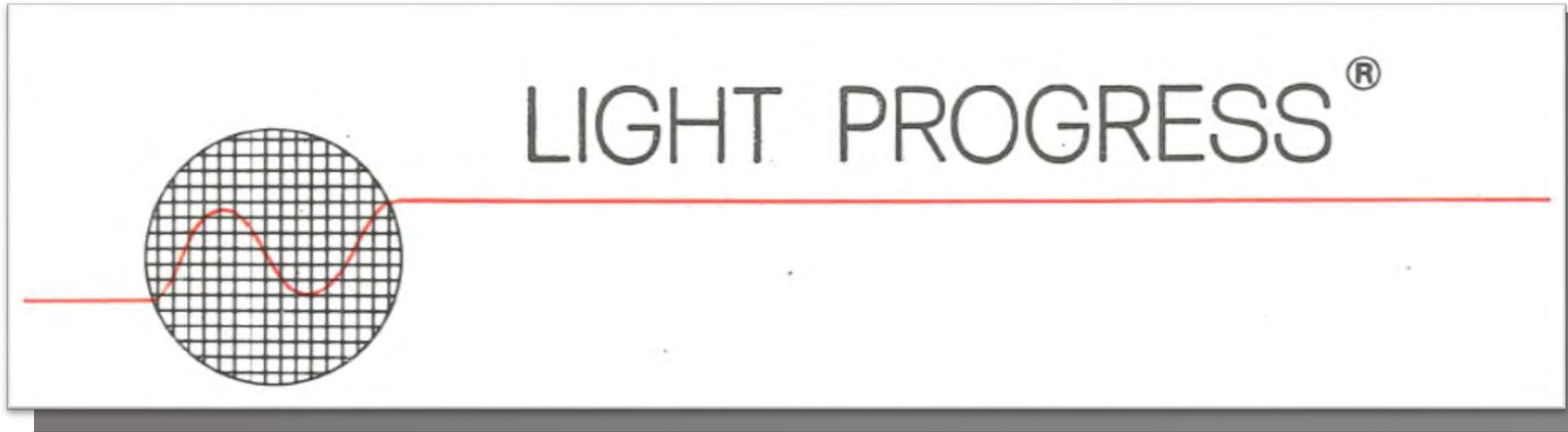


Health



studies, develops, projects and produces

Ultraviolet Germicidal Irradiation

devices, since

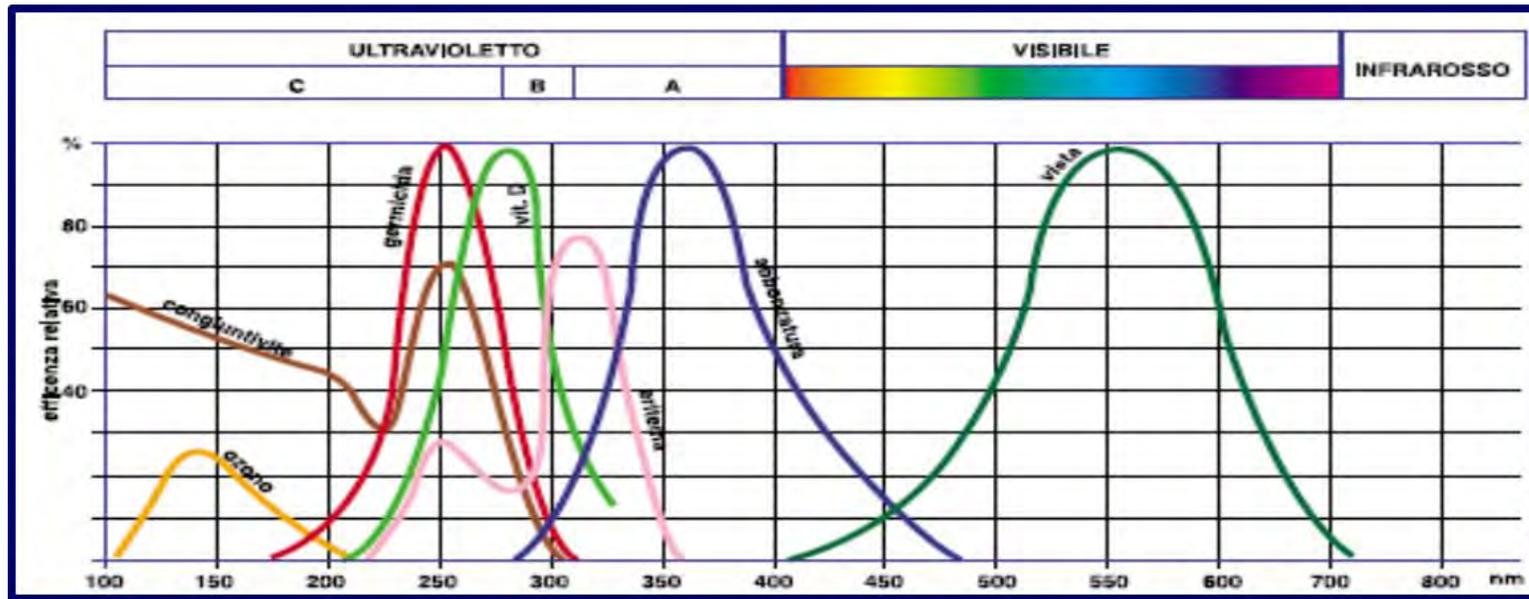


# What does UVGI mean ?

Light in a broad sense can be divided in visible, infra-red and ultraviolet rays.

Ultra-violet rays (invisible) can be classified in:

- UV - A (with tanning properties)
- UV - B (with therapeutic properties)
- **UV - C (with germicidal properties)**



UV-C (short-wave) from 100 to 280 nm

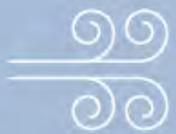
The absorption of a UV photon by the DNA of microorganisms causes a destruction of a link in the DNA chain, and consequently the inhibition of DNA replication.

The germicidal effects of the UV-C radiation **destroy DNA of Bacteria, Viruses, Spores, Fungi, Moulds and Mites** avoiding their growth and proliferation.

UVGI technology is a physic disinfection method with a **great costs/benefits** ratio, it's ecological, and, unlike chemicals, it works against every microorganisms without creating any resistance.



operates in different fields and turns Ultraviolet Technology into real Solutions, providing a Specific Device for every application needed.



