogatory responses); *id.* at 7, 10-11 (documents).). Serendia also noted that Respondents asked every deposition witness from Serendia, ViOL Company, Ltd. ("ViOL"), and Benev about SynKloud. Serendia provided detailed pin cites where that testimony can be found. (*Id.* at 9.). In addition, Serendia noted that Respondents' claims that Serendia withheld information about SynKloud is also false because certain of the Respondents knew the various entities and their involvements with Serendia since 2017 because of several Federal court litigations in which certain of the Respondents were involved. (*Id.* at 13-14.). Additionally, SynKloud was removed as a party from certain Federal litigation [redacted]. (*Id*. at 14.). Based upon the evidence Serendia produced in some 23 exhibits and a timeline, Serendia contended that it did not commit discovery abuse, and Respondents are not entitled to the relief they seek. (*Id.*). Serendia's Timeline is particularly helpful in describing the various agreements at issue. (Appx. A, Opp'n to Motion to Terminate.).

The Parties were given time to argue standing on December 12, 2023, after the formal Hearing testimony had concluded. (Standing Tr. at 1601-1637.).

During oral argument on December 12, 2023, Respondents reasserted their request to take additional

discovery as they had requested in their Motion to Terminate. (*Id.* at 1616:12-14.). Respondents' request was aimed at taking discovery . (CX-3032C . As noted above, Respondents argued that the vested standing in SynKloud, who, Respondents argued, should have been a party to this Investigation. (RPBr. at 3-4; RBr. at 4-6.). In part, Respondents argued that because (RX-0132C, (CX-3031C, is "illusory, and should not be considered[.]" (*See* RPBr. at 3; *see al*so RBr. at 4-5.). Respondents also suggested that raised unanswered questions about SynKloud's relevance to this Investigation that could only be answered by additional discovery. (Standing Tr. at 1605:16-1607:3.).

This decision formally denies Respondents' Motion to Terminate and the relief Respondents requested. It addresses specifically the procedural and substantive reasons why Respondents' request for additional discovery time after the discovery deadline was not granted. First, from a timeline that Serendia submitted and argued, Respondents were aware of SynKloud's existence since before this Investigation was initiated. (*See* Opp'n to Motion to Terminate at 2-6.). Serendia provided a timeline and listed all dates and proceedings dating back to 2020, and all of documents that Serendia provided to Respondents before this Investigation was initiated, and then during discovery, by which Respondents were made aware of various agreements that Serendia had with ViOL, Benev, and SynKloud. All documents reflect dates they became effective or were rescinded. (*Id.*). One of the proceedings that Serendia describes was a parallel Federal District Court litigation from which SynKloud was dropped as a party without opposition. The Private Parties were the same as in this Investigation. (Standing Tr. at 1610: 19-25; Exs. H-6 to Opp'n Motion to Terminate.). Or to state in another way, Respondents knew about SynKloud's existence since at least 2020, and willingly excused that entity from a Federal litigation.

Additionally, in this Investigation, Respondents did not request or serve a deposition subpoena to obtain additional information from SynKloud. (*See* Standing Tr. at 1618:10-14.). Second, Respondents did not request or serve a trial subpoena to obtain SynKloud's testimony for the Hearing in this Investigation. Third, when Dr. Na testified during the Hearing, Respondents did not ask him about the SynKloud relationship with Dr. Na or Benev. (*Id.* at 1618:14-18.). Respondents did not ask Benev's corporate representative (or any other witness, including Dr. Na) during the Hearing about Benev's relationship with SynKloud. (*Id.* at 1618:10-18.).

In sum, Respondents had several opportunities during the normal course of the Investigation to obtain additional information about the Serendia/Benev/ViOL/SynKloud relationship. Respondents chose not to avail themselves of the various opportunities they had either during discovery or during the Hearing, and for at least three (3) years before. Additionally, and perhaps finally, Serendia's counsel represented that Serendia produced the , and (*Id.* at 1617:8-10.). Perhaps most significantly Serendia's counsel "confirmed that Serendia searched for Documents between SynKloud and Dr. Na, Serendia, ViOL, and Benev related to this investigation, related to (*Id.* at 1617:12-16.). Serendia noted and argued, with Staff, *see infra*, that were not relevant to Serendia's domestic industry. (*Id.* at 1616:17-22; *see also* SPBr. at 30-31; SBr. at 13-14.). In other words, Respondents had the opportunity to access all necessary information about SynKloud through discovery in this Investigation and in

title in the Asserted Patents as follows: CX-0766 (assignment of '836 Patent from Dr. Na to ViOL and then to Serendia); CX-0769 (assignment of '536 Patent from Dr. Na to ViOL and then to Serendia); CX-0770 (assignment of application for '774 Patent from Dr. Na to ViOL and then to Serendia); CX-0771 (confirmatory assignment of '812 Patent from Dr. Na to Serendia). (CBr. at 8.). Serendia also noted that the referenced assignments "create[] a presumption of validity as to the assignment and places the burden to rebut such a showing on one challenging the assignment." (*Id*. (citing *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1328 (Fed. Cir. 2010) (affirming that "the Commission's determination that appellants have not sustained their burden is supported by substantial evidence")).). In this instance, Respondents have not rebutted the presumption successfully.

2. The Weight of the Evidence Supports a Finding that Serendia Has Standing Without Including SynKloud as a Party

Since the outset of this Investigation, Respondents have contended that Serendia lacked standing to bring this Investigation. According to Respondents, standing can only be satisfied by the participation of another entity, SynKloud Technologies, LLC ("SynKloud"). (*See* RPBr. at 3.).

Additionally, in support of the standing finding and conclusion, evidence reflects that Benev Co. Inc. ("Benev"): (i) has been impliedly licensed to the Asserted Patents through its exclusive distribution of the Sylfirm X beginning in 2021, pursuant to the terms of the Sole Distribution Agreement dated September 3, 2020 (CX-0763C); and (ii) has been [redacted] (CX-0765C [redacted] *see*

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previous litigations. The weight of the evidence does not support Respondents' arguments. Respondents' arguments that Serendia lacks standing have no merit.

also CBr. at 137-138; *accord* SRBr. at 23).[16] Respondents have argued that the Benev License cannot be legitimate because by virtue of the [redacted], Serendia and SynKloud would have been restored to their pre-contract status. (*See* RBr. at 4-5.). The only legal authority that Respondents have cited is a 1996 Fifth Circuit decision that interprets Texas law. (*Id.* at 4.). Staff also has noted that the [redacted] either expressly or impliedly. The [redacted]. (SBr. at 13-14; SRBr. at 23-24.).

Staff and Serendia disagreed with Respondents' interpretations of the various agreements at issue and their arguments, as does this decision.

Nonetheless, Respondents have argued (while Serendia has mostly disputed) that Serendia transferred "all substantial rights" in the Asserted Patents to SynKloud, a patent monetization entity, through [redacted]. (*See* RRBr. at 2-3; RBr. at 4; CX-3028C.). That is an argument to which Serendia agreed. Serendia acknowledged that "SynKloud had 'the exclusive right to license and/or sublicense' the Asserted Patents" [redacted]. (*See* CPBr. at 7-8; Opp'n to Motion to Terminate.).

However, on that date, it is apparent from the language of the [redacted], supported by Dr. Na's unrebutted testimony, that any rights SynKloud had in the Asserted Patents

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[16] It should be noted that Respondents Jeisys Medical Inc.'s and Cynosure, LLC's Withdrawal of License Defense, Doc. ID No. 827352 (July 26, 2024) ("License Defense Withdrawal") does not pertain to the licenses mentioned in this Section on standing. The License Defense Withdrawal notes that a Korean Court has interpreted a 2012 agreement between the Jeisys Respondents and Dr. Na as not giving the Jeisys Respondents a license to the Family Two Patents. (*See* License Defense Withdrawal at 1.).

themselves were [redacted], before this Investigation was filed. (*See* CX-3031C at 1; Tr. (Na) at 90:15- 91:9; Opp'n to Motion to Terminate at 1-3; *see also, e.g.*, Standing Tr. at 1610:12-22.).

Respondents' additional arguments, and the supporting (or negating) documents and arguments that refute their arguments, are explained below.[17] Moreover, well before this Investigation, Respondents were aware that SynKloud had been removed from various Federal court litigations because it lacked standing. (Opp'n to Motion to Terminate at 13; *see also* n.15, *supra*.).

First, as noted above, according to Respondents, SynKloud is the proper party in interest. That SynKloud is a proper party in interest is refuted directly by the [redacted] (CX-3031C; RX-2576C) [18] [redacted]

[17] The various agreements that are mentioned in this Section and in other sections of this ID, and that were considered/reviewed, are as follows: (1) [redacted] (CX-2862C.0001); (2) [redacted] (CX-0763C) [redacted]; (3) [redacted] (CX-0762C) (certified assignments filed in this Investigation); (4) [redacted] CX-3028C) [redacted] (CX-0765C.0001, 0003-4) [redacted]; and (6) [redacted] (CX-3031C). The documents are described in detail in Respondents' Motion to Terminate at 3-8. This decision does not agree with Respondents' interpretations, as explained in this Section.

[18] Respondents noted in their Pre-Hearing Brief that the [redacted] was produced after the close of fact discovery, yet they relied upon it and made several arguments substantively why it should not be considered. (RPBr. at 3.). Respondents did not move for the [redacted] exclusion either at the pre-hearing stage or in their Post-Hearing Brief. Therefore, they have waived the right of appeal to argue that the [redacted] was not in evidence and could not be relied upon, nor should it be allowed in evidence, pursuant to Ground Rules 7.2 and 10.1.

[redacted]. Specifically, the [redacted] (CX-3031C.). As Serendia and Staff have argued correctly, any substantial rights SynKloud may have had in the Asserted Patents [redacted] reverted to Serendia. (CBr. at 8-9; SBr. at 13-14.). Nonetheless, Respondents have criticized the [redacted] as having no meaning (or as "illusory" and/or as rescinding the Benev Exclusive License). (*See* RPBr. at 3-4; RRBr. at 74-75.).

Respondents also argued that because SynKloud is a patent monetization or "non-practicing entity," which [redacted], it has standing. However, SynKloud's [redacted] has no bearing on standing. (*See* Opp'n to Motion to Terminate at 1, 21, 28-29; 30 (citing *See Fleet Connect Solutions LLC*, 2022 WL 2805132, *2–*3 ("The Court finds that Defendant has failed to show that litigation funding agreements, if any, are relevant to the claims or defenses in this action. Rather, in demanding such documents under the guise of determining ownership of the Asserted Patents, Defendant attempts to engage in a fishing expedition that serves only to shift the burden of establishing proof of standing to Plaintiff prior to any good-faith challenge to standing being put forward by Defendant.")).).

Second, Serendia noted that SynKloud was removed as a co-plaintiff because it lacked standing from Federal litigations through motions and orders of the Federal courts in cases in which EndyMed and Cynosure were parties, along with other Respondents who have been terminated from this Investigation. (CPBr. at 7; Opp'n to Motion to Terminate at 6-7; *see also* Exs. H-J to Opp'n to Motion to Terminate.).

Third, Respondents argued in their Joint Pre-Hearing Brief that Benev and Serendia engaged "in a course of conduct" which "indicates that [redacted] remains effective. For example, in [redacted] (RPBr. at 4 (citing RX-2577C).). However, Respondents did not develop this argument or adduce evidence during the Hearing that would support this argument. Thus, Respondents have waived, rescinded, or surrendered any argument they may try to make about this issue on appeal pursuant to Ground Rule 10.1.

