Appeal decision

Appeal No. 2017-4956

Kyoto, Japan
Appellant SHIMADZU CORPORATION

Patent Attorney KYOTO INTERNATIONAL PATENT LAW OFFICE

Tokyo, Japan
Appellant TOKYO UNIVERSITY OF SCIENCE

Patent Attorney KYOTO INTERNATIONAL PATENT LAW OFFICE

Regarding a case of an appeal against the examiner's decision of refusal on Japanese Patent Application 2012-268502 "Optical imaging apparatus" [Japanese Unexamined Patent Application Publication No.2014-115151, application published on Jun. 26, 2014], the appeal decision shall be made as follows.

Conclusion

The appeal of the case was groundless.

Reason

1 History of the procedures

The present application is an application filed on Dec. 7, 2012, reasons for refusal were notified as of Jun. 17, 2016, and, although an amendment was made as of Aug. 9, 2016, a decision of refusal was issued as of Jan. 4, 2017. In response to this, an appeal against the examiner's decision of refusal was demanded as of Apr. 7, 2017, and, at the same time, an amendment was made. Then, in the body, reasons for refusal were notified as of Jan. 11, 2018, and an amendment was made as of Feb. 26, 2018.

2 Invention

The inventions according to claims 1 to 10 of the present application are specified by the matters described in claims 1 to 10 of the scope of claims amended by the amendment dated Feb. 26, 2018, and the invention according to claim 1 (hereinafter, referred to as " Invention 1") is as follows.

"[Claim 1]

An optical imaging apparatus which projects light onto a biological sample, and detects light obtained from the sample in response to the projected light to create a two-dimensional image, the optical imaging apparatus comprising:

a) a sample stage for placing a biological sample thereon in a substantially horizontal position ;

b) an illuminating unit that emits excitation light to be projected onto the biological sample on the sample stage;

c) an imaging unit that obtains an image by fluorescence emitted from the biological sample in response to the excitation light from the illuminating unit;

d) a light-guiding optical system including a common reflection optical unit that bends both the excitation light and the fluorescence within a space so as to guide the excitation light from the illuminating unit to the biological sample, and to guide fluorescence from the biological sample to the imaging unit, wherein

the illuminating unit includes an emission unit arranged in a manner avoiding a optical axis of the fluorescence directed toward the imaging unit from the reflection optical unit, and excitation light emitted from the emission unit is projected onto the biological sample from the reflection optical unit approximately coaxial with a optical axis of the fluorescence directed toward the reflection optical unit from the biological sample."

3 Summary of the reasons for refusal notified by the body

The reasons for refusal notified by the body as of Jan. 11, 2018 (hereinafter, referred to as "the Reason for Refusal by the Body") are as follows.

"The inventions according to the following claims of this application could have been invented with ease by a person skilled in the art before filing of the application based on the inventions described in the following publications distributed in Japan or abroad, or inventions available to the public through electric communication lines before the filing of the application. Therefore, the applicant should not be granted a patent in accordance with the provisions of Article 29(2) of the Patent Act.

Note (See below regarding Cited Documents, etc.)
*Claims 1-3
*Cited Document 1

*Claims 4-9
*Cited Document 1, and Cited Document 2

*Claim 10
*Cited Document 1, Cited Document 2, and Cited Document 3

List of cited Documents and the like
Cited Document 1: United States Patent No. 7873407 Description
Cited Document 2: Publication of Japanese Translation of PCT International Application No. 2006-525494
Cited Document 3: Japanese Unexamined Patent Application Publication No. 2012-154628"

4 Cited Invention, Cited Documents, and the like
(1) Regarding Cited Document 1

In Cited Document 1, there are described the following matters along with drawings (the underlines were given by the body, and a line number depends on a numeral described in the page center).

