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Attorneys for Plaintiff

UNITED STATES DISTRICT COURT

WESTERN DISTRICT OF TEXAS

AUSTIN DIVISION

)

OPTRASCAN, INC.)	Cause No. 1-23-cv-00733
Plaintiff,)	COMPLAINT FOR PATENT
V.)	INFRINGEMENT
MORPHLE LABS INC.)	JURY TRIAL DEMANDED
Defendant.)	

Plaintiff OptraSCAN, Inc. ("Optrascan") complains of Defendant Morphle Labs Inc. ("Morphle" or "Defendant") as follows:

I. <u>NATURE OF LAWSUIT</u>

1. This is a claim for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

II. <u>THE PARTIES</u>

2. Plaintiff Optrascan is a corporation having a principal place of business located in San Jose, California. Optrascan is the owner, by assignment, of U.S. Patent Number 10,338,365 (the '365 Patent) issued July 2, 2019, and entitled "Slide Storage, Retrieval, Transfer, and Scanning System for a Slide Scanner" (copy attached as Exhibit A) and U.S. Patent Number 10,586,376 (the '376 Patent) issued March 10, 2020, and entitled "Automated Method of Predicting Efficacy of Immunotherapy Approaches" (copy attached as Exhibit B). Optrascan owns all rights, title, and interest in, and has standing to sue for infringement of the '365 Patent and '376 Patent.

3. On information and belief, Defendant Morphle is in the business of providing microscope slide scanners and is located New York City, New York and Bangalore, India.

III. JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the patent laws of the United States of America, Title 35 U.S.C. This Court has jurisdiction over the subject matter of the Complaint under 28 U.S.C. §§ 1331 and 1338(a).

5. Personal Jurisdiction over the defendant is proper in this Court in that Defendant has done, and continues to do, business in this district. Venue in this judicial district is proper under 28 U.S.C. §§ 1391(b), (c) and/or 1400(b) in that a substantial part of the events giving rise to the patent infringement claims herein have taken place and may still be taking place in this judicial district.

IV. <u>THE SUBJECT PATENTS</u>

7. The '365 Patent and '376 Patent are directed to techniques to retrieve, transfer and scan slides for analysis. Such a method of treatment finds particular value in analyzing slides, for example, pathology slides of sections of a tissue in an automated and in a time efficient manner with fidelity of the results maintained. The patented technology thus makes it simpler and quicker, with more consistent results than prior methods.

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8. The '365 Patent is entitled, "Slide Storage, Retrieval, Transfer, and Scanning System for a Slide Scanner" and contains multiple claims directed to the automated scanning of slides, including those with pathology tissue sections. The '365 Patent was properly and duly issued by the United States Patent and Trademark Office and the '365 Patent is presumed to be valid.

9. The '376 Patent is entitled, "Automated Method of Predicting Efficacy of Immunotherapy Approaches" and contains multiple claims directed to the automated scanning of slides, including those with pathology tissue sections. The '376 Patent was properly and duly issued by the United States Patent and Trademark Office and the '376 Patent is presumed to be valid.

V. <u>DEFENDANT'S ACTS OF INFRINGEMENT</u>

10. Optrascan restates and incorporates by reference paragraphs 1 through 9 above as if fully re-stated herein.

11. The inventors of the '365 Patent, Abhijeet Gholap, Anagha Jadhav, Isha Doshi and Somwanshi were the first to identify and put into practice the use of an automated slide storage, retrieval, transfer and scanning system of the type and form of the claimed invention. Abhijeet Gholap, Anagha Jadhav, Isha Doshi and Somwanshi have assigned their rights in the '365 Patent to Optrascan.

12. The inventors of the '376 Patent, Abhijeet Gholap, Anagha Jadhav and Gurunath Kamble were the first to identify and put into practice the use of an automated method to predict the efficacy of an immunotherapy treatment of the type and form of the claimed invention. Abhijeet Gholap, Anagha Jadhav and Gurunath Kamble have assigned their rights in the '376 Patent to Optrascan.

13. Prior to their invention as claimed in the '365 Patent and '376 Patent, the scanning and analysis of slides was a timely process. The invention patented in the '365 Patent and '376 Patent made analysis of slides, including those with tissue sections easier and the result of the analysis, more accurate.