Fourth, [redacted] (*See* Ex. D to Opp'n to Motion to Terminate, [redacted].). [redacted] (Compl. Ex. 66, [redacted].). Serendia also [redacted] The [redacted]. (*See* Opp'n to Motion to Terminate at 13-14; *accord*, SBr. at 13.). As noted in the [redacted] chain of title, this document clearly does not negate Serendia's right to standing.

Fifth, according to Respondents, a [redacted] (RPBr. at 3-4; RBr. at 4; RRBr. at 2-3; Motion to Terminate at 1, 7, 10, 21, 23, 30). In that same vein, Respondents also argued that ViOL has rights in the Asserted Patents because

it had a [redacted].

(RBr. at 4-5). However, the [redacted], which is in evidence contrary to Respondents' argument, [redacted].

(*See* CX-3032C [redacted]; *see also* RRBr. at 4.). As both Serendia and Staff noted, with legal support, the fact that [redacted] has no significance legally and does not confer standing. (CPBr. at 8-9; SBr. at 7-8.). [redacted] is not a substantial right in any Asserted Patent and does not confer standing. (CBr. at 8 (citing *Certain Audio Processing Hardware*, Inv. No. 337-TA-1026, Comm'n Op. at 13-25 (Apr. 2018) ("*Audio Processing*") ("[R]eceive[ing] a portion of the proceeds from litigating or licensing the patent" does not convey standing); *see also* CX-0762C [redacted]; *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014).).

Sixth, Respondents argued early in the Investigation that "Dr. Na is the alter-ego of Serendia" and controls all enforcement decisions. (*See* CX-0148C (Rog. Resp.). However, Respondents did not adduce evidence during the Hearing on this claim. Consequently, Respondents waived, abandoned, and surrendered any right to raise this argument on appeal pursuant to Ground Rule 10.1. Without more and given that the only legal authority that Respondents relied upon was a distinguishable case that interpreted Texas law, the evidence does not support Respondents' assertion. *Samsung Elecs. Am., Inc.,* 2019 WL 1399927, at *3 (E.D. Tex. Mar. 28, 2019).

Seventh, Respondents argued both in its Motion to Terminate and its Pre-Hearing Brief that Serendia has not retained all substantial rights in the Asserted Patents because of a [redacted]

(CX-3028C)) [redacted] (CX-3031C). (RPBr. at 3-4; Motion to Terminate at 1-2.). As part of that argument, discussed above, Respondents also argued that [redacted] operates an encumbrance on Serendia's rights in the Asserted Patents. (Motion to Terminate at 18; RPBr. at 4.). Whether SynKloud's [redacted] are described as an "encumbrance" on Serendia's patent rights, or as an [redacted] in the Asserted Patents, as noted above, Serendia's standing is not undermined. (*See* SBr. at 14 (citing *e.g., Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343, 1351 (Fed. Cir. 2016) (holding that a financial interest in litigation and licensing is not a substantial right) (collecting cases); *WAG Acquisition, LLC v. Multi Media, LLC*, 2019 WL 3804135, at *2 (D.N.J. Aug. 13, 2019) (denying motion to dismiss for lack of standing and rejecting defendants' argument that a litigation funder possessed substantial rights due to plaintiff's inability to pursue litigation without funding).).

Serendia has standing. It has the exclusive rights and ownership in the Asserted Patents. *Active Matrix Organic Light-Emitting Diode Display Panels and Modules for Mobile Devices, and Components Thereof* ("*Display Panels"*), Inv. No. 337-TA-1351, Comm'n Op. at 11 (May 15, 2024).

IV. THE ASSERTED PATENTS

The Asserted Patents share the same named inventor, Dr. Jongju Na, and are members of two (2) patent families. (*See* Compl. at ¶ 1.1, Doc. ID No. 791505 (Mar. 1, 2023).).

The '836, '379, and '444 patents are members of one patent family and share a common specification ("Na Effect Patents" or "Family One Patents") (*see id.*). The '536, '774, and '812 patents are members of another patent family and share a common specification ("Needle

Assembly Patents" or "Family Two Patents") (*see id.*). As discussed above in Section II, only the '836, '536, '774, and '812 patents remain at issue in this Investigation.

According to Serendia, the Na Effect Patents claim priority to U.S. Application No. 14/006,930, filed on June 14, 2012, and Korean Application Nos. 10-2011-0057691 and 10-2011-0057692, both filed on June 14, 2011. (Complainant's Notice of Patent Priority Dates/Dates of Conception at 2-3, Doc. ID No. 795792 (May 5, 2023).). The Needle Assembly Patents all claim priority to U.S. Provisional Application No. 61/449080, filed on March 3, 2011. (*See id.* at 1-2.).

A. Overview of the '836 Patent (Na Effect Patent or Family One Patent)

The Na Effect Patent or Family One Patent describes the claimed invention as being "for medical treatment including skin treatment using electrical energy, especially with the primary purpose for skin treatment for aesthetics[.]" (JX-0007 ('836 patent) at 1:24-26.). The Na Effect Patent describes a "method and apparatus that provides electric stimulation directly to a body region including the dermis via needles. (*Id.* at 2:37-41.). The method purportedly "revitalizes and regenerates the body region including collagen by wounding the dermis." (*Id.* at 2:39-41.).

Figure 5 of the Na Effect Patent depicts a "a simplified diagram of treatment architecture using non insulated needles according to an embodiment[.]" (*Id.* at 4:41-43.). More specifically, Figure 5 depicts needles 300 with needle tips 302 for generating energy field 909. (*See id.* at 7:27-32 (referencing Fig. 6); *see also id.* at 9:25-26.).

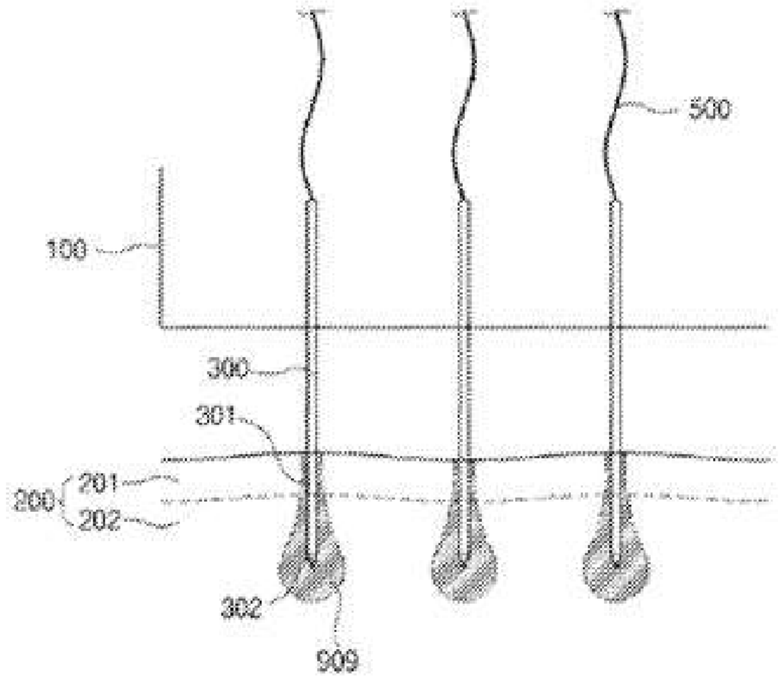


FIGURE 5

(*Id.* at Fig. 5.).

Figure 6 of the Na Effect Patent depicts an embodiment where "adjacent or neighboring needles may be configured to have opposite polarities (+) and (-)[.]" (*Id.* at 4:1-3.).

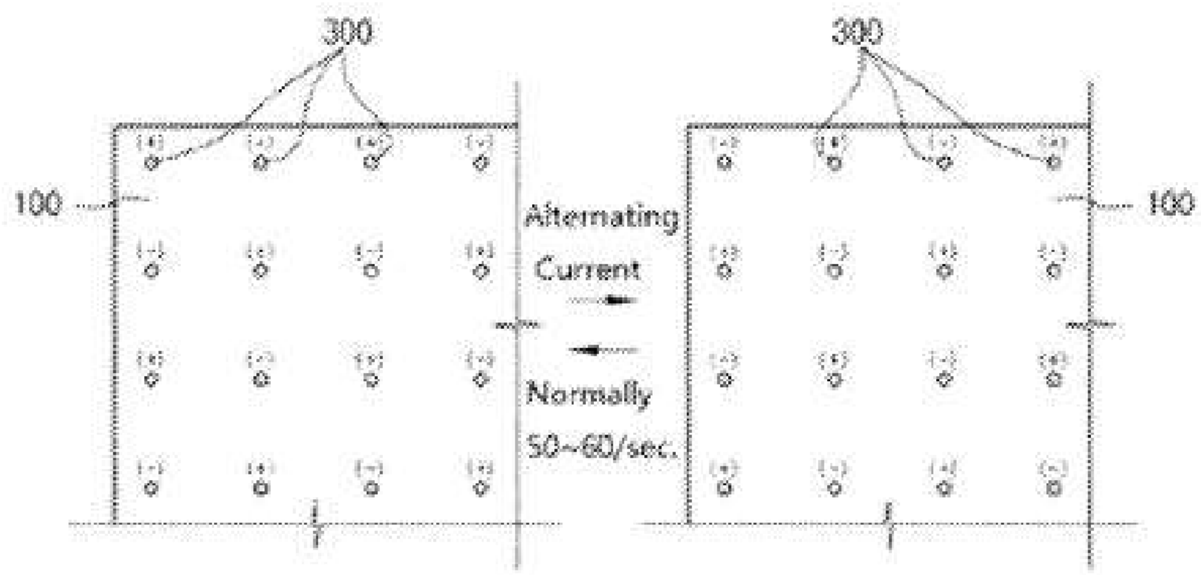


FIGURE 6

(*Id.* at Fig. 6.).

The Na Effect Patent also discloses:

> In an embodiment, the temperature is raised about the tip of each needle, not between needles. The method of the present invention may control electrical factors or distance between needles to control the energy field applied between needles. A method of the present invention may enable users to control the number

of treatments in target areas by controlling the dissipated energy in needles.

(*Id.* at 3:30-36.).

As noted above in Section II, claims 1, 9 and 22 of the '836 patent are at issue. The claims are reproduced below, along with the claims from which they depend.[19]

> **1.** A skin treatment apparatus, comprising:
>
> a plurality of electrodes, the electrodes being bipolar and configured to be insertable into skin to be treated; and
>
> a radio frequency (RF) generation module, the RF generation module electrically coupled to the plurality of electrodes and configured to provide an Alternating Current (AC) RF signal to the plurality of electrodes configured to cause coagulation around each electrode rather than coagulating between the electrodes.
>
> **9.** The skin treatment apparatus of claim 1, wherein the electrodes are needles and have a diameter from 0.25 mm to 0.30 mm.
>
> 14. A method of treating skin, comprising:
>
> inserting a plurality of electrodes, the electrodes being bipolar into a section of skin to be treated; and
>
> applying a Alternating Current (AC) Radio Frequency (RF) signal to the plurality of electrodes configured to cause coagulation around each electrode rather than coagulating between the electrodes.
>
> **22.** The method of treating skin of claim 14, wherein the RF is from 0.5 to 10 Mhz and the predetermined time interval is from 0.05 to 0.8 seconds.

(*Id.* at cls. 1, 9, 14, 22.).

B. Overview of the '536, '774, and '812 Patents (Needle Assembly Patents or Family Two Patents)

The Needle Assembly Patents or Family Two Patents describe the claimed invention as being "used in treating derma[to]logical tissue." (JX-0001 ('536 patent) at 1:25-27.).[20] The Needle Assembly Patents depict and describe that the "derma[to]logical treatment apparatus"

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[19] The asserted patent claim numbers are in bold.