A "TECHNICAL FIELD

This invention relates to optical imaging and in particular, to optical imaging in biological specimens." (Column 1, lines 37 to 40)

B " The specimen may be an animal (for example, a small animal, such as a mouse). The animal may be living. The object in the specimen may be tumor in the animal." (Column 8, lines 5 to 7)

C "Structured Illumination Mode
The measurement system 100 can also provide an illumination light intensity profile that is either uniform or structured (e.g., a spatially varying illumination intensity profile and/or an illumination profile that is controlled in time sequence) at the specimen position. This provides different means to obtain structural and optical information from the specimen, the information serving as input to 3D reconstruction algorithms. The light source used for structured fluorescence excitation can include one or more light source elements such as conventional lamps, LEDs, or lasers, for example. The illumination light can be delivered to the specimen directly or via fiber optics, dichroic beamsplitters, light pipes, diffusers, or any other optical device to transport and/or condition the light." (Column 32, lines 26 to 39)

D "For example, in some structured illumination modes of operation, different sides of a specimen can be illuminated in a chosen sequence. Moreover, each side of the specimen can be illuminated with a patterned light intensity profile, or with a sequence of light intensity patterns. Even a single light intensity pattern, used to illuminate one or more sides, can be used to realize the benefits of structured illumination. In general, a structured illumination mode provides for either simultaneous illumination of a specimen with a structured light source, or direction-sequential illumination with a structured light source." (Column 32, lines 40 to 50)

E "In a first aspect, structured illumination of a specimen can be provided by multiple light source elements arranged in a desired configuration around the specimen. For example, FIG. 12 shows an embodiment of a measurement system 100 that includes a source 102 configured to direct light 104 to a lens 431, which directs the light to reflect from a dichroic beamsplitter 430 and to pass through an imaging lens 433. The light is divided into two counter-propagating portions by a mirror 440. One of the portions is directed to reflect from a mirror 442, pass through lens 434, reflect from a first surface 200a of a pyramid 200, and impinge upon the specimen 2 from above in the plane of the figure. The second portion of the illumination light is directed to reflect from the mirror 442, pass through a lens 439, reflect from a second surface 200b of the pyramid 200, and impinge on the specimen from below in the plane of the figure. The structured illumination provided by the two beams induces fluorescence in the specimen. Portions of the emitted fluorescence retrace the optical paths of the excitation beams to the beamsplitter 430. Due the red-shift of the emitted fluorescence, the fluorescence radiation is transmitted through the dichroic beamsplitter 430 and is imaged by a lens 432 as two different views 116 of the specimen 2. The two views are captured by a detector system 118, which includes a CCD array. The embodiment shown in FIG. 12 is an epi-fluorescence measurement system, and the incident light and the emitted fluorescence encounter several optical elements common to the optical path of each." (Column 32, line 51 to Column 33, line 10)

F "FIG. 12 shows a two-dimensional projection of a three-dimensional measurement system. Therefore, optical elements that are not positioned in the plane of the figure are not depicted. For example, other surfaces of the pyramid 200 are not shown in figure- these are used to capture other views of the specimen. In general, other light source elements, mirrors, beamsplitters, and other optical elements can also be present. For example, a second set of light conditioning and collecting optics can be used to capture two additional views of the specimen propagating into and out of the plane of FIG. 12. In some embodiments, the measurement system can be only two-dimensional, however, as depicted. Further, in some embodiments, the surfaces 200a and 200b can be two surfaces of a mirror, or they can be the surfaces of two separate mirrors. In general, many combinations of optical elements can be provided in order to capture a two- or three-dimensional set of views of the specimen 2. The foregoing discussion applies as well to the embodiments of FIGS. 13-16, any of which may be configured to operate in a two-dimensional or three-dimensional imaging modality." (Column 33, lines 11 to 30)