14. Defendant was informed of its infringing activity in writing no later than November 17, 2022, by Optrascan. Despite the written notice, Defendant has continued to undertake activities, including offering for sale and selling slide readers that infringe the two patents-in-suit. These offers

COMPLAINT

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for sale and sales have been made throughout the United States and include offer for sale and sales of the infringing slide readers in Texas and more specifically, within Austin, Texas. Defendant has continued to infringe the '365 Patent (Exhibit A – Infringement Claim Chart '365 Patent) and '376 Patent (Exhibit B – Infringement Claim Chart '376 Patent) as Defendant is well aware of the significant benefits provided by Optrascan's patented technology to Defendant's infringing slide readers.

15. Indeed, knowing that the inventive patented technology provided significant benefits to Defendant's slide reader, including the Morpholens 6, Morpholens 240 and Hemolens, Defendant has decided to proceed with using the inventive method without obtaining the consent of Optrascan. Instead, Defendant, with full knowledge of the '365 Patent's and '376 Patent's existence, have willfully infringed the '365 Patent and '376 Patent to the great detriment and loss of Optrascan.

16. Defendant has been on notice of the '365 Patent and Optrascan's claims of infringement, and, for at least this reason, Defendant's actions are believed to be willful and undertaken with the intent to infringe the '365 Patent.

17. Defendant has been on notice of the '376 Patent and Optrascan's claims of infringement, and, for at least this reason, Defendant's actions are believed to be willful and undertaken with the intent to infringe the '376 Patent.

14. Defendant's direct infringement and inducement to infringe have been willful and have deliberately injured and will continue to injure Optrascan unless and until the Court enters an injunction prohibiting further infringement and, specifically, enjoining further use, sale and/or offer for sale of the patented method that fall within the scope of the '365 Patent's and '376 Patent's claims.

VI. <u>PRAYER FOR RELIEF</u>

WHEREFORE, Optrascan asks this Court to enter judgment against Defendant and against its subsidiaries, affiliates, agents, servants, employees and all persons in active concert or participation with them, granting the following relief:

COMPLAINT

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A. An award of damages adequate to compensate Optrascan for the infringement that has occurred, together with prejudgment interest from the date infringement of the '365 Patent and '376 Patent began;

B. Increased damages as permitted under 35 U.S.C. § 284;

C. A finding that this case is exceptional and an award to Optrascan of its attorneys' fees and costs as may be appropriate and as provided by 35 U.S.C. § 285;

D. A permanent injunction prohibiting further infringement, inducement and contributory infringement of the '365 Patent and '376 Patent.

E. Pre-judgment interest calculated from the time of the first occurrence of any infringing activity through and until entry of judgment; and

F. Such other and further relief as this Court or a jury may deem proper and just.

VII. JURY DEMAND

Optrascan demands a trial by jury on all issues presented in this Complaint.

Dated: June 28, 2023

- By: <u>/s/ Peter D. Weinstein</u> Peter D. Weinstein, Ph.D., J.D. Texas State Bar No. 24126484 <u>peter.weinstein@entralta.com</u> Entralta P.L.L.C. 4500 Williams Dr. Ste 212, PMB 511 Georgetown, TX 78633
- By: <u>/s/ Graigory B. Fancher</u> Graigory B. Fancher Texas State Bar No. 24052016 <u>gfancher@bwwlaw.com</u> Bourland, Wall & Wenzel, P.C. 301 Commerce Ste 2500 Fort Worth, TX 76102

Attorneys for Plaintiff OptraSCAN, Inc.

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U.S. PATENT No. 10,338,365

"Slide Storage, Retrieval, Transfer and Scanning System for a Slide Scanner"

CLAIM CHART

MORPHLE

The following claim chart is for illustrative purposes only and sets out Plaintiff's current views as to infringement of at least claim 1 of the '365 Patent. Plaintiff will supplement this chart as needed as the action progresses and reserves the right to make changes as needed as discovery progresses and further information comes to light.

OptraScan Claim	Morphle Technology
1. A slide storage,	1. Morphle provides a slide storage, retrieval, transfer and
retrieval, transfer and	scanning system for a slide scanner comprising:
scanning system for a	a slide scanning stage that receives a slide into a slide holder
slide scanner	below a microscope objective and moves the slide holder (via a
comprising: a slide	lead screw) in relation to the microscope objective in order to scan
scanning stage	the slide;
configured to receive a	
slide into a slide holder	Morphle provides a slide storage assembly (i.e., housing)
below a microscope	configured to store at least one slide basket (i.e., slide cassette),
objective and move the	wherein each of the at least one slide basket (i.e., slide cassette) is
slide holder in relation	configured to store at least six slides;
to the microscope	
objective in order to	Morphle provides a slide basket transfer assembly configured to
scan the slide;	store at least one slide basket as it grips the slide basket (i.e., slide
	cassette) and retrieves the slide basket for scanning beneath the
a slide storage assembly	microscope objective, and after scanning, returns the slide basket
configured to store at	(i.e., slide cassette) into the slide storage assembly (i.e., housing)
least one slide basket,	respectively;
wherein each of the at	
least one slide basket is	Morphle provides a slide transfer assembly that is integrally
configured to store a	formed with the slide basket transfer assembly and a slide basket
plurality of slides;	holder configured to retrieve a slide from the slide basket transfer
	assembly, deliver the slide to the slide scanning stage of a slide
a slide basket transfer	scanner, and return the slide from the slide scanning stage to the
assembly configured to	slide basket transfer assembly;
retrieve and store the	
at least one slide basket	Morphle provides a slide basket holder of the slide basket transfer
from and into the slide	assembly being configured to move vertically along a Z axis in
storage assembly,	order to transfer a slide basket from the slide storage assembly
respectively;	(i.e., housing) to the slide transfer assembly; and a support base