[20] Because the Needle Assembly Patents share a common specification, citations in this ID are to the specification of the '536 patent unless indicated otherwise.

comprises "a user handle 220 coupled to an acupuncture plate 200." (*Id.* at 2:51-55, Figs. 1A, 1B.). The plate includes "a plurality of acupuncture pins or needles 230. (*Id.* at 2:61-67; *see also id.* at Figs. 1B, 1C.).

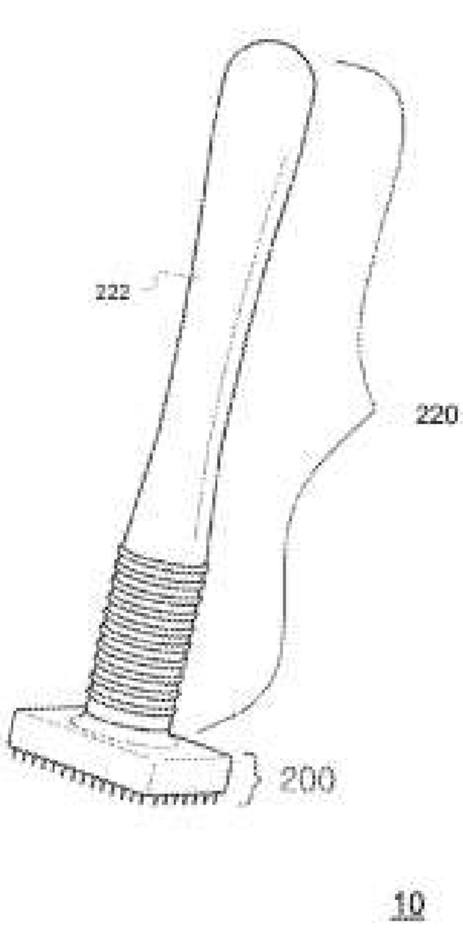


FIGURE 1A

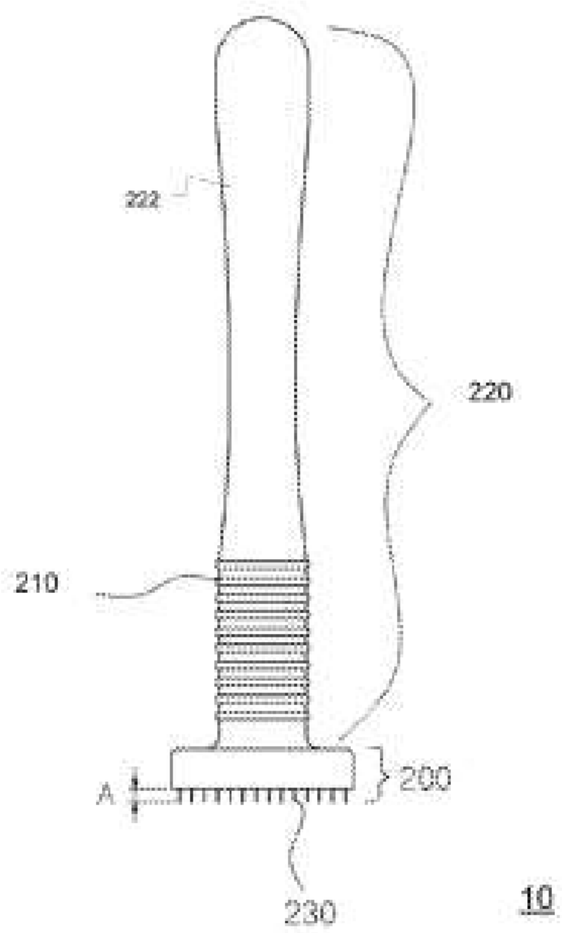


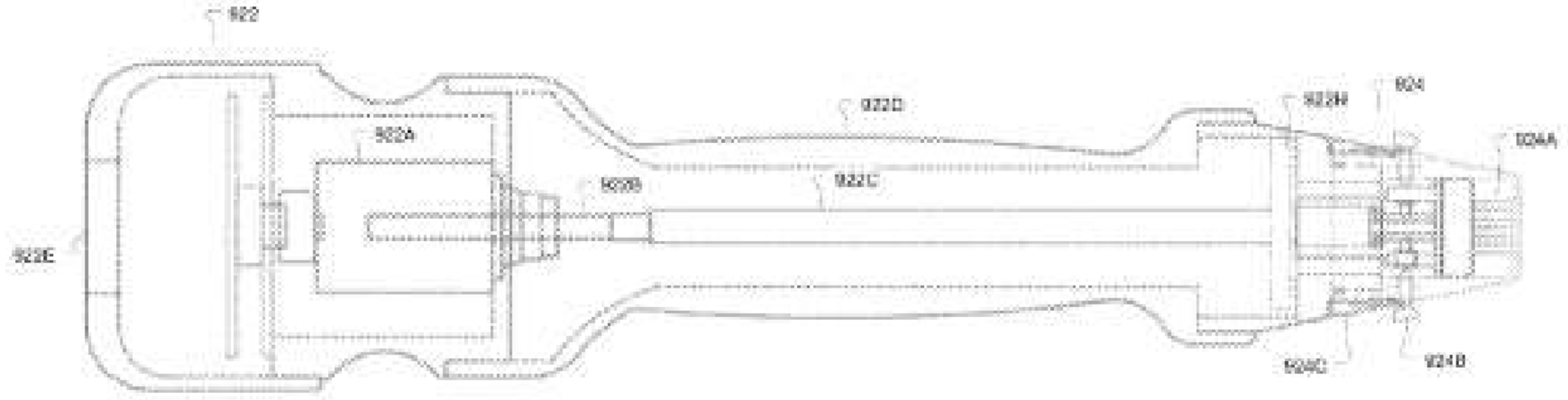
FIGURE 1B

(*Id.* at Figs. 1A, 1B.).

In operation, a user employs the apparatus "to create a plurality of micro-wounds or holes in derma[to]logical layers of mammal's [] skin or dermis." (*Id.* at 3:21-23.). Creating such micro-wounds or holes in the skin "may improve the absorption or application of one or more chemicals applied on or about the micro-wounds or holes" (*id.* at 3:23-26) and "may increase cellular activity and help heal tissue faster and facilitate the delivery, uptake and use in the cell of the cosmetics, medications, or chemicals [] used" (*id.* at 7:51-54).

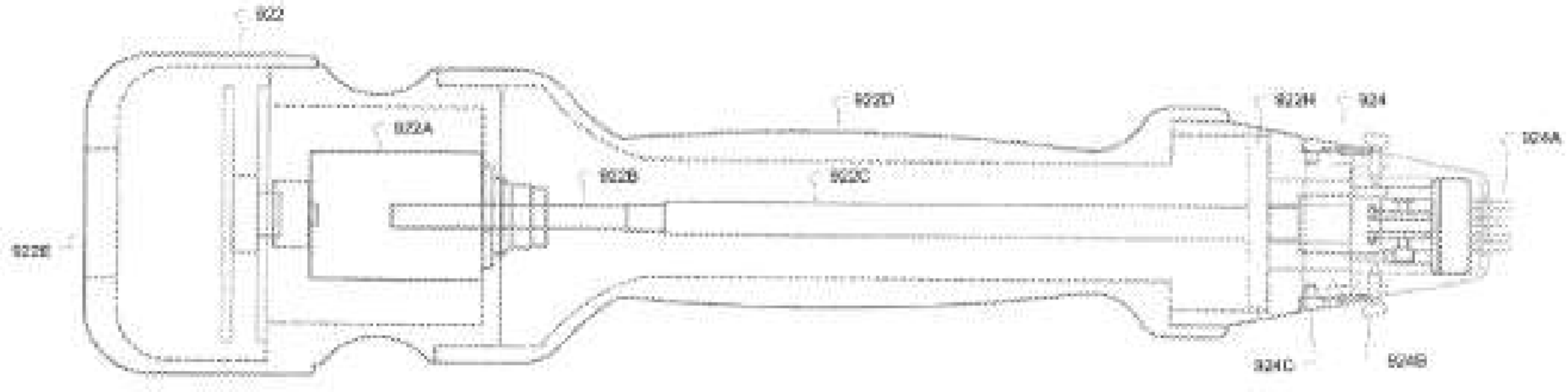
To assist in creating the micro-wounds or holes in the skin, "electrical signal generation system 300 may be electrically coupled to the acupuncture apparatus 320 via one or more wires

300A and to a mammal 20 to be treated via one or more wires 300B" to "generate a variety of signals . . . to vibrate one or more pins 351 electrically coupled to system 300." (*Id.* at 3:27-45, Figs. 2A-2C.). Additionally, the Needle Assembly Patents depict and describe that the dermatological treatment apparatus may include "a disposable needle module 924 . . . to be removed [from hand module 920] and disposed after one or more treatments or for each patient, client, or user." (*Id.* at 9:26-30, Figs. 9C, 9D.).



922

FIGURE 9C



922

FIGURE 9D

(*Id.* at Figs. 9C, 9D.).

Figures 10A-10D of the Needle Assembly Patents depict how the needle module 924 can be attached and removed from the user handle. Figures 10A and 10C are depicted below.