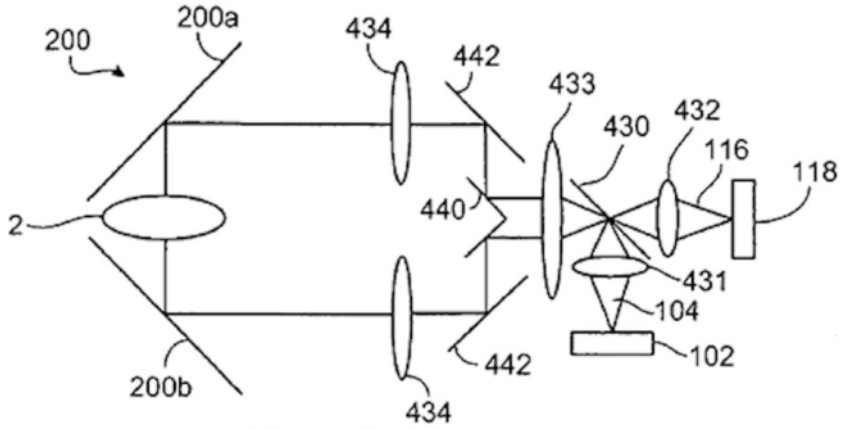

FIG. 12

G "Another embodiment of a measurement system that provides a structured illumination source is shown in FIG. 13. In this embodiment, light provided by optical fiber bundles 510 arranged around specimen 2 is used to illuminate the specimen and induce fluorescence. The emitted fluorescence is collected by a series of optical elements that are similar to those of FIG. 12. Since the illumination and fluorescence radiation do not share a common optical path, the embodiment of FIG. 13 is an example of a non-epi-fluorescence measurement system. In this embodiment, for example, the fiber bundle source elements 510 can be positioned to illuminate different sides of the specimen 2 via the reflective surfaces of the pyramid 200. Further, each of the source elements 510 can be selectively enabled to provide direction-sequential illumination when desired, or the sources may all be simultaneously enabled." (Column 33, lines 31 to 46)

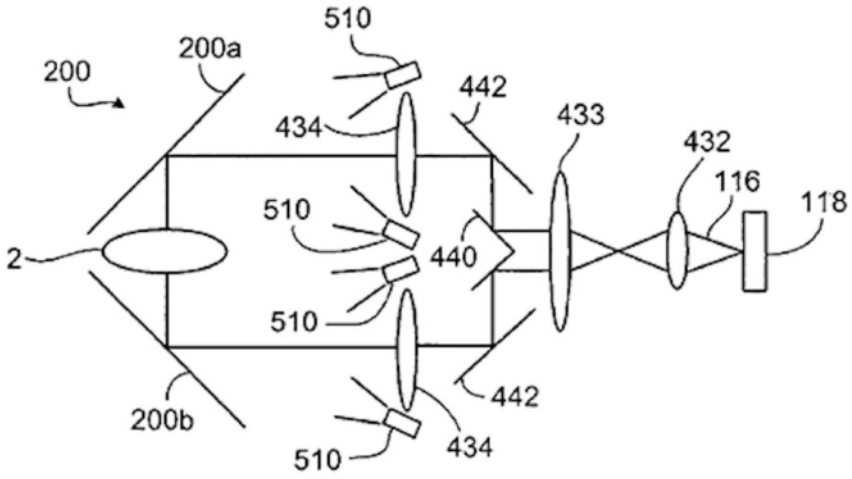

FIG. 13

H "Light 104 can be provided in the form of a light beam, such as a laser beam, or can have a more diffuse spatial intensity profile, such as for a lamp. In some embodiments, the light source 102 can include two or more light-producing elements providing light at the same or different wavelengths. For example, embodiments may feature a light source 102 that includes a first source element that produces reference illumination light, the reference illumination light including a broad distribution of wavelengths (i.e., white light), and a second source element that produces measurement illumination light having a relatively narrow distribution of wavelengths." (Column 37, lines 24 to 36)

I "Spatial light modulators and other optical devices and elements for modifying the spatial intensity profile of the illumination light 108 can also be used to provide more spatially uniform illumination of a specimen where desired in some embodiments." (Column 38, lines 50 to 54)

J "In general, a specimen of interest is mounted on an illumination stage 110, and illumination light is directed to be incident thereon. The illumination stage 110 can include a specimen holder, for example, secured to a supporting platform. The supporting platform can be affixed to a translation stage that provides the illumination stage 110 with multiple degrees of translational freedom. The position of the illumination stage 110 can be changed in response to an automated signal from the electronic control system 122, for example, or in response to a manual signal from an operator. In some embodiments, adjustment of the position of the specimen relative to the imaging system can also be accomplished by adjusting the positions of the light conditioning optics and the light collecting optics while the illumination stage 112 remains in the same position." (Column 38, line 62 to Column 39, line 9)