a slide transfer assembly configured to retrieve a slide from the slide basket transfer assembly, deliver the slide to the slide scanning stage of a slide scanner, and return the slide from the slide scanning stage to the slide basket transfer assembly;

a slide basket holder of the slide basket transfer assembly being configured to move vertically along a Z axis in order to transfer a slide basket from the slide storage assembly to the slide transfer assembly; and a support base of the slide transfer assembly being configured to move horizontally in an X-Y plane in order to transfer a slide from the slide basket transfer assembly to the slide scanning stage of the slide scanner, wherein the Z axis is perpendicular to the X-Y plane.

integrally formed with the slide transfer assembly and being configured to move horizontally in an X-Y plane in order to transfer a slide from the slide basket transfer assembly integrally formed with the slide transfer assembly to the slide scanning stage of the slide scanner, wherein the Z axis is perpendicular to the X-Y plane.

By Example: "MorphoLens 240 Demo Video"

Morpholens 240 slide scanner | Morphle Digital Pathology (morphlelabs.com) The demo video displays and demonstrates a slide scanning stage configured to receive a slide into a slide holder below a microscope objective in order to scan the slide. This is shown in at least timestamps 0:30 to 0:41 of the video.

The demo video further displays and demonstrates a slide storage assembly configured to store at least one slide basket, wherein each of the at least one slide basket is configured to store a plurality of slides. This is shown in at least timestamps 0:17-0:28 and 0:58-1:02 of the demo video and further shown in the screen shot below:



The demo video also displays and demonstrates a slide basket transfer assembly configured to retrieve and store the at least one side basket from and into the slide storage assembly, respectively. This is shown in at least timestamps 0:30-0:35 of the demo video. The slide basket transfer assembly of Morphle retrieves a slide basket (functionally equivalent slide cassette) for scanning by a slide scanner as shown in the demo video and the screen shots below:



The demo video further displays and demonstrates a slide transfer assembly configured to retrieve a slide from the slide basket transfer assembly, deliver the slide to the slide scanning stage of the slide scanner, and return the slide from the slide scanning stage to the slide basket transfer assembly. This structure and functionality is shown in at least timestamps 0:30-0:35 of the demo video. As the lead screw turns, an individual slide is translated beneath a slide scanner via the slide transfer assembly which is integrated with a slide basket holder, therefore operating as a slide transfer assembly within the metes and bounds of the claimed limitations.

The demo video also displays and demonstrates a slide basket holder of the slide basket transfer assembly being configured to move vertically along a Z axis in order to transfer a slide basket from the slide storage assembly to the slide transfer assembly; and a support base of the slide transfer assembly being configured to move horizontally in an X-Y plane in order to transfer a slide from the slide basket transfer assembly to the slide scanning stage of the slide scanner, wherein the Z axis is perpendicular to the X-Y plane. This is shown in at least timestamps 0:29-0:35 of the demo video. Vertical movement of the slide basket holder is inherent given that the slide basket transfer assembly must elevate to scan the remaining batch of slide baskets. The slide basket holder is integral with the slide basket transfer assembly as shown in the demo video and screen shot below:



7. The slide storage, retrieval, transfer and scanning system for a slide scanner as claimed in claim 1 comprising: the slide basket transfer assembly comprising a track and a slide basket holder;

the slide basket holder being configured to move along the track;

and the slide basket holder being configured to removably receive a slide basket. 7. Morphle provides a slide basket transfer assembly comprising a track and a slide basket holder; the slide basket holder being configured to move along the track;

Morphle provides the slide basket holder being configured to removably receive a slide basket.