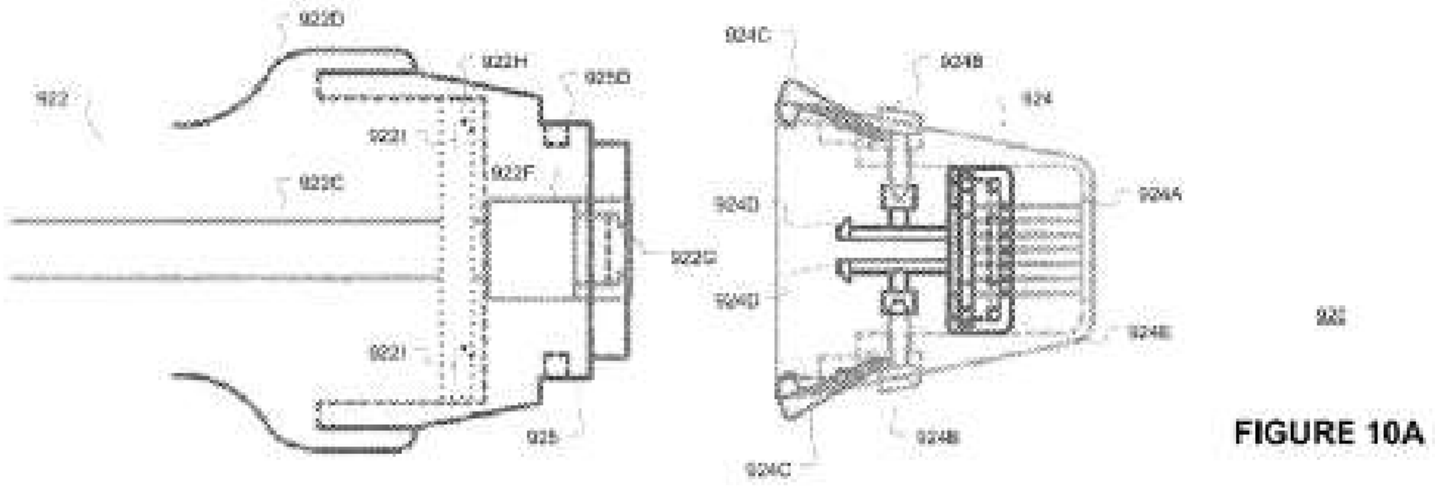


FIGURE 10A

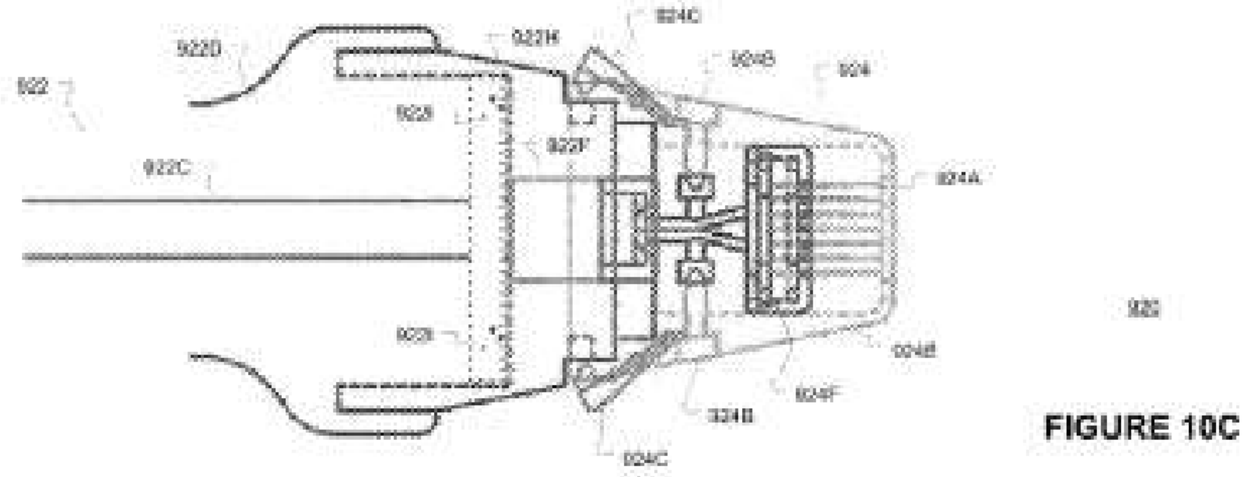


FIGURE 10C

(*Id.* at Figs. 10A, 10C.).

As depicted in Figures 10E and 11A of Needle Assembly Patents, needles 924A can be deployed or extended from the needle module 924. (*See id.* at 2:30-32, 12:18-23, 12:41-43.). Figure 10E is depicted below.

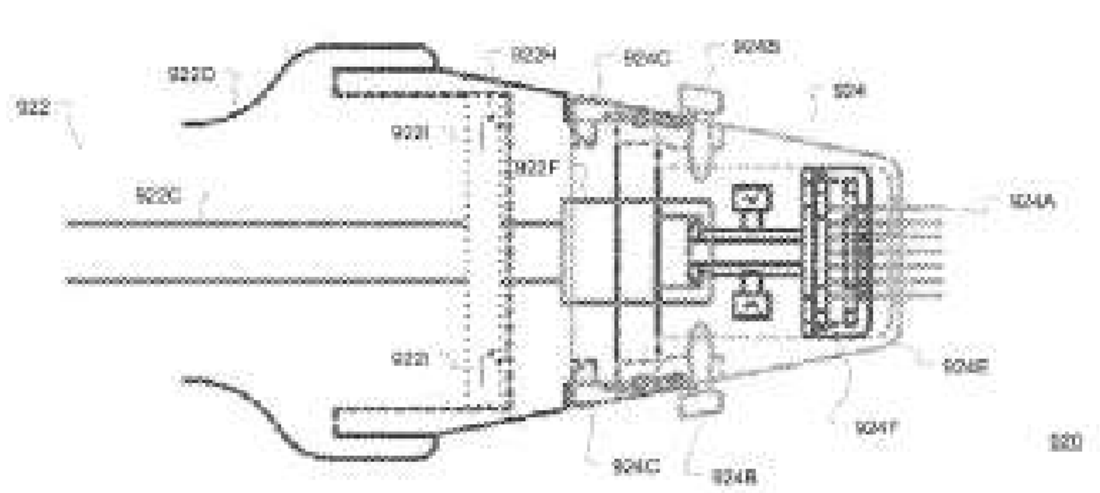


FIGURE 10E

(*Id.* at Fig. 10E.).

As noted above in Section II, a11 and 16 of the ’536 patent; claim 14 of the ’774 patent; and claims 5, 13, and 18 of the ’812 patent are at issue. The claims are reproduced below, along

with the claims from which they depend.[21]

> **11.** An apparatus for treating dermatological tissue, comprising:
>
> a user holdable device including a proximal end and a releasably couplable deployable needle assembly, the deployable needle assembly mechanically separatably from the proximal end and including a plurality of extendable needles, a plurality of the extendable needles extendable from a deployable needle assembly end surface, one of the proximal end and the deployable needle assembly including at least one electrical conductor and the other including at least one restorably deflectable electrical contact couplable to the one of the proximal end and the deployable needle assembly at least one electrical conductor;
>
> a motor coupled to a plurality of extendable needles that causes the plurality of extendable needles to extend a desired distance from the needle assembly end surface when the motor is energized with a particular signal; and
>
> a signal generator electrically coupled to the plurality of extended needles to energize the plurality of extended needles.
>
> **16.** The apparatus of claim 11, the wherein at least one restorably deflectable electrical contact includes a depressible pin.

(JX-0001 (’536 patent) at cls. 11, 16.).

> 11. An apparatus for treating dermatological tissue, comprising:
>
> a device including a plurality of needles one of extending or extendable a desired distance from a surface, the desired distance selected to enable the plurality of needles to penetrate dermatological tissue; and
>
> a signal generator electrically coupled to the plurality of extended needles to produce pulsed radio frequency signals across the plurality of needles to affect dermatological tissue near the plurality of needles.
>
> 12. The apparatus of treating dermatological tissue of claim 11, wherein the device includes an end surface configured to be placed on or near dermatological tissue to be treated, the end surface including a plurality of needles extendable to a desired distance from the end surface.
>
> **14.** The apparatus for treating dermatological tissue of claim 12, further including a motor coupled to the plurality of extendable needles that may be directed to cause the plurality of the extendable needles to extend a desired distance from the end surface.

(JX-0003 (’774 patent) at cls. 11-12, 14.).

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[21] The asserted patent claim numbers are in bold.

1. A method of treating dermatological tissue, comprising:

placing a user holdable device releasably couplable deployable needle module end surface on or near dermatological tissue to be treated, the user holdable device including a proximal end and the releasably couplable deployable needle module, the releasably couplable deployable needle module mechanically separatably from the user holdable device proximal end and including a needle assembly including a plurality of needles, the needle assembly movable within the releasably couplable deployable needle module to extend the plurality of needles from the releasably couplable deployable needle assembly end surface while at least one electrical contact of the needle assembly remains electrically coupled to at least one electrical contact of the user holdable device proximal end; and

communicating electrical signals from the user holdable device proximal end to the needle assembly via the electrical contacts.

2. The method of claim 1, further comprising energizing a motor coupled to the needle assembly to cause the plurality of the needles to extend a desired distance from the releasably couplable deployable needle module end surface.

3. The method of claim 2, further comprising energizing the plurality of needles via a signal generator electrically coupled to the suer holdable device proximal end.

4. The method of claim 3, wherein the user holdable device proximal end further includes at least one embedded LED therein and further including energizing the at least one embedded LED so the at least embedded LED illuminates the releasably couplable deployable needle module.

5. The method of claim 4, wherein the needle assembly includes a translucent section and further including energizing the least one embedded LED to illuminate the plurality of needles via the needle assembly translucent section.

13. The apparatus of claim 12, further including a motor coupled to the needle assembly to extend the plurality of needles a desired distance from the releasably couplable deployable needle assembly end surface when the motor is energized with a particular signal.

18. The apparatus of claim 12, wherein one of the at least one electrical contacts includes a pin that is extendable in the same direction as the plurality of needles.

(JX-0005 (’812 patent) at cls. 1-5, 13, 18.).

C. Inventorship

1. Respondents Claim That Dr. Na Was Not the Sole Inventor of the '836, '536, and '812 Patents

Respondents attempted to prove that Ilooda's CEO in 2009, Mr. Yonghan Kim, is a co-inventor of the '836 patent (RBr. at 52-62), as well as of the '536 patent and the '812 patent (RBr. at 94-98.). Serendia successfully undermined Respondents' attempt. (CRBr. at 39-45.). Although there is some evidence that Mr. Kim worked with Dr. Na on ideas that eventually became the '836, '536, and '812 patents, the evidence is conflicting as is their testimony about their individual contributions to the ideas that became those patents. Ultimately, the issue is whether Mr. Kim's testimony about his alleged contributions to the inventions is credible and sufficiently corroborated. For the reasons explained below, Respondents have failed to carry their burden to prove by clear and convincing evidence that Mr. Kim is a co-inventor of the '836, '536, and '812 patents.

2. Legal Standard

The Manual of Patent Examining Procedure ("MPEP"), Section 2109 on Inventorship, states: "The definition of inventorship can be simply stated: 'The threshold question on determining inventorship is who conceived the invention. Unless a person contributes to the conception of the invention, he is not an inventor. . . . Insofar as defining an inventor is concerned, reduction to practice *per se* is irrelevant [except for simultaneous conception and reductio to practice." *Fiers v. Revel*, 984 F.2d 1164, 1168 (Fed Cir. 1993)]."

However, "[t]he burden of proving that an individual should have been added as an inventor to an issued patent is a 'heavy one,' and the 'issuance of a patent creates a presumption that the named inventors are the true and only inventors. Thus, an alleged joint inventor must

prove a claim of joint inventorship by 'clear and convincing evidence.'" *HIP, Inc. v. Hormel Foods Corp.*, 66 F.4th 1346, 1350 (Fed. Cir. 2023), *cert. denied*, 144 S. Ct. 377, 217 L. Ed. 2d 204 (2023) (internal citations omitted).

> To meet the clear and convincing burden of proof:
>
> > alleged co-inventors must prove their contribution to the conception with more than their own testimony respecting the facts surrounding a claim of derivation or priority of invention. Whether the inventor's testimony has been sufficiently corroborated is evaluated under a "rule of reason" analysis. Under this analysis, '[a]n evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the [alleged] inventor's story may be reached.' Corroborating evidence may take many forms. Reliable evidence of corroboration preferably comes in the form of physical records that were made contemporaneously with the alleged prior invention. Circumstantial evidence about the inventive process may also corroborate. Additionally, oral testimony of someone other than the alleged inventor may corroborate.

Trovan, Ltd. v. Sokymat SA, Irori, 299 F.3d 1292, 1302–03 (Fed. Cir. 2002) (internal citations omitted).