K In the above-mentioned "G", it is described that "The emitted fluorescence is collected by a series of optical elements that are similar to those of FIG. 12.". Therefore, it is described in FIG. 13 that, as with FIG. 12 and the above-mentioned "E"

("the optical paths of the excitation beams" cited as "Portions of the emitted fluorescence retrace the optical paths of the excitation beams to beamsplitter 430"), a portion of fluorescence, which is emitted to the upper side of the plane of the Figure from the specimen 2, is reflected by the first surface 200a of the pyramid 200, passes through the lens 434, and reflected by the mirror 442; the second portion of the fluorescence, which is emitted toward the lower side of the plane of the figure from the specimen 2, is reflected by the second surface 200b of the pyramid 200, passes through the lens 434, and is reflected by the mirror 442; and the two portions of the fluorescence reflected by the mirror 442 propagate in the same direction by the mirror 440, pass through the imaging lens 433, are imaged by the lens 432, and are captured by the detector system 118 including a CCD array.

In Cited Document 1, following the explanation of the example of FIG. 12 (the above-mentioned summarized matters "E" and "F"), it is described in the tail end of the above-mentioned summarized matter "F" that "the foregoing discussion applies as well to the embodiments of FIGS. 13-16, any of which may be configured to operate in a two-dimensional or three-dimensional imaging modality".

Therefore, within the explanation regarding the example of FIG. 12 in Cited Document 1, the explanation content regarding the technology that is in common with the example of FIG. 13 also applies to the example of FIG. 13. From this reason, it is recognized that in Cited Document 1 the following invention (hereinafter, referred to as "Cited Invention") is described, as the example of FIG. 13.

"A measurement system 100 ("C") related to optical imaging in biological specimens (from the above-mentioned "A", and the same applies hereafter), wherein

one of portions of illumination light reflects from the first surface 200a of the pyramid 200, and is directed so as to impinge upon the specimen 2 from above in the plane of the figure; a second portion of the illumination light reflects from the second surface 200b of the pyramid 200, and is directed so as to impinge upon the specimen 2 from below in the plane of the Figure; the illumination induces fluorescence in the specimen ("E"); a portion of the fluorescence emitted from the specimen 2 toward the upper side of the plane of the Figure reflects from the first surface 200a of the pyramid 200, passes through the lens 434, and reflects from the mirror 442; a second portion of the fluorescence emitted from the specimen 2 toward a downward direction of the plane of the Figure reflects from the second surface 200b of the pyramid 200, passes through the lens 434, reflects from the mirror 442; the two portions of the fluorescence reflected by the mirror 442, propagate in the same direction by the mirror 440, pass through the imaging lens 433 ("K"), the fluorescence radiation is imaged as two different views 116 of the specimen 2 by the lens 432, and the two views are captured by the detector system 118 including a CCD array ("E"), wherein

the surface 200a and the surface 200b can be two surfaces of a mirror, or can be the surfaces of two separate mirrors ("F"), wherein

the measurement system 100 is a non-epi-fluorescence measurement system in which the illumination and fluorescence radiation do not share a common optical path ("G"), and the fiber bundle source elements 510 can be positioned to illuminate different sides of specimen 2 via the reflective surfaces of the pyramid 200 ("G"), and wherein

a specimen of interest is mounted on the illumination stage 110, and illumination

light is directed to be incident thereon ("I")."

5 Comparison / Judgment
(1) Comparison
Invention 1 and Cited Invention will be compared.
A Since "mouse" is illustrated as "specimen" in Cited Document 1 (the cited matter "B"), "biological specimen" in Cited Invention corresponds to "biological sample" in Invention 1 in light of the statement of "a biological sample 7 such as a mouse" in paragraph [0030] of the description of the present application.

B In light of the above "A", in "the measurement system 100" in Cited Invention, "illumination light" "impinges upon the specimen 2", "the illumination induces fluorescence in the specimen", "fluorescence radiation" "is imaged by the lens 432" as "the views 116", and "the views are captured by the detector system 118 including a CCD array". Therefore, "the measurement system 100" corresponds to "an optical imaging apparatus which projects light onto a biological sample, and detects light obtained from the sample in response to the projected light to create a two-dimensional image" in Invention 1.