By Example: "MorphoLens 240 Demo Video"

Morpholens 240 slide scanner | Morphle Digital Pathology (morphlelabs.com) The MorphoLens 240 demo video displays and demonstrates a slide basket transfer assembly comprising a track and a slide basket holder; the slide basket holder being configured to move along the track. This is shown in at least timestamps 0:29-0:39 and in the screen shot reproduced below where the track is clearly visible in the bottom of the frame which guides the movement of the slide basket transfer assembly, and therefore the slide basket holder, as it holds slides stationary for scanning.







U.S. PATENT No. 10,586,376

"Automated Method of Predicting Efficacy of Immunotherapy Approaches"

CLAIM CHART

MORPHLE

The following claim chart is for illustrative purposes only and sets out Plaintiff's current views as to infringement of at least claim 1 of the '376 Patent. Plaintiff will supplement this chart as needed as the action progresses and reserves the right to make changes as needed as discovery progresses and further information comes to light.

OptraScan Claim	Morphle Technology
1. An automated method of predicting	1. Morphle provides an automated slide scanning system and a processing device, wherein the automated slide scanning system comprises an image
immunotherapy approaches comprises	electronically connected to the processing device;
the steps of:	Morphle provides the receiving of a sample slide through the automated slide scanning system, wherein a tissue sample is mounted to the sample
(A) providing an	slide;
automated slide	A A such that the state of the
scanning system and a processing device, wherein the automated	sample through the image acquisition unit;
slide scanning system	Morphle provides the execution of at least one cell segmentation process
comprises an image	on the slide image through the processing device in order to identify a
acquisition unit, and	plurality of cells from the slide image;
wherein the automated	
slide scanning system is	Morphle provides analyzing a plurality of cells with at least one cell
electronically	classification algorithm through the processing device in order to identify a
connected to the	tumor cell percent positivity value and an immune cell percent positivity
processing device;	value;
(B) receiving a sample	Morphle provides calculating a treatment efficacy score from the tumor
slide through the	cell percent positivity value and the immune cell percent positivity value.
automated slide	
scanning system,	By Example: HemoLens product website
wherein a tissue sample	Hemolens (morphlelabs.com) The HemoLens product website displays and
is mounted to the	demonstrates the provision of an automated slide scanning system and a
sample slide;	processing device, wherein the automated slide scanning system
	comprises an image acquisition unit, and wherein the automated slide
(C) acquiring at least	scanning system is electronically connected to the processing device. This
one slide image of the	is shown in the screen shots reproduced immediately below in which an
tissue sample through	automated slide scanning system is depicted with the capability of AI-





addition to Al-enabled cell differentiation provided by Morphle, it is cl and apparent the technology of Morphle as disclosed on the product website comprises at least one cell classification algorithm that identi tumor cell percent positivity value and an immune cell percent positiv value.	ear fies a 'ity
 2. The automated 2. Morphle provides the ability to analyze a plurality of cells with at le one cell classification algorithm through the processing device in order identify at least one biomarker. 	ast r to
approaches as claimed	
in claim 1 comprises the By Example: HemoLens product website	
step of: <u>Hemolens (morphlelabs.com)</u> The HemoLens product website display	s and
analyzing the plurality demonstrates the ability to analyze a plurality of cells with at least on	e cell
classification algorithm through the processing device in order to ider	tify
al least one biomarker. This is shown in at least subsections 2 and 3 of all algorithm through the "The All-Digital Workflow" sections of the product website. The ability	the
processing device in sort flag and nre-flag cells cell-types and other abnormalities is	/ 10
order to identify at least consistent with the ability to identify at least one biomarker.	
one biomarker.	
4. The automated 4. Morphle provides a method comprising the steps of: wherein the a	t
method of determining least one slide image is a whole slide image of the sample slide; execu	ting
potential efficacy of the at least one cell segmentation process on the whole slide image	
immunotherapy through the processing device in order to identify a plurality of cell ne	sts
approaches as claimed from the slide image.	
in claim 1 comprises the	
steps of: Morphie provides wherein the plurality of cells identified from the wr	ole
wherein the at least slide image comprises a heterogeneous cell population comprising tul	nor
one slide image is a cells and non-tumor cells, and wherein the plurality of cell nests is	
the sample slide:	
executing the at least	
one cell segmentation By Example: HemoLens product website	
process on the whole Hemolens (morphlelabs.com)	
slide image through the The HemoLens product website displays and demonstrates the ability	to
processing device in capture a whole slide image of a sample slide and execute at least one	e cell
order to identify a segmentation process on the whole slide image through the processir	ng
plurality of cell nests device in order to identify a plurality of cell nests from the slide image	. This
from the slide image, is shown in at least the sections "The All-Digital Workflow" and "Design of the section o	gned
for Maximum Utility with Minimal AI" of the product website, which	
wherein the plurality of discloses flagging and sorting of cells and cell abnormalities, thereby	P.1.
whole slide image	liae
comprises a	
heterogeneous cell	
population comprising	