Additionally, in *Hip, Inc. v. Hormel Foods Corp.*, the Federal Circuit reaffirmed the three-part test from *Pannu v. Iolab Corp.* ("*Pannu*"), that an alleged inventor is one who: (1) contributes in some significant manner to the conception of the invention; (2) contributes to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention; and (3) does more than merely explain to the real inventors well-known concepts and/or the current state of the art. *HIP*, 66 F.4th at 1350 (citing *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998) ("*Pannu*"); *see also Plastipak Packaging, Inc. v. Premium Waters, Inc.*, 55 F.4th 1332, 1340 (Fed. Cir. 2022) (reaffirming the three-party inventorship test set forth in *Pannu*); *CardiAQ Valve Techs., Inc. v. Neovasc Inc.*, 708 F. App'x 654, 659-60 (Fed. Cir. 2017) (applying *Pannu*, affirming district court ruling that the patent failed to name two co-inventors, affirming finding that their contributions were more than just

information that existed in the prior art because the prior art reference in which their contribution allegedly was disclosed was not publicly available at the time of the invention); *Tube-Mac Indus., Inc. v. Campbell*, No. 2022-2170, 2024 WL 1132229, at *4 (Fed. Cir. Mar. 15, 2024) (applying *Pannu*, affirming district court ruling that the patent failed to name two co-inventors, affirming finding that the two omitted co-inventors' contribution was significant because, without it, "the invention would not be viable"); *Blue Gentian, LLC v. Tristar Prod., Inc.*, 70 F.4th 1351, 1360 (Fed. Cir. 2023) (applying *Pannu*, contributions of alleged co-inventor were significant because they reflected the subject matter that the patentee had relied on to distinguish the invention from the prior art); *Bio-Rad Labs., Inc. v. Int'l Trade Comm'n*, No. 2020-1785, 2021 WL 1680268, at *1320-22 (Fed. Cir. Apr. 29, 2021) (applying *Pannu*, contributions of alleged co-inventors were not significant because they were publicly known and/or disclosed in the prior art before the time of the invention); *Nartron Corp. v. Schukra U.S.A. Inc.*, 558 F.3d 1352, 1357 (Fed. Cir. 2009) (applying *Pannu*, affirming district court ruling on summary judgment that individual was not an omitted co-inventor, finding that the allegedly omitted co-inventor's contribution was "insignificant when measured against the full dimension of the invention" because the contribution was in the prior art); *Acromed Corp. v. Sofamor Danek Grp., Inc.*, 253 F.3d 1371, 1380 (Fed. Cir. 2001) (applying *Pannu*, affirming the district court's ruling that the patents were not invalid for improper inventorship, affirming the district court's finding that there was insufficient evidence that alleged co-inventor actually contributed the subject matter that he testified he contributed).

3. Mr. Kim's Alleged Contributions to the Claimed Subject Matter

Claims 1, 7, 8, 19, 22, 27, 28, and 29 of the '836 patent each requires "a plurality of electrodes, the electrodes being bipolar," a "radio frequency (RF) generation module," which is

"configured to provide an Alternating Current (AC) RF signal to the plurality of electrodes configured to cause coagulation around each electrode rather than coagulating between the electrodes." (JX-0007 at 10:48-59, 11:4, 11:7, 11:25-30, 12:5, 12:13, 12:27, 12:30, 12:34.). Claim 27 recites "a drive module to controllably move one or more of the plurality of electrodes into skin to be treated." (*Id.* at 12:27-29.). Respondents argued that Mr. Kim's inventive contributions to the foregoing claims of the '836 patent include: (1) using AC RF and specific frequencies of RF; and (2) a drive module or motor in the handpiece of the RF microneedling device. (RBr. at 55-59.).

Claims 1, 4, 5, 11, 14 and 15 of the '536 patent and claims 1, 2, 4, 5, 12, 13, and 17 of the '812 patent all require "a user holdable device [] releasably couplable deployable needle [assembly or module]." (JX-0001 at 15:17-18, 16:14-15; JX-0005 at 15:47-48, 16:47-48.). Claims 1, 4, 5, 11, 14, and 15 of the '536 patent and claims 2, 4, 5, 13, and 17 of the '812 patent all require "a motor." (JX-0001 at 15:33, 16:26; JX-0005 at 15:67, 16:60.). Claims 4, 5, 14, and 15 of the '536 patent and claims 4, 5, and 17 of the '812 patent all also require an "embedded LED." (JX-0001 at 15:49, 16:41; JX-0005 at 16:7-8, 17:8-9.). Respondents argued that Mr. Kim's inventive contributions to the foregoing claims include: (1) a motor to control the depth of needle insertion; (2) a disposable and detachable needle cartridge; and (3) an embedded LED. (RBr. at 94.).

None of the Parties analyzed the evidence under the three-factor framework provided in *Pannu*.

As detailed below, Dr. Na and Mr. Kim provided conflicting and sometimes diametrically opposing testimony about their respective contributions to the invention.

4. Mr. Kim and Dr. Na Offered Competing Accounts of Their Contributions

Dr. Na, who is the sole named inventor on the face of the '836 patent, met and held discussions with Mr. Kim during the spring and summer of 2009. (Tr. (Kim) at 755:20-756:12). Mr. Kim testified that he met Dr. Na through a mutual acquaintance between the spring and summer of 2009. (Tr. (Kim) at 755:20-756:12.). Mr. Kim testified that their mutual acquaintance informed Mr. Kim that Dr. Na was developing a medical device for skin treatment and was searching for a company to help him. (*Id.*). According to Mr. Kim, at their first meeting, which occurred in person at Ilooda, Dr. Na told Mr. Kim that he wanted to make improvements to his derma stamp device, which is referred to as Dr. Na's microneedling therapy device ("MTS"). (*Id.*at 757:7-12.). However, Dr. Na testified that [redacted] (Tr. (Na) at 98:21-22.). The CEO of Ilooda at the time, Mr. Joon, attended the first meeting between Mr. Kim and Dr. Na. (Tr. (Kim) at 756:21-757:2.). However, Respondents did not call Mr. Joon to testify. As a result, neither Dr. Na's nor Mr. Kim's testimony is corroborated by the testimony of another witness, let alone by clear, documentary evidence.

The MTS consists of a stamp-like structure at the end of a handle. On the stamp-like structure, or derma stamp, there are multiple short needles. (Tr. (Kim) at 761:17-762:5.). According to Mr. Kim, the stamp was used by pressing it against a patient's face so that the needles caused micro damage to the face. (*Id.*). According to Mr. Kim, Dr. Na wanted to add low frequency electrical signals to improve the MTS. These signals were to be the kind of electrical signals that stimulate nerves and muscles and are commonly used in physical therapy devices to reduce pain. (*Id.* at 762:2-14.). In response, Mr. Kim testified that he told Dr. Na

that low frequency signals would not result in skin improvement. (*Id.*). Instead, according to his testimony, Mr. Kim suggested causing limited thermal damage using something like a laser or conductive needles with an RF signal. (*Id.* at 762:15-23.). At that time, and as Dr. Na testified, [redacted]. (Tr. (Kim) at 766:11-16; Tr. (Na) at 114:11-17; RX-2548C (Na Dep. Tr.) at 219:17-220:1 [redacted]). A device that Dr. Na had developed, in 2005, called the "derma stamp device," or the MTS described above, did not use RF. (Tr. (Na) at 75:1-9.). However, in somewhat conflicting testimony, Dr. Na also testified that [redacted]. (*Id.* at 100:23-101:1.). Mr. Kim testified that, during their discussions, Mr. Kim answered questions from Dr. Na and proposed ideas for improving the MTS. (Tr. (Kim) at 762:24-763:2, 764:13-19.).

The foregoing evidence suggests that [redacted]. (Tr. (Na) at 79:18-25, 83:4-13.).

By contrast, according to his unrebutted testimony, Mr. Kim started developing RF surgical devices in 2001 when he joined a Korean company, SomeTech, as a director of its R&D team. (Tr. (Kim) at 751:25-752:7.). As SomeTech's director of R&D, Mr. Kim developed the "Dr. Oppel" and "Thermocon" devices, which used alternating current and had monopolar and bipolar electrodes, including selecting the RF frequencies those devices could use. (*Id.* at 752:8-753:13.). The "Dr. Oppel" device was used for skin treatment, specifically to reduce exposed pores. (*Id.* at 754:4-9.). The "Thermocon" device was used for nerve blocking. (*Id.*). Both devices used disposable electrodes. (*Id.*at 753:17-754:3.). After SomeTech, Mr. Kim joined

Ilooda as its director of R&D. (*Id.* at 754:19-22.). As director of R&D at Ilooda, Mr. Kim developed several RF devices for reducing wrinkles and making skin look younger, that used alternating current. (*Id.* at 754:23-25.). The products that Ilooda developed used both monopolar and bipolar electrodes and included products called: Lunar S, 4sOne, Lunar N, Caresys RF, Qray FRX, CICU-f, and FRAXIS. (*Id.* at 754:23-755:19.).

Mr. Kim testified that the ideas he discussed with Dr. Na are captured by a July 20, 2009 email from Mr. Kim to Dr. Na and its attachment. (*Id.* at 764:13-765:1; CX-0249C.0003 (July 20, 2009 email), CX-0250C (attachment to July 20, 2009 email).). That July 20, 2009 email is reproduced below.

Figure 1: July 20, 2009 Email From Mr. Kim to Dr. Na Regarding Proposed RF MTS Device

Hi there. Director Jong Ju Na!

Sorry for the late reply due to the actuator specification review. The attachment summarizes the simple specifications of RF MTS, etc.

We have conducted 2 internal development reviews in the lab. As for the timeline, the current project will be finalized at the end of August, so we will start from September.
If the contract is signed before then, we plan to proactively start sourcing parts, etc., in advance. We apologize that it is difficult to move up the schedule because the ongoing project is scheduled for a fall release.

We will create a detailed development plan when we go into the actual development, but for now, we will only send you a brief summary of our review findings.
Please cc and reply with any questions you may have. I will respond with answers.

That's all for now.

==========

Yong-han, Kim / Vice President / Research institute

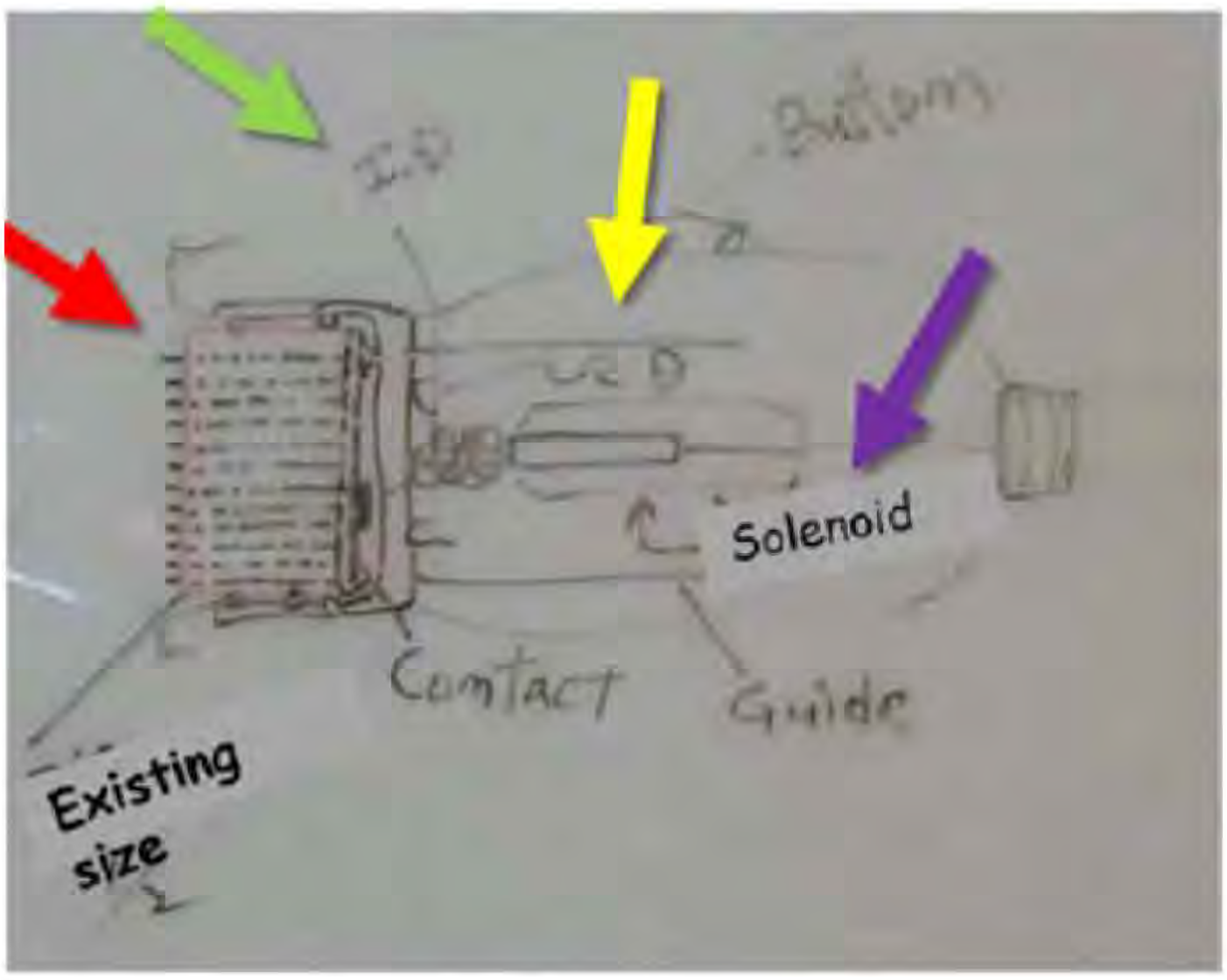
(CX-0249C.0003; Tr. (Kim) at 764:13-765:1.).