C In light of the above-mentioned "A", "the illumination stage 110" on which a "specimen of interest" is "mounted" in Cited Invention, and, "a) a sample stage for placing a biological sample thereon in a substantially horizontal position" in Invention 1 are common in a point of being "a) a sample stage for placing a biological sample thereon".

D In light of the above-mentioned "A" and "C", "the fiber bundle source elements 510" "to illuminate different sides of specimen 2", which "is mounted on the illumination stage 110, and illumination light is directed to be incident thereon" in Cited Invention is one that "induces fluorescence in the specimen" by "illumination", and, therefore, corresponds to "b) an illuminating unit that emits excitation light to be projected onto the biological sample on the sample stage" in Invention 1.

E In light of the above-mentioned "A", "CCD array" in Cited Invention that "captures" "fluorescence radiation" "induced" by "illumination" as "views" "imaged by the lens 432" corresponds to "c) an imaging unit that obtains an image by fluorescence emitted from the biological sample in response to the excitation light from the illuminating unit" in Invention 1.

F In Cited Invention, "mirror" having "the first surface 200a of the pyramid 200" and "the second surface 200b of the pyramid 200", "via" which "illumination" from "the fiber bundle source elements 510" travels "to illuminate sides" of "the specimen 2", and which "reflects" "a portion of the fluorescence emitted from the specimen 2 toward the upper side of the plane of the Figure" and "a second portion of the fluorescence emitted from the specimen 2 toward a downward direction of the plane of the Figure", corresponds to "a common reflection optical unit that bends both the excitation light and the fluorescence within a space" in Invention 1.

G In light of the above-mentioned "F", the above "mirror" having "the first surface 200a of the pyramid 200" and "the second surface 200b of the pyramid 200", and "the lens 434", "the mirror 442" and "the mirror 440" for making two "portions" of "fluorescence" "propagate in the same direction" "to be imaged by the lens 432" and "captured by the detector system 118 including a CCD array" in Cited Invention correspond to "d) a light-guiding optical system including a common reflection optical unit that bends both the excitation light and the fluorescence within a space so as to guide the excitation light from the illuminating unit to the biological sample, and guide fluorescence from the biological sample to the imaging unit" in Invention 1.

H Since it is a matter of common general technical knowledge that an end of "optical fiber bundle" is made to be an emitting part of light, the matter in Cited Invention that "illumination" which "does not share a common optical path" with "fluorescence radiation" includes an end of "optical fiber bundle" of "the fiber bundle source elements 510" corresponds to "the illuminating unit includes an emission unit arranged in a manner avoiding a optical axis of the fluorescence directed toward the imaging unit from the reflection optical unit" in Invention 1.

I In light of the above-mentioned "A", "F" and "H", the matter in Cited Invention that "illumination light" emitted from an end of "the fiber bundle source elements 510" "illuminates sides" "of the specimen 2 via the reflective surfaces of the pyramid 200" and the matter in Invention 1 that "excitation light projected from the emission unit is projected onto the biological sample from the reflection optical unit approximately coaxial with a optical axis of the fluorescence directed toward the reflection optical unit from the biological sample" are common in a point that "excitation light projected from the emission unit is projected onto the biological sample from the reflection optical unit".

J "A measurement system 100 related to optical imaging" in Cited Invention corresponds to "optical imaging apparatus" in Invention 1.

From the above, the corresponding feature and the different features between Invention 1 and Cited Invention are as follows.
(Corresponding features)
"An optical imaging apparatus which projects light onto a biological sample, and detects light obtained from the sample in response to the projected light to create a two-dimensional image, the optical imaging apparatus comprising:

a) a sample stage for placing a biological sample thereon;

b) an illuminating unit that emits excitation light to be projected onto the biological sample on the sample stage;

c) an imaging unit that obtains an image by fluorescence emitted from the biological sample in response to the excitation light from the illuminating unit;

d) a light-guiding optical system including a common reflection optical unit that bends both the excitation light and the fluorescence within a space so as to guide the excitation light from the illuminating unit to the biological sample, and guide fluorescence from the biological sample to the imaging unit, wherein

the illuminating unit includes an emission unit arranged in a manner avoiding a

optical axis of the fluorescence directed toward the imaging unit from the reflection optical unit, and excitation light projected from the emission unit is projected onto the biological sample from the reflection optical unit."