HVAC



Water



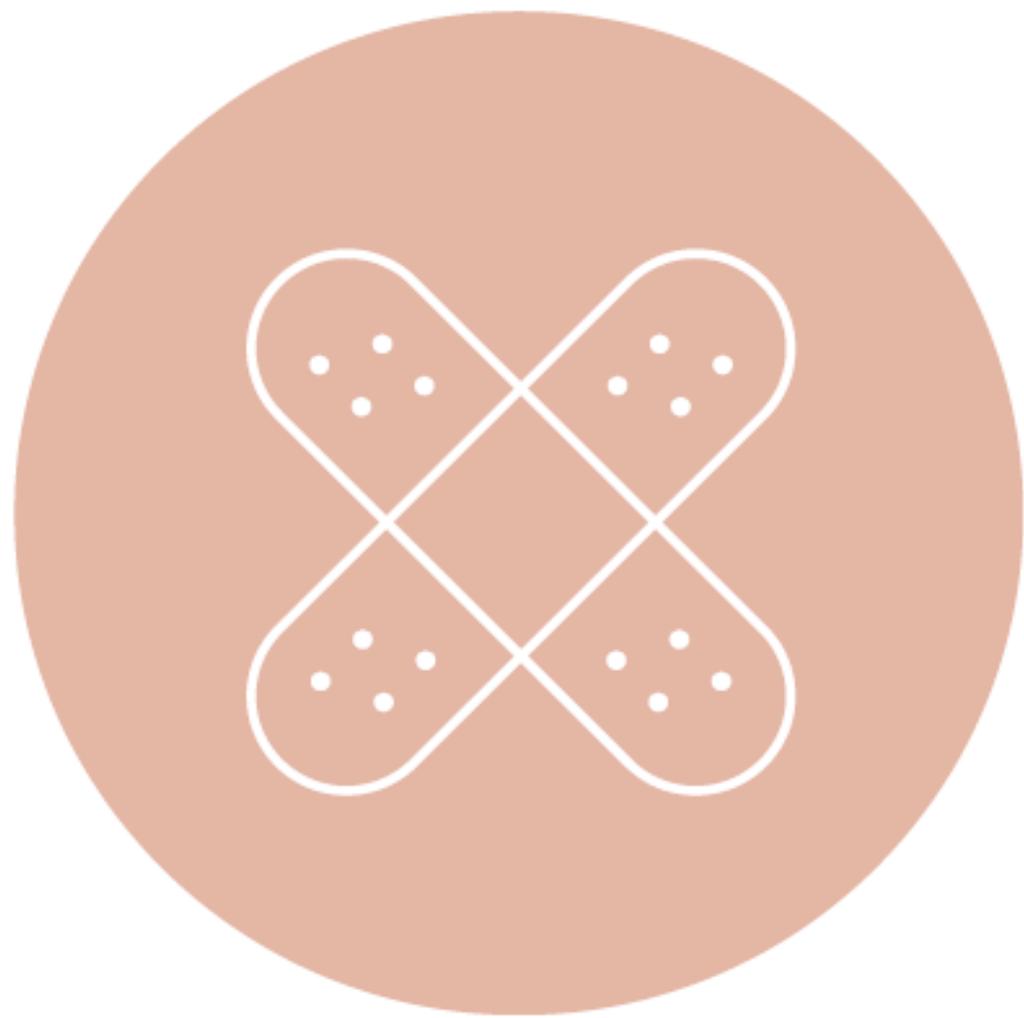
Health



Food



Smell reduction



# What are most common issues in healthcare?

Healthcare environment is for sure the most sensitive about hygiene levels control. However it is also the **most fertile ground** on which to develop issues regarding the **spread of viruses, bacteria, moulds, spores and mites**. There usually a great consciousness regarding the proper procedures that have to be followed to avoid the spreading of harmful microorganisms.

But often they are not enough.



# What are most common issues in healthcare ?



Disinfection is the base for good hygiene praxis in healthcare environments.

A good sanitization procedures enables the elimination of **pathogenic microorganism**.

Microorganisms arrive through the air, employees, and, obviously, patients.

They spread through the air, by sedimentation or by vectors (animated) or vehicle (inanimate).

Microorganisms settle in areas that offer a favorable environment for proliferation.

These areas become potential sources of **contamination for the whole environment**.

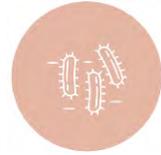
Chemical method is used massively, but not without a lot of bad consequences.

# What is important in healthcare ?

-  To set **ideal hygienic** conditions in every environment.
-  To **avoid Risks**, increasing controls.
-  To have a **programmable** and possibly automated **cleaning process**.
-  To **cut the consumption of chemicals**, which create resistant pathogens.