A presentation that Mr. Kim said he prepared, titled "Full Automatic RF MTS," is attached to the July 20, 2009 email. (Tr. (Kim) at 764:24-765:16; CX-0250C.0008). That presentation contains a hand drawing of the proposed device. A version of that hand drawing,

with red, green, yellow, and purple arrows that Mr. Kim added as his annotations for the purposes of the present Investigation is reproduced below. The green arrow in Figure 2 below depicts an "ID," which is a memory component that stores information about whether and how many times the needle cartridge has been used. (Tr. (Kim) at 768:24-769:14.). The yellow arrow in Figure 2, below, points to an LED indicator that, when activated, informs the user that RF is being transmitted. (Tr. (Kim) at 769:15-770:13.). This is important because RF electricity must be transmitted at the same time the needles are protruding into the skin. (*Id.*). Dr. Na testified that [redacted]. (Tr. (Na) at 100:20-22.).

The purple arrow in Figure 2 below, indicates a solenoid that controls movement of the needle assembly. (Tr. (Kim) at 770:14-20.).

Figure 2: Hand Drawing of Proposed Fully Automatic RF MTS with Annotations by Mr. Kim



(CX-0250C.0010; Tr. (Kim) at 765:17-767:11; RDX-0008C.0007.).

However, in testimony that somewhat contradicted Mr. Kim's, Dr. Na testified that the [redacted]. (Tr. (Na) at 101:2-10.). Dr. Na also testified consistently during the Hearing and during his deposition, that [redacted]. (Tr. (Na) at 101:15-23; RX-2550C (Na Dep. Tr.) at 138:4-140:12.).

By contrast, Mr. Kim testified that the drawing depicted in Figure 2 above was drawn entirely by him on a whiteboard in a conference room above Ilooda. (Tr. (Kim) at 765:25-767:11.).

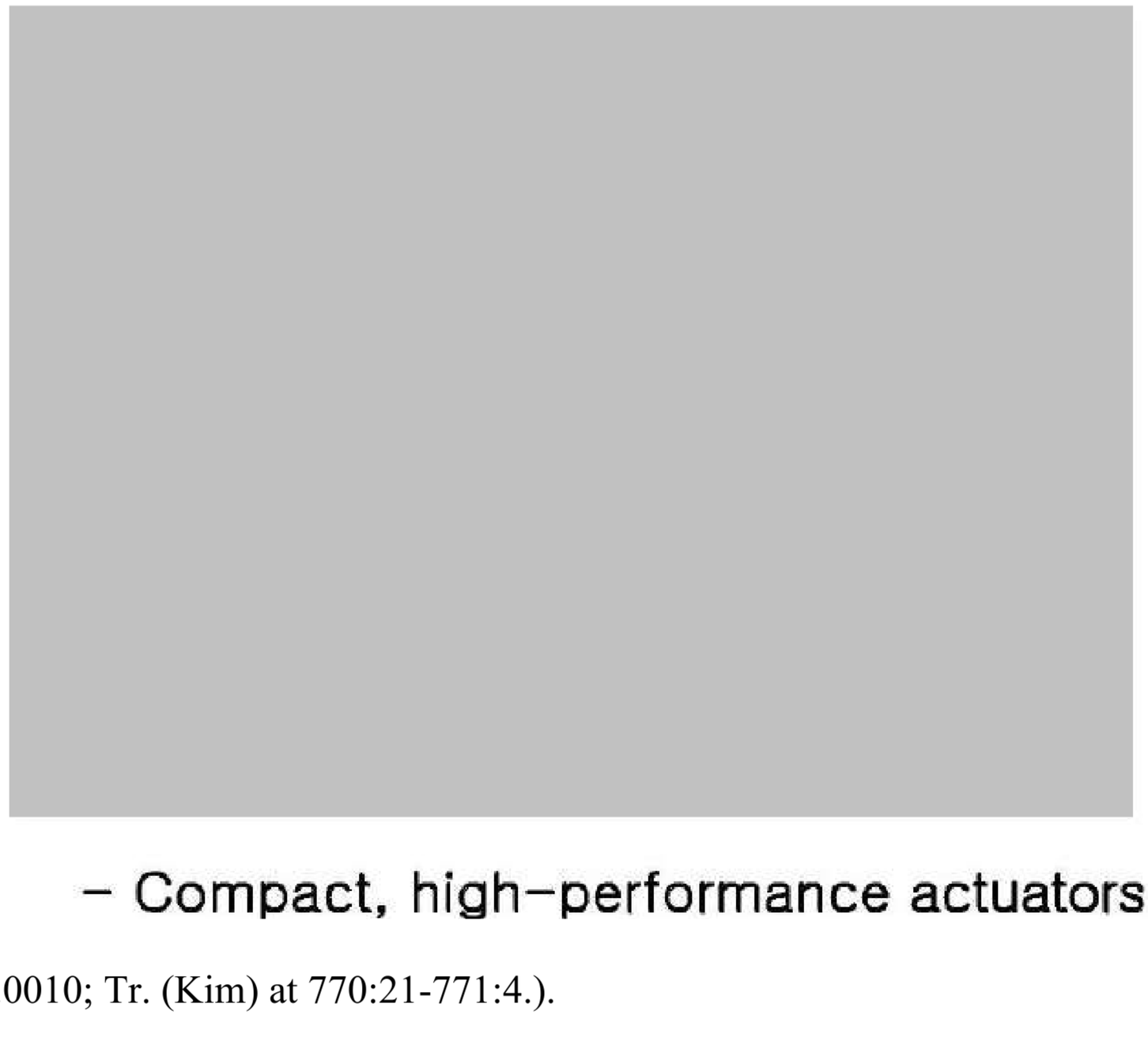
In Figure 2, above, the red arrow points to the needle assembly, the left side of which would face the skin of the patient. (Tr. (Kim) at 767:12-24.). Mr. Kim testified that he proposed to Dr. Na that the needle assembly should be disposable because it must be sterile. He claimed it should be disposable because sterilizing a needle assembly in an autoclave would damage the electrical components. (*Id.* at 767:25-768:8.). However, Dr. Na testified that [redacted]. (Tr. (Na) at 99:16-100:13.).

Mr. Kim testified that he proposed that the needles have a thickness of 350 micrometers because of his experience using lasers with beam diameters of 70 to 350 micrometers. (*Id.* at 768:9-16.). Mr. Kim also testified that he proposed needles (which in the MTS had a length of about 0.25 millimeters), that should have a length of 3 millimeters "to transmit heat to the dermal layer" because "fractional lasers mostly use that length." (*Id.* at 768:17-23.). However, Dr. Na testified that [redacted]. (Tr. (Na) at 100:17-19.). Dr. Na also testified that [redacted]

. (*Id.* at 102:17-24.).

A second picture on the same page of the July 20, 2009 email presentation, depicted below in Figure 3, depicts using actuators to control the movement of the needle assembly:

Figure 3: Depiction of Actuators for Use in Proposed Fully Automatic RF MTS

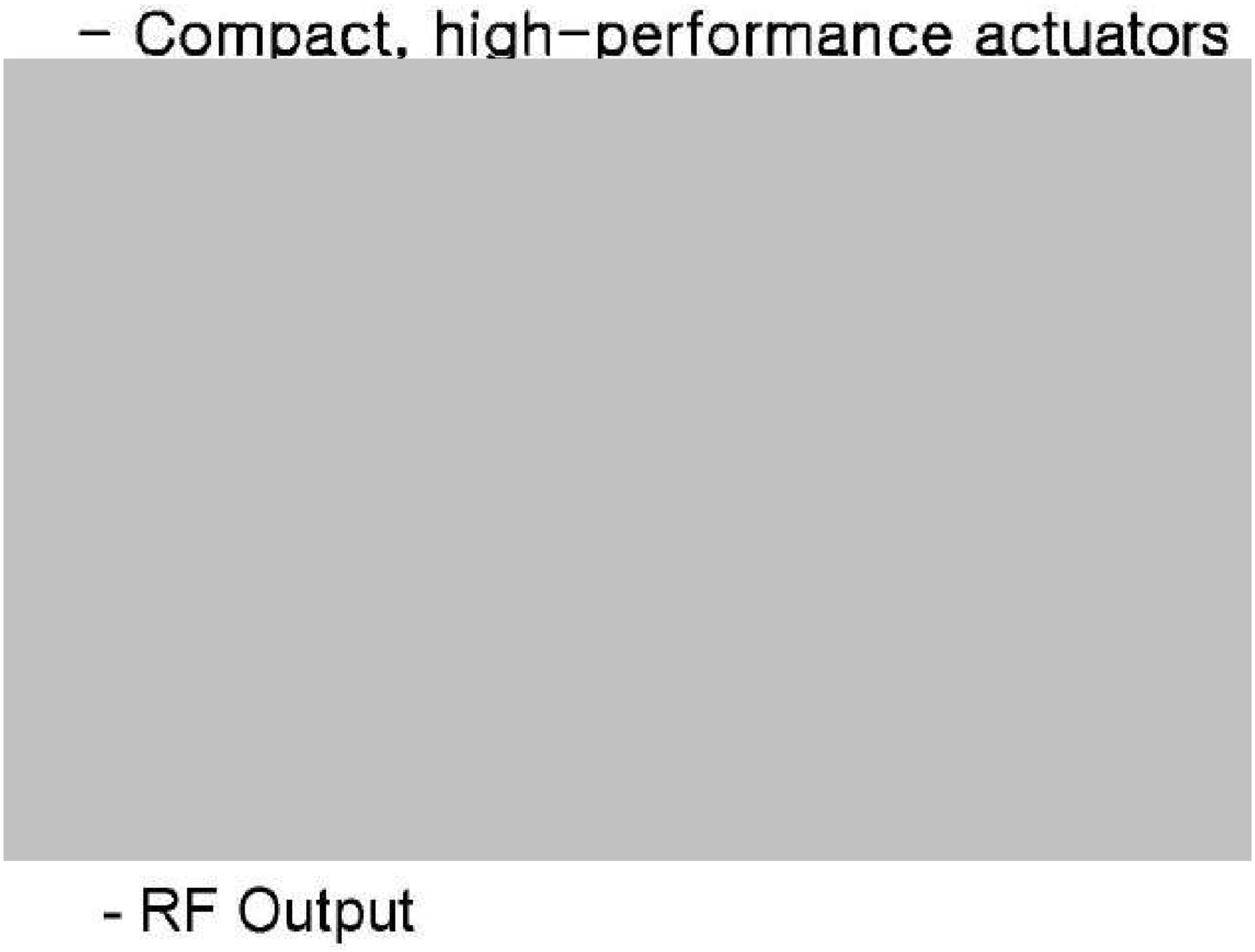


(CX-0250C.0010; Tr. (Kim) at 770:21-771:4.).