(Different Feature 1)

A point that, in Invention 1, a sample stage makes a biological specimen be "placed thereon in a substantially horizontal position" , whereas, in Cited Invention, although "a specimen of interest" that is a "biological specimen" is "placed" on "the illumination stage 110", it is not explicitly stated that it is "placed" " in a substantially horizontal position ".

(Different Feature 2)

A point that, in Invention 1, excitation light emitted from the emission unit is projected onto the biological specimen from the reflection optical unit "approximately coaxial with a optical axis of the fluorescence directed toward the reflection optical unit from the biological sample", whereas, in Cited Invention, although "illumination light" that is emitted from an end of "the fiber bundle source elements 510" "illuminates sides" "of the specimen 2 via the reflective surfaces of the pyramid 200", which is a "mirror", it is not clear whether "optical path" of "illumination light" that "illuminates sides" "of the specimen 2" (this corresponds to "axis" of "excitation light emitted from the emission unit" in Invention 1, and the same applies hereinafter) is "approximately coaxial" with "optical path" of "fluorescence radiation" from "biological specimen" directed toward "the first surface 200a of the pyramid 200" and "the second surface 200b of the pyramid 200" (the optical paths correspond to "a optical axis of the fluorescence directed toward the reflection optical unit from the biological sample" in Invention 1, and the same applies hereinafter).

(2) Judgment

Hereinafter, the different features will be discussed below.

A Regarding Different Feature 1

In Cited Document 1, "mouse" is illustrated as "specimen" (refer to the cited matter "B" of Cited Document 1), and it is common to place "specimen" like a mouse on a stage approximately horizontally, and, therefore, it could have been achieved by a person skilled in the art with ease to make Cited Invention have the constitution in which "the specimen 2" is "placed in a substantially horizontal position " on "the illumination stage 110" shown in Cited Invention, and make Cited Invention have the constitution of Invention 1 concerning the above-mentioned Different Feature 1.

B Regarding Different Feature 2

(A) The technical meaning of the term "approximately coaxial" in Invention 1 will be divided into the following two cases, and the above-mentioned Different Feature 2 will be judged.

a Case "approximately coaxially" is being used as the meaning of not being coaxial, but being almost coaxial

In Cited Invention 1, "illumination light" to be emitted from an end of "the fiber bundle source elements 510" "illuminate sides" of the specimen 2 via reflection surfaces

of the pyramid 200 that is a "mirror". Therefore, it could have been achieved by a person skilled in the art with ease to set the optical paths of "illumination light" in such a way that light reflected by "mirror" becomes coaxial (that is, approximately coaxial) with "optical path" of "fluorescence radiation" toward "the first surface 200a of the pyramid 200" and "the second surface 200b of the pyramid 200" from "biological specimen" as much as possible so as to be able to effectively illuminate the specimen 2 that is a target to obtain views by a CCD array by the light reflected by a "mirror".

b Case "approximately coaxially" is being used synonymous with "coaxial"

Since "emission unit" in Invention 1 "is arranged in a manner avoiding a light axis of the fluorescence directed toward the imaging unit from the reflection optical unit", it is optically unreasonable that, even if "excitation light projected from the emission unit" is reflected by "reflection optical unit" to be "guided to the biological sample", the light axis of "excitation light" guided to a biological specimen from the emission unit is "coaxial" with "a light axis of the fluorescence directed toward the reflection optical unit from the biological sample".

Therefore, the technical meaning regarding the matter that "excitation light projected from the emission unit is projected onto the biological sample from the reflection optical unit approximately coaxial with a light axis of the fluorescence directed toward the reflection optical unit from the biological sample" in Invention 1 will be discussed based on the statements of the description of the present application.

(a) First, in paragraph [0010] of the description of the present application (refer to the written amendment dated Feb. 26, 2018), and paragraph [0011] (refer to the amendment as of Apr. 7, 2017), there are the following statements (the underlines are given by the body for emphasis).

"[0010]

In an optical imaging apparatus according to the present invention, it is preferred that the illuminating unit be of a constitution including a plurality of emission units arranged in a manner surrounding the opticalaxis of fluorescence toward the imaging unit from the reflection optical unit. More preferably, the plurality of emission units may be arranged at substantially equal intervals of rotation angle surrounding the optical axis of fluorescence toward the imaging unit from the reflection optical unit.

[0011]

According to this constitution, even if the illuminating unit is not located on the optical axis of fluorescence toward the imaging unit from the reflection optical unit, it is possible to project excitation light at approximately uniform intensity to a biological specimen placed on the sample stage. Accordingly, for example, when a fluorescence intensity distribution image derived from a fluorescent material that has been taken into a biological specimen is obtained, dependency on excitation light intensity distribution disappears, and it is possible to obtain an accurate fluorescence intensity distribution image."

(b) According to the above statements of the description of the present application, it is understood as the matter that "excitation light projected from the emission unit is projected onto the biological sample from the reflection optical unit approximately coaxial with a optical axis of the fluorescence directed toward the reflection optical unit from the biological sample" in Invention 1 means that, for example, "the illuminating

unit includes" "a plurality of" "emission units arranged in a manner avoiding a light axis of the fluorescence directed toward the imaging unit from the reflection optical unit", and, by synthesizing "excitation light" from those "emission units", the optical axis of "illumination" according to the synthesized "excitation light" is made to be "approximately coaxial with the optical axis of fluorescence toward the reflection optical unit from the biological specimen", thereby "projecting measurement light at approximately uniform intensity to a biological specimen placed on the sample stage".

(c) In contrast to them, in Cited Document 1, it is illustrated in FIG. 13 that two "fiber bundle source elements 510" each illuminating one "side" are arranged relative to each "side" of "the specimen 2" (Note that it is described in Cited Document 1 as "The foregoing discussion applies as well to the embodiments of FIGS. 13-16, any of which may be configured to operate in a two-dimensional or three-dimensional imaging modality." (refer to the cited matters "F" of Cited Document 1), and, therefore, it is recognized that, as with FIG. 12, FIG. 13 is "two-dimensional projection of a three-dimensional measurement system", and is not "depicting an optical element that is not placed within the plane of the figure" (refer to the summarized matters "F" of Cited Document 1), or indicates "two-dimensional measurement system".).

(d) Then, since it is a well-known matter to perform uniform illumination by synthesizing illumination light from a plurality of light sources, it could have been achieved by a person skilled in the art with ease to arrange, when it is desired to "provide more uniform illumination of a specimen spatially" as described in the cited matters "I" of Cited Document 1, a plurality of "fiber bundle source elements 510" each for illuminating one "side" (at positions that do not share an optical path of fluorescence radiation), and synthesize illumination light from the plurality of "fiber bundle source elements 510" to "provide more uniform illumination of a specimen spatially"; that is, to conceive the constitution of Invention 1 concerning the above Different Feature 2 by making "optical path" of synthesized "illumination light" be "approximately coaxial" with an "optical path" of "fluorescence radiation" toward "the first surface 200a of the pyramid 200" and "the second surface 200b of the pyramid 200" from a "biological specimen".

C Then, even if these different features are comprehensively taken into consideration, the effect exerted by Invention 1 is nothing but an effect within a range to be predicted from the effect exerted by Cited Invention and well-known matters, and thus it cannot be regarded as a particularly distinguishing effect.

D Accordingly, Invention 1 is an invention that could have been invented by a person skilled in the art with ease based on Cited Invention and well-known matters.

6 Closing

As above, the appellant should not be granted a patent for Invention 1 under the provisions of Article 29(2) of the Patent Act, and, therefore, the application should be rejected without examining the inventions according to other claims.

Therefore, the appeal decision shall be made as described in the conclusion.

Apr. 26, 2018

Chief administrative judge: KOBAYASHI, Norifumi
Administrative judge: SHIMIZU, Minoru
Administrative judge: USHIDA, Shingo