-  **Maintain the hygiene** level achieved **easily**.



devices



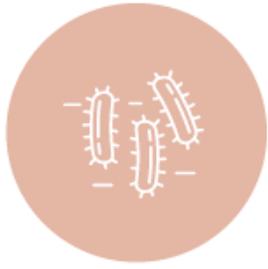
are EASY to APPLY



create NO RESISTANCE



make you SAVE TIME



### **IT ELIMINATES COMPLETELY ALL PATHOGENS**

UVGI eliminates bacteria, viruses, spores, fungi, molds and mites, without creating microbial resistant forms as chemical disinfectants and antibiotics do usually.



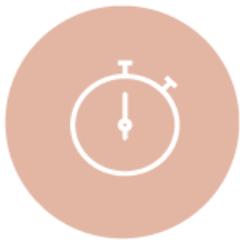
### **GOOD COSTS/BENEFIT RATIO**

HAIs have a cost in health, as well from an economic point of view. UVGI devices interact with cleaning operations improving their effectiveness. UVGI systems do not require special maintenance, they just need periodic lamp replacement.



### **IT IS A PHYSICAL PROCESS, SAFE AND ECO - FRIENDLY**

It requires little time to achieve microbial reduction of over 99%. UVGI treatment prevents the onset of such conditions, which are the base of cross-contamination development.



### **IT IS A DEEP, CONTINUOUS, PROGRAMMABLE DISINFECTION**

UVGI method maintains ideal hygienic conditions in healthcare environments, both in presence that in absence of patients and employees.



### **IT'S EASY TO APPLY, YOU CAN TRUST ON US!**

Our expert team work with both big and small healthcare facilities, obtaining always great results. We will help you to choose the best product between our complete range of over 300 different models offering you the perfect solution that will satisfy your needs.

What are  **Wavelength** *PROGRESS* devices

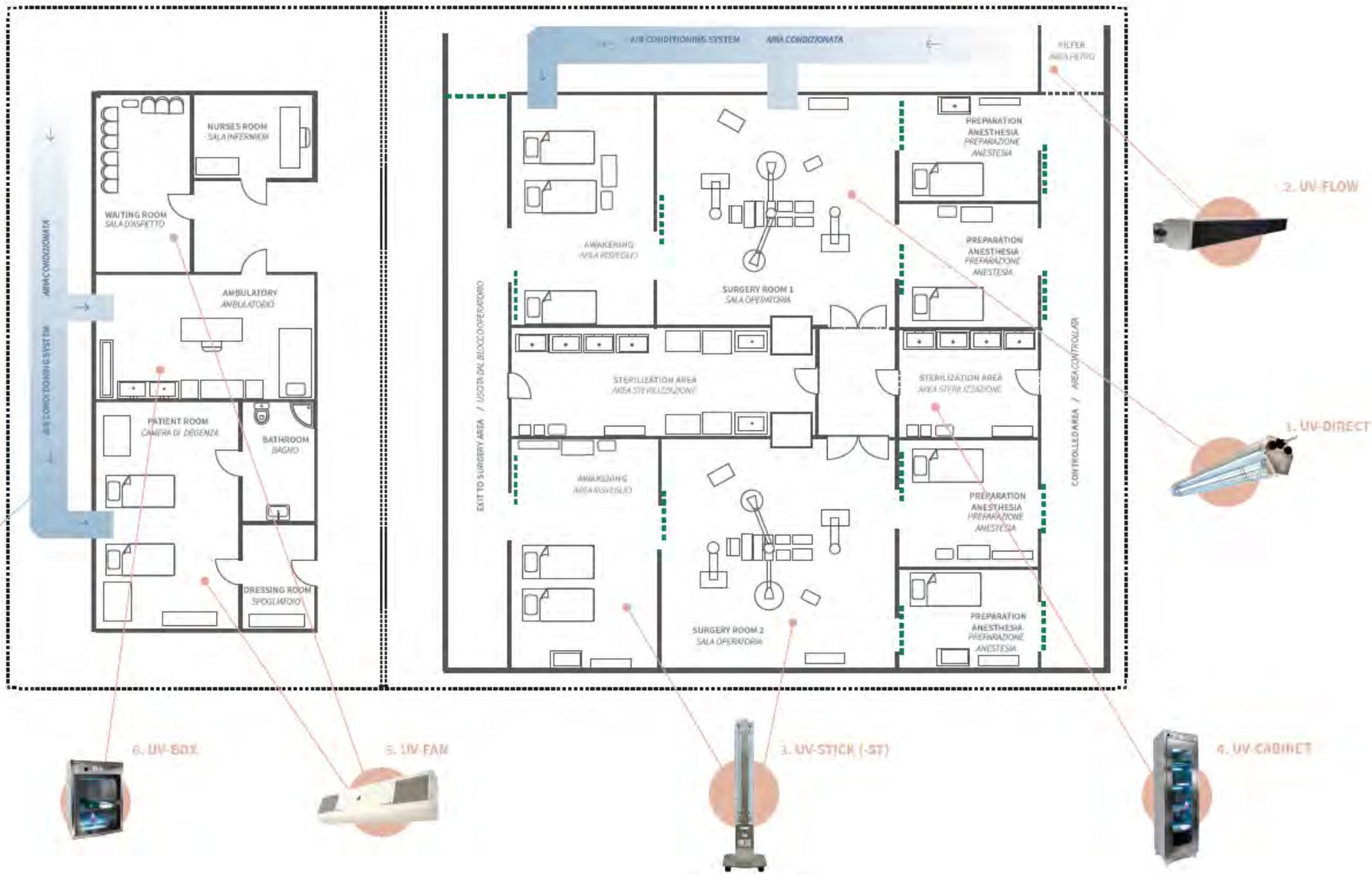
designed to improve

Hygiene and Safety

in Healthcare ?



# Application Scheme



# Environmental Disinfection

- Direct Irradiation (absence of people)
- Air Purifiers (presence of people)



It can be easily applied as a common ceiling light fixture.

Special mirror bright reflector to increase UVGI power.

Switched ON during work breaks, it treats both air and surfaces

Made in high quality SS.

Control board available to set up programmable disinfections.

External Grid to protect the lamp.



It can be easily applied as a common ceiling light fixture, but smallest models could be also used inside processing and packaging machines (pharma industries).