tumor cells and non-	The HemoLens product website further displays and demonstrates
tumor cells, and	wherein the plurality of cells identified from the whole slide image
wherein the plurality of	comprises a heterogeneous cell population comprising tumor cells and
cell nests is identified	non-tumor cells, and wherein the plurality of cell nests is identified from
from the	the heterogeneous cell population; and segregating the cell nests into
heterogeneous cell	tumor regions and non-tumor regions. This is shown in at least sections
population; and	"The All-Digital Workflow" and "Designed for Maximum Utility with
segregating the cell	Minimal AI" of the product website, which discloses the sorting and
nests into tumor	flagging of cells and abnormalities and therefore provides the ability to
regions and non-tumor	segregate cell nests into tumor and non-tumor regions in addition to
regions.	meeting all of the remaining limitations of claim 4.
5. The automated	5. Morphle provides a method comprising the steps of: wherein the at
method of determining	least one slide image is a whole slide image of the sample slide: executing
potential efficacy of	the at least one cell segmentation process on the slide image through the
immunotherapy	processing device in order to identify tumor cells and immune cells from
approaches as claimed	the plurality of cells.
in claim 1 comprises the	
steps of	
wherein the at least	By Example: Hemol ens product website
one slide image is a	Hemolens (morphielabs.com)
whole slide image of	The Hemolens product website displays and demonstrates wherein the at
the sample slide:	least one slide image is a whole slide image of the sample slide: executing
executing the at least	the at least one cell segmentation process on the slide image through the
one cell segmentation	processing device in order to identify tymor cells and immune cells from
process on the slide	the plurality of cells. This is shown in at least sections "The All-Digital
image through the	Workflow" and "Designed for Maximum Utility with Minimal Al" of the
nrocessing device in	product website. These sections display the ability to differentiate, classify
order to identify tumor	sort and flag colls and apportualities, and therefore disclose the ability to
cells and immune cells	identify tymer cells and immune cells from a plyrality of cells in addition to
from the plurality of	the remaining limitations of claim 5
cells.	
6. The automated	6. Morphle provides a method comprising the steps of executing at least
method of determining	one masking algorithm through the processing device in order to identify a
notential efficacy of	plurality of cellular and subcellular structures of interest from the slide
immunotherany	image.
approaches as claimed	
in claim 1 comprises the	By Example: Hemolens product website
stens of	Hemolens (morphielabs.com)
executing at least one	The Hemolens product website displays and demonstrates the ability of
masking algorithm	executing at least one macking algorithm through the processing device in
through the processing	order to identify a plurality of cellular and subcellular structures of interact
device in order to	from the slide image. This is shown in at least the "The All-Digital
identify a nurality of	Workflow" and "Designed for Maximum Litility with Minimal Al" of the
cellular and subcellular	worknow and Designed for Maximum Ouncy with Minima AF of the
structures of interest	of collular and subcollular structures of interact from a clide image through
from the slide image	Al anabled coll differentiation and therefore meet the claimed limitation of
nom the shae image.	Arenableu cell unierentiation and therefore meet the claimed limitation of
	limitations of claim 6.

11. The automated method of determining potential efficacy of immunotherapy approaches as claimed in claim 1 comprises the steps of:

applying a plurality of image filters to the slide image through the processing device in order to produce a plurality of filtered and segmented slide images; and displaying at least one of the plurality of filtered and segmented slide images on a display device. 11. Morphle provides a method comprising the steps of: applying a plurality of image filters to the slide image through the processing device in order to produce a plurality of filtered and segmented slide images; and displaying at least one of the plurality of filtered and segmented slide images on a display device.

By Example: HemoLens product website

Hemolens (morphlelabs.com)

The HemoLens product website displays and demonstrates applying a plurality of image filters to the slide image through the processing device in order to produce a plurality of filtered and segmented slide images; and displaying at least one of the plurality of filtered and segmented slide images on a display device. This is shown in at least the screen shot reproduced below which clearly displays image filtering processes and the display of at least one of filtered and segmented slide images on a display device.

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- Pick specific etiologies from RBC morphometric parameters
- Filter based on diameters to hunt for microcytic and macrocytic anemias
- Sort cells based on elongation to quickly detect sickle cells
- Surface irregularity based sorting to check for Poikilocytosis