Dr. Na testified that . (Tr. (Na) at 100:7-16.).

A third picture on that page of the presentation attached to the July 20, 2009 email, which is depicted below in Figure 4, depicts a 1 MHz RF waveform for use with actuators for the proposed fully automatic RF operated MTS or electrified stamp device.

Figure 4: Depiction of 1 MHz RF Waveform For One of Mr. Kim's RF Devices



(CX-0250C.0010; Tr. (Kim) at 771:10-19.).

Mr. Kim testified that the 1 MHz waveform depicted in Figure 4 above, reflects a measurement taken in 2007 from an actual RF device he developed. (Tr. (Kim) at 771:10-19.).

Mr. Kim also testified that he proposed the target specifications for certain components of the proposed fully automatic RF MTS product, including the ID, LED, and RF frequency, which are depicted in Figure 5, below.

Figure 5: Target Specifications for Proposed Fully Automatic RF MTS Product



(Tr. (Kim) at 771:20-772:3; CX-0250C.0009.).

Dr. Na testified that . (Tr. (Na) at 101:11-14.).

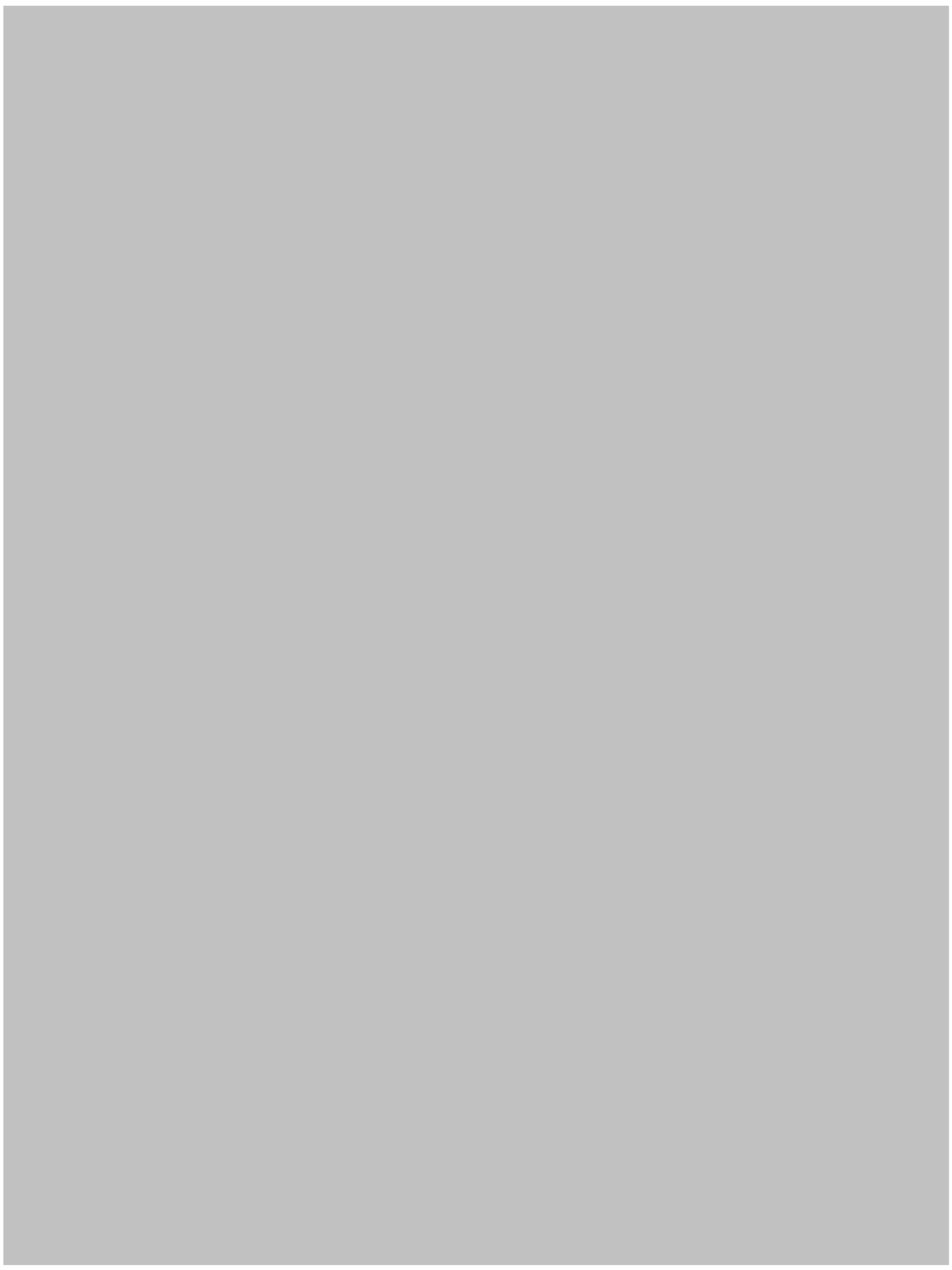
5.

According to Mr. Kim, in August 2009, Mr. Kim sent Dr. Na a draft contract that would have governed their relationship wherein Mr. Kim's company, Ilooda, would handle development and supply of the RF MTS, whereas Dr. Na would handle sales. (Tr. (Kim) at 772:10-773:11; CX-0251C.0001 (August 2009 email sending draft contract); RX-1733C.0002 (translation of August 2009 email sending draft contract); CX-0252C.0001, 0004 (draft contract); RX-0409C.0002, 0005 (translation of draft contract).). After exchanging modifications and revisions, at least according to Mr. Kim, Dr. Na stopped responding. (Tr. (Kim) at 773:13-21.). According to Dr. Na, ultimately, . (Tr. (Na) at 102:25-103:9.). That did not happen.

6. Mr. Kim Was Informed of the ’836 Patent and the ’536 Patent in 2018

In 2018, Serendia sent a letter to Cutera, Ilooda’s distributor, in which Serendia asserted Cutera’s infringement of the ’836 patent and the ’536 patent. (Tr. (Kim) at 786:20-787:2; CX-3067C.). According to his testimony, at that time Mr. Kim consulted U.S. patent lawyers in connection with a response dated April 16, 2018. (Tr. (Kim) at 787:3-13, 790:10-14; CX-3394C.).

Figure 6: Excerpt from Mr. Kim’s Counsel’s Letter to Serendia Responding to Serendia’s Claims of Infringement of the ’836 and ’536 Patents





(Tr. (Kim) at 787:3-13, 790:10-14; CX-3394C.).

As can be seen in the letter dated April 16, 2018, that was sent on Mr. Kim's behalf to Serendia, Mr. Kim's claims of co-inventorship were not asserted even then. (Tr. (Kim) at 787:14-23.).

Mr. Kim testified that he has applied for patents. (Tr. (Kim) at 783:13-784:22.).

7. Respondents Have Not Carried Their Burden of Proof That Mr. Kim is a Co-Inventor

The Federal Circuit's instruction in *Trovan* requires an evaluation of the pertinent evidence, under a rule of reason analysis. *Trovan*, 299 F.3d at 1302-03. Dr. Na and Mr. Kim have competing claims, and often conflicting testimony, about the same ideas and annotations that appear in the July 20, 2020 e-mail and its attachments. (*Compare* Tr. (Kim) at 755:20-756:12 *with* Tr. (Na) at 98:21-22; *compare* Tr. (Kim) at 762:2-23 *with* Tr. (Na) at 100:23-101:1; *compare* Tr. (Kim) at 768:24-770:13 *with* Tr. (Na) at 100:20-101:10; *compare* Tr. (Kim) at 765:25-767:11 *with* Tr. (Na) at 101:15-23, 138:4-140:12; *compare* Tr. (Kim) at 767:12-768:8

with Tr. (Na) at 99:16-100:13; *compare* Tr. (Kim) at 768:9-23 *with* Tr. (Na) at 100:17-19; *compare* Tr. (Kim) at 770:21-771:4 *with* Tr. (Na) at 100:7-16; *compare* Tr. (Kim) at 771:21-772:3 *with* Tr. (Na) at 101:11-14.).). However, neither Serendia nor Respondents provided independent testimonial corroboration of Dr. Na's or Mr. Kim's testimony about their respective contributions.

With respect to credibility, although both men gave what they firmly believed to be their contributions to the asserted patents, Mr. Kim's actions, after he and Dr. Na broke off contact in 2009, do not persuasively support Mr. Kim's claims of inventorship. (*See, e.g.,* Tr. (Kim) at 786:20-788:23; CX-3067.). From Mr. Kim's testimony that he has experience applying for patents and his status as the director of R&D of a medical device company, it can be inferred that he knew something about the necessity of protecting patent rights. However, he allegedly divulged his own ideas to Dr. Na, the Chief Executive Office of another medical device company, about how to improve that other CEO's device. (Tr. (Kim) at 764:13-765:1; CX-0249C.0003, CX-0250C.). When Dr. Na ostensibly stopped responding, Mr. Kim did not investigate whether he should seek patent protection for the automatic RF MTS ideas that he alleged in this Investigation are his. (Tr. (Kim) at 783:13-784:3.). Rather, Mr. Kim waited until this Investigation was filed, ***fourteen years*** after Dr. Na broke off contact (if Mr. Kim is to believed), before asserting his co-inventorship claims. Moreover, despite being informed of the '836 patent and the '536 patent in April 2018, Mr. Kim waited almost ***five years*** until this Investigation was filed in March 2023 to assert his co-inventorship claims.

Mr. Kim's background and expertise with RF medical devices, and [redacted], if considered on its own apart from other evidence, would lend some credibility to Mr. Kim's inventorship testimony that Mr. Kim provided an inventive concept. (Tr. (Kim) at

751:25-753:13, 753:17-754:3, 754:19-755:19, 766:11-16; Tr. (Na) at 75:1-9, 75:18-25, 83:4-13, 114:11-17; RX-2548C (Na Dep. Tr.) at 219:17-220:1.). However, that cited testimony should be read as being undermined by the fact that the use of RF was known in the prior art. (*See* Sections below, which generally discuss prior art for each patent, under Invalidity, but specifically the use of RF.).

However, because of the actions Mr. Kim took after he ceased having contact with Dr. Na, actions which are described more below, it is a finding of this ID that Dr. Na's account, in which [redacted], is persuasive and more supported by the evidence. (Tr. (Na) at 80:5-9, 98:19-94:1, 100:23-101:14.). Consequently, whatever Mr. Kim's contributions to the '836 patent and/or the '536 patent may have been, there is insufficient corroboration, let alone clear and convincing evidence, that would establish that Mr. Kim is entitled to co-inventorship of either the '836 patent or the '536 patent. (*Id.* at 787:25-788:23.). The alleged contributions to the '536 patent are the same as for the '812 patent (RBr. at 94), and so these findings for the '536 patent are equally applicable to the '812 patent.

In addition to the rule of reason analysis of *Troyan*, the Federal Circuit has instructed that a putative inventor's contributions must be analyzed to determine whether those contributions are sufficient for the putative inventor to qualify as a true inventor. *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998). Under the three-part inventorship test set forth in *Pannu*, and confirmed by the Federal Circuit (*see, e.g.*, *HIP*, 66 F.4th at 1350), Mr. Kim must have: (1) contributed in some significant manner to the conception of the claimed inventions; (2) made a contribution to the claimed inventions that is not insignificant in quality, when measured against the full dimension of the claimed inventions; and (3) done more than merely explained to Dr. Na

well-known concepts.

Serendia's expert, Mr. Crosby, testified that Mr. Kim's alleged contributions to the '536 patent and the '812 patent were known in the prior art. (Tr. (Crosby) at 1526:25-1527:7.). He testified that the prior art discloses a handpiece that houses a motor, wherein the motor is used for oscillating or reciprocating the needle portion. (*Id.* at 1527:8-1528:2.). He also testified that the prior art discloses embedded LEDs. (*Id.* at 1528:3-9.). Mr. Crosby explained that it is the combination of these elements, not any one individually, that is significant. (*Id.* at 1528:15-1529:7.). According to Mr. Crosby, because Mr. Kim did not claim to conceive of the combination of these elements, he cannot have made a significant contribution to the claimed inventions. (*Id.* at 1529:8-1530:1.).

Respondents' expert, Dr. Woloszko, did not provide contrary testimony to that of Mr. Crosby. (Tr. (Woloszko) at 978:13-991:9.).

Although none of the Parties presented an analysis of the *Pannu* factors, the evidence that was presented through Serendia's expert, Mr. Crosby, was not controverted. It is therefore a finding of this ID that, if Mr. Kim contributed anything, his contributions consisted only of subject matter that was already in the prior art, consistent with *Pannu*. Dr. Na credibly testified that [redacted]. (Tr. (Na) at 99:16-100:16, 100:17-22, 101:2-23.). Respondents failed to present clear and convincing evidence that Mr. Kim contributed significantly to the claimed inventions.

Respondents argued that *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456 (Fed. Cir. 1998) ("*Ethicon*") supports Respondents' arguments that Mr. Kim is a co-inventor. It does not. In *Ethicon*, the Federal Circuit affirmed the Federal district court's holding that Mr. Choi was an omitted co-inventor for two reasons. First, Mr. Choi presented drawings depicting the subject

matter he conceived. *Id.* at 1464. Dr. Yoon needed someone with Mr. Choi's expertise, Dr. Yoon proposed that he and Mr. Choi work together to develop new products, their business relationship was informal, Mr. Choi wasn't paid for his work, Mr. Choi's drawings were very similar to the patent figures, and Mr. Choi described himself as having been a "member' of Dr. Yoon's business. *Id.* at 1464. Second, in *Ethicon*, although the inventor Dr. Yoon claimed that he disclosed the ideas to Mr. Choi before Mr. Choi drew them, Dr. Yoon's testimony and evidence were found by the *Ethicon* court to not be credible. Apparently, Dr. Yoon attempted to rebut Mr. Choi's evidence using an altered drawing that was rejected as unreliable due to how it was altered. The Federal district court found that Dr. Yoon had "altered and backdated documents to make it appear that he had independently invited [the subject matter]." Moreover, the trial court had also found that Dr. Yoon's testimony conflicted with his deposition testimony on key points. *Id.* at 1462.

Here, in contrast with *Ethicon*, it is a finding of this ID that Dr. Na's testimony is credible. Unlike in *Ethicon*, there is no evidence that Dr. Na altered or backdated ***documents*** to create the appearance that he independently developed the invention. There is no evidence of a conflict between Dr. Na's trial testimony and his deposition testimony.

Ultimately, it is a finding of this ID that, under the rule of reason analysis of *Troyan*, as well has under a *Pannu* analysis, that Respondents have failed to prove by clear and convincing evidence that Mr. Kim is a co-inventor of any of the Asserted Patents. Additionally, Mr. Kim's failures to assert any rights in the Asserted Patents for 14 years, as described above, also constitute significant direct and circumstantial evidence that Mr. Kim is not a co-inventor.

V. THE PRODUCTS AT ISSUE

A. Respondents' Accused Products

As defined in the NOI, the accused products in plain language consist of Respondents' "RF microneedling dermatological treatment devices and components thereof[.]" Fed. Reg. 88 at 20552 (Apr. 6, 2023). Below is a table of the Accused Products that identifies each associated Respondent. (*See* CPBr. at 4; CBr. at 6.).

Accused Product(s)	Respondents
Potenza	Jeisys, Cynosure
EndyMed Pro and Pure 2.0 with Intensif handpiece ("Intensif")	EndyMed

EndyMed has multiple Accused Products. It is undisputed that EndyMed's Accused Products are representative of each other for purposes of infringement. EndyMed stipulated that "the EndyMed Pro (when used with the Intensif applicator) and the EndyMed Pure 2.0 (when used with the Intensif applicator), are representative of each other with respect to the Accused Functionality." (JX-0024C.0002 (EndyMed Rep. Product Stip.), ¶ 3; *see also id.* ¶¶ 4-6.). Serendia also presented unrebutted testimony that the Accused Products "are functionally identical." (Tr. (Daniel van der Weide)[22] at 279:24-280:3.). Additionally, Respondents did not

[22] When he testified as an expert witness during the Hearing on November 2, 2023, Dr. Daniel van der Weide was a Professor of Electrical and Computer Engineering with appointments in Radiology, Biomedical Engineering, and Materials Science. (CPSt. at Ex. 3.). Serendia identified Dr. van der Weide as an expert to testify about, *inter alia*, "the state of the art at issue, the skill level of one of ordinary skill in the art, disclosures in the asserted patents and patents or patent applications to which the asserted patents claim priority, issues relating to claim construction, infringement, validity (including secondary considerations), enforceability of the asserted patents, and the technical prong of domestic industry." (CPSt. at 6.). He was accepted without objection as an expert for the subject matter for which he was called to testify.

challenge the representativeness of the identified EndyMed Accused Products in their Pre-Hearing Brief. (RPBr. at 2.). Thus, any argument on this issue is deemed abandoned or withdrawn under Ground Rule 7.2. (GR 7.2.).

In Respondents' Pre-Hearing Brief, Jeisys contended that its accused needle tip components for the accused Potenza product are not representative of each other for purposes of claims 1 and 14 of the '836 patent's final limitation, "configured to cause coagulation around each electrode rather than coagulating between the electrodes" (the "coagulation" limitation). (RPBr. at 2.). However, Jeisys did not make this argument in its Initial Post-Hearing Brief. Thus, any argument on this issue is deemed waived under Ground Rule 10.1. (G.R. 10.1.). Moreover, Jeisys' contention is not unsupported by the evidence. For example, Jeisys' expert agreed that each of the needle tips identified in the Potenza 510(k) materials are used to coagulate tissue. He also acknowledged that he did not identify any contrary information in the 510(k) submissions (i.e., that would support his attempted Hearing testimony) that would distinguish among needle tips, or with respect to how different needle tips operate with the Potenza product. (Tr. (James F. Brennan III)[23] at 1193:17-1194:2; *see also* CPBr. at 24 (Potenza representativeness).).

Accordingly, Serendia has proven with virtually unrebutted evidence that the Accused Products it analyzed are representative of other Accused Products.

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[23] When he testified during the Hearing as an expert witness on December 11, 2023, Dr. James Brennan was a Principal at Exponent, Inc. (RPSt. at App. F.). Respondents identified Dr. Brennan as an expert to testify about, *inter alia*, "the level of ordinary skill in the art, the background technology, the subject matter and file history of the Asserted Patents and related patents, non-infringement of the Potenza product, non-infringing alternatives, and the March 2012 Jeisys cense agreement." (RPSt. at 4.). He was accepted without objection as an expert witness on the subjects for which he was called to testify.

B. Serendia's DI Products

The alleged domestic industry product for all Asserted Patents is the "SylfirmX product, its related handpieces, and needles assemblies" ("Sylfirm X or "DI Product"). (Doc. ID No. 796488 (Disclosure of Domestic Industry Products) (May 15, 2023).).

VI. PERSON OF ORDINARY SKILL IN THE ART[24]

A. Definition of a Person of Ordinary Skill in the Art

Respondents proposed one definition of a person with skill in the art for all Asserted Patents, while Serendia proposed one definition for the Needle Assembly Patents and a somewhat similar definition for the Na Effect Patent.

For the Needle Assembly Patents, the Private Parties proposed similar levels of ordinary skill in the art. The Private Parties' proposed definitions are as follows (material differences identified in bold):

Complainant's Definition	**Respondents' Definition**
"(1) seven to ten years of experience with developing and/or using ***of tissues***, and (2) a related graduate engineering degree or M.D. and may have worked as part of a multidisciplinary team and drawn upon not only his or her own skills, but also would have taken advantage of certain specialized skills of others on the team when solving a technical problem." (CMBr. at 21 (emphasis added).).	"(1) 7-10 years of experience with developing and/or ***using treatment systems for delivery of electromagnetic radiation energy to skin or other tissues***, and (2) a related graduate engineering degree or M.D. The POSA may have worked as part of a multidisciplinary team and drawn upon not only his own skills, but also taken advantage of certain specialized skills of others on the team when solving a technical problem." (SMBr. at 14 (emphasis in original) (citing Ilooda's Supplemental Response to Serendia's Interrogatory No. 14 (June 14, 2023)); *see also* CMBr. at 21-22.).

[24] The legal standard for the level of ordinary skill in the art can be found in the *Markman* Order. (*See Markman* Order at 9-10.).

The Patent and Trial and Appeal Board ("PTAB"), in its decision denying institution of *inter partes review* ("IPR") of the '536 patent, adopted the same definition as the Respondents proposed in this Investigation. (*See* JXM-0016 (IPR2022-00378 Decision Denying Institution of *Inter Partes Review* of the '536 Patent) at 10 (noting that "Serendia does not contest" the proposed definition).). Although there does not appear to be a material difference between the Private Parties' proposals, Respondents' proposed definition for the Needle Assembly Patents has been adopted in view of the PTAB's decision and because Serendia did not dispute that definition during the IPR proceeding.

For the Na Effect Patent, Private Parties proposed substantively identical levels of ordinary skill in the art. The Private Parties' proposed definitions are as follows:

Complainant's Definition	**Respondents' Definition**
"(1) 7-10 years of experience with developing and/or using treatment systems for delivery of electromagnetic radiation energy to skin or other tissues, and (2) a related graduate engineering degree or M.D. and may have worked as part of a multidisciplinary team and drawn upon not only his or her own skills, but also would have taken advantage of certain specialized skills of others on the team when solving a technical problem." (CMBr. at 21.).	"(1) 7-10 years of experience with developing and/or using treatment systems for delivery of electromagnetic radiation energy to skin or other tissues, and (2) a related graduate engineering degree or M.D. The POSA may have worked as part of a multidisciplinary team and drawn upon not only his own skills, but also taken advantage of certain specialized skills of others on the team when solving a technical problem." (SMBr. at 15 (citing Ilooda's Supplemental Response to Serendia's Interrogatory No. 14 (June 14, 2023)); *see also* CMBr. at 21-22.).

The Private Parties' proposed definition for the Na Effect Patent has been adopted as follows: "(1) 7-10 years of experience with developing and/or using treatment systems for delivery of electromagnetic radiation energy to skin or other tissues, and (2) a related graduate engineering degree or M.D. and may have worked as part of a multidisciplinary team and drawn