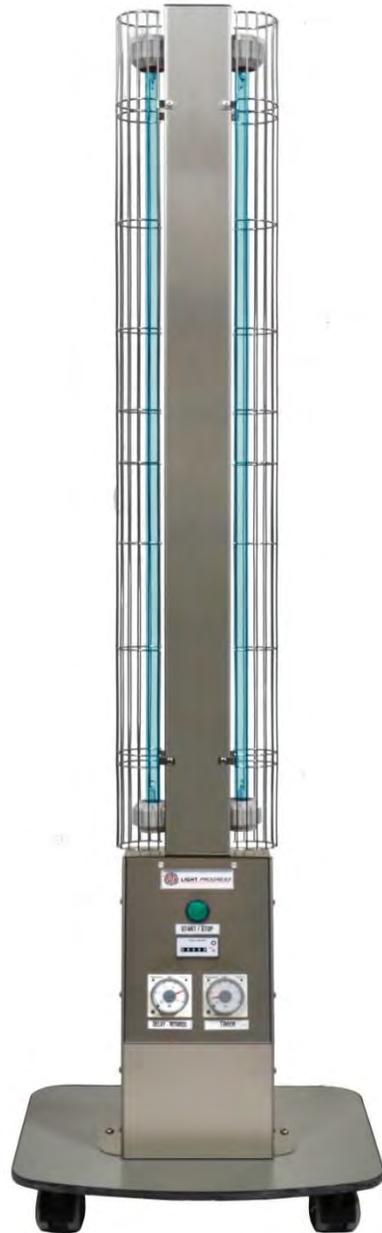
Switched ON during work breaks, it treats both air and surfaces.

Made in high quality SS.

Special mirror bright reflector to increase UVGI power.

Control board available to set up programmable disinfections.

External Grid to protect the lamp.



-ST model with double lamp and a four-wheels stand is available to treat surfaces all around in different environments.



Its compact sizes and the wide range of models allow endless applications' solutions.



# UV-DIRECT



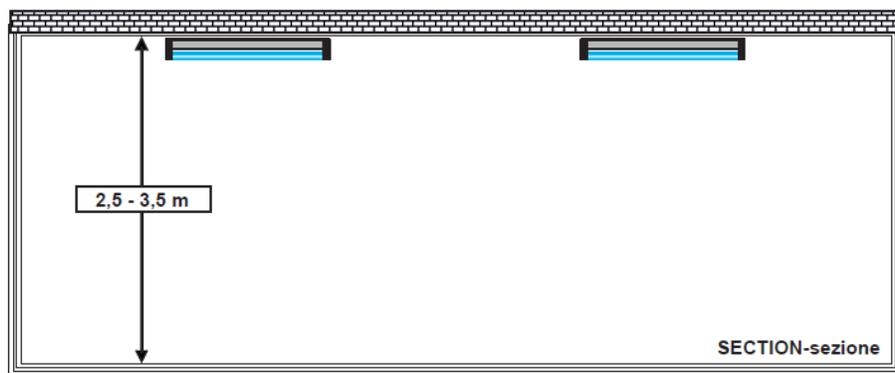
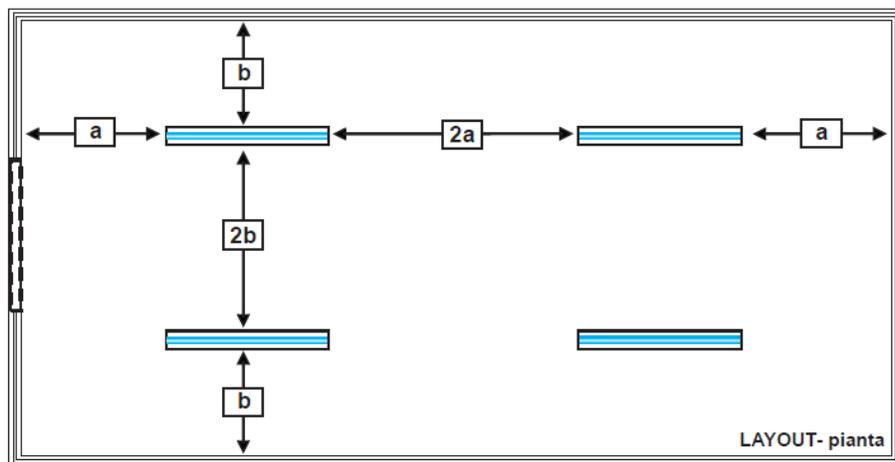
# UV-STICK-NX



When staff leaves during work breaks, direct irradiation of surfaces allow a deep disinfection treatment.

The natural recirculation of air currents allows air disinfections as well.

The combination of surface + air disinfection creates the ideal hygiene level in healthcare environments.



We help you designing the **application layouts** to fit the specific area that has to be treated.

The solution provided will fit exactly clients' need, according to our know-how in UV-C employment methods and our 30 years experience specific in food industries applications, as well as several tests made with a University Research center;



# UV-FAN



Air Purifier, it treats the air 24 hours a day, without any contraindications for the people present.

A silent built-in fan conveys the air to pass inside its germicidal chamber.

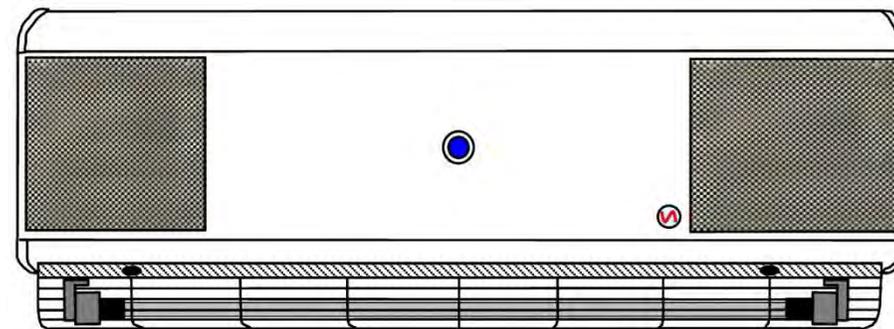
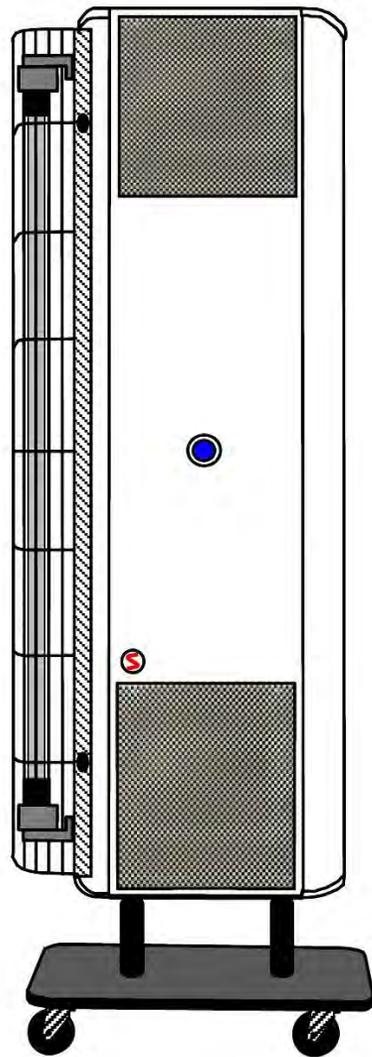
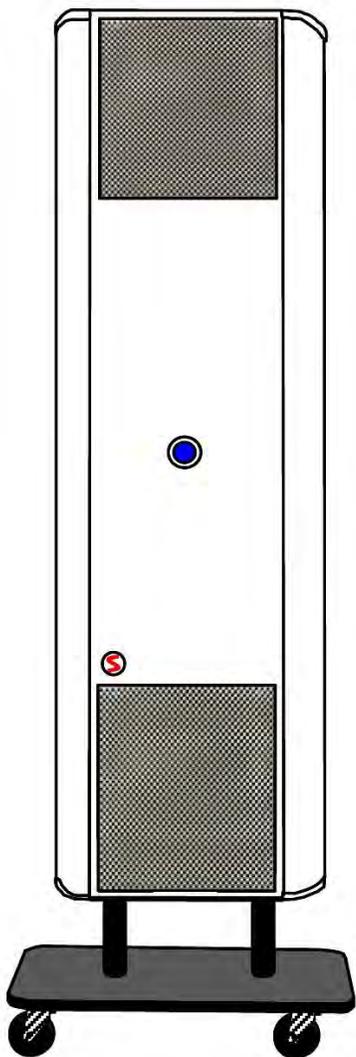
External body in extruded Aluminum, