

# Smart Eye Camera (SEC)



**A certified Slit-Lamp medical device in Japan, a smartphone attachment which allows Ophthalmic examination only by the smartphone.**



## Unique and Innovative Features

### 1. Smartphone diagnosis

SEC allows the outer camera of the smartphone to make an Ophthalmological diagnosis using its own light source. No need for the external battery or light source.

### 2. Anterior eyes examination

Possible to make a diagnosis in any eyes. Clear slit-lamp image in the eyelid, ocular surface, conjunctiva, cornea, iris and crystalline lens. Diffuse illumination, slit-light (0.2~1.0mm) illumination, and blue light illumination.

### 3. Equal performance compared to existing equipment

SEC is proven to have equal performance to the conventional professional slit-lamp microscope used in Ophthalmology clinics\*.

\*Shimizu E, Ogawa Y, Yazu H, Aketa N, et al, Plos One 2019.

<https://journals.plos.org/plosone/article/comments?id=10.1371/journal.pone.0215130>

### 4. Internationally Patented, Certified Medical Device in Japan, invented by Japanese Ophthalmologists

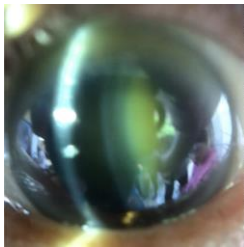
Internationally patented, an approved medical device in Japan, with some of the toughest regulations worldwide, invented through the wisdom of the OUI Inc. founded Ophthalmologists.\*\*

\*\*13B2X10198030101

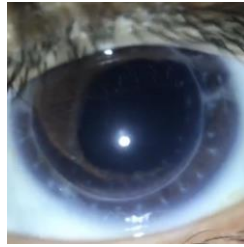


## Example Images by SEC

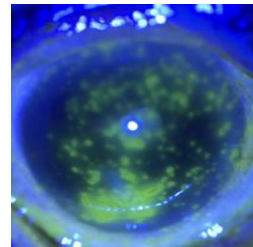
3 types of light (Slit/White-diffused/Blue-diffused) are available by utilizing smartphone camera and light source



Cataract  
(Slit-Light)



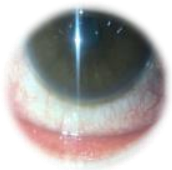
Corneal  
Transplantation  
(White-diffused Light)



Severe Dry Eye Disease  
(Blue-diffused Light)

## Diagnosable Disease Portfolio

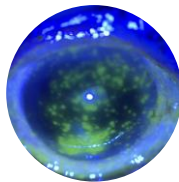
With its equal performance to the conventional slit-lamp microscope, almost all eye diseases of anterior segment of eye can be diagnosed



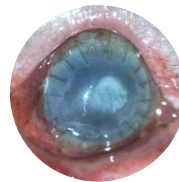
Epidemic  
Keratoconjunctivitis  
(Virus infection)



Allergic  
conjunctivitis



Dry Eye  
Disease



Infectious  
Keratitis



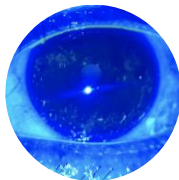
Cataract  
(Moderate)



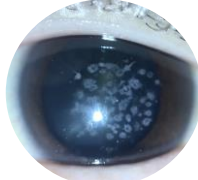
Cataract  
(Severe)



Meibomian  
Gland Dysfunction



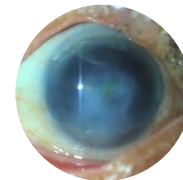
Keratitis  
Filamentosa



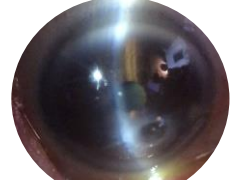
Avellino  
Corneal Dystrophy



Uveitis



Trachoma



Corneal  
Perforation

## Principal Track Record in Japan

Keio University Hospital  
Yokohama Keiai Eye Clinic  
KOBAYASHI Pharmaceutical Co., Ltd.



# Principal Track Record Abroad



VietnamVN



MongoliaMN



ZambiaZM



MalawiMW

## Potential Use in Developing Countries

### 1. Eye Camp for Cataract Surgeries

SEC achieves tremendous efficiency in outreach to identify the potential patients for eye camp for cataract surgeries. Also, it achieves tremendous efficiency in diagnosis for post-surgeries of eye-camp for cataract surgeries.



### 2. Rural Clinics with Frequent Blackout

Even in the rural clinics with frequent blackout of electricity where the slit-lamp microscope cannot be used, doctors can keep diagnosing with SEC.

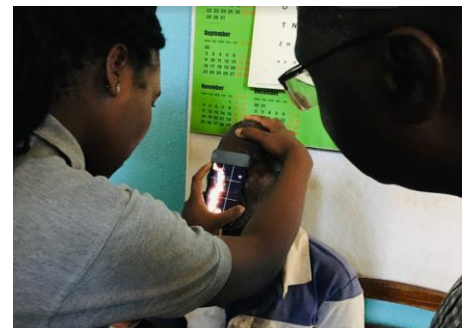


### 3. Training for Doctors/Medical Staffs

Making it possible to share the same vision together, SEC works well for training scenes for Ophthalmologists/medical Staffs with less experience.

### 4. Remote Diagnosis

With smartphone application video of the images of patients can be recorded easily and can be shared to ophthalmologists in the remote area.





## ABOUT Us

**OUI Inc. is a company founded by 3 Japanese ophthalmologists with the goal to overcome world blindness by combining their knowledge in the field with new ideas to push the development of healthcare.**



**Eisuke Shimizu MD, PhD**  
CEO,  
Co-founder

Graduated from Keio University School of Medicine. Major in Ophthalmology. Specializes in the dry eye disease. Established OUI Inc. in 2016 with Dr. Yazu and Dr. Aketa. Discovered problems of Ophthalmology in Vietnam during international medical support activities, invented and implemented the SEC as a solution. Project associate lecturer of Keio University School of Medicine.



**Hiroyuki Yazu MD, PhD**  
Director,  
Co-founder

Graduated from Keio University School of Medicine. Major in Ophthalmology. Specializes in Allergy and autoimmune disease. Established OUI Inc. in 2016 with Dr. Shimizu and Dr. Aketa. A lecturer of Tsurumi University School of Dental Medicine. Director of the international Ophthalmology cooperation NPO Fight for vision.



**Naohiko Aketa MD, PhD**  
Co-founder

Graduated from Keio University School of Medicine. Major in Ophthalmology. Specializes in Cornea disease and corneal transplantation. Established OUI Inc. in 2016 with Dr. Shimizu and Dr. Yazu.

## Vision and Mission

### **Mission:**

#### **Leading the Growth of Medical Services**

We will challenge to grow the medical services.

We will challenge to create the best healthcare scenes.

We will apply the doctor's opinion and contribute to the medical development.

### **Vision:**

#### **To overcome 50% of the world blindness by the year 2025 with SEC**

Blindness continues to remain a major problem worldwide. WHO announced that at least a billion people have a visual impairment that can be prevented or has yet to be addressed. Over half of these blindness incidents were caused by cataracts.

We found that one of the major problems is that there is no diagnostic device in the areas where blindness is increasing.

To address this issue, we invented the SEC. We aim to contribute to overcome 50% of the world blindness by the year 2025 by spreading SEC and hereby provide proper eye-diagnosis to the patients suffering from access in medical services.

# Academic Track Record

## Research Paper in English

Shimizu E, Ogawa Y, Yazu H, Aketa N, et al. "Smart Eye Camera": An innovative technique to evaluate tear film breakup time in the murine dry eye disease model. Plos One. 2019 May 9; 14(5): e0215130.

## Presentation in Academic Conference

1. Aketa N, Ogawa Y, Shimizu E, Yazu H, Shimmura S, Tsubota K. "Smart Eye Camera" An innovative device to evaluate tear film breakup time in the murine dry eye disease model. Japan Cornea Conference 2019.
2. Shimizu E, Ogawa Y, Aketa N, Yazu H, Yang F, Tsubota K. Consecutive ocular phenotypes in chronic graft-versus-host disease murine model. The 123<sup>rd</sup> Annual Meeting of the Japanese Ophthalmological Society.

# Media Track Record

Nihon Keizai Shimbun  
(the leading economic newspaper in Japan) 16<sup>th</sup> Jan 2020



Nihon Keizai Shimbun, 29<sup>th</sup> Jan, 2018  
Medical Tribune, 30<sup>th</sup> Jan, 2018  
Nikkei Digital Health, 31<sup>st</sup> Jan 2019 etc.



# Contact Us

**OUI Inc.**  
Address: 3F, 1-36-2, Shinjuku, Shinjuku-ku, 160-0022, Tokyo, Japan  
Email: [info@ouiinc.jp](mailto:info@ouiinc.jp)  
Web: <https://ouiinc.jp/en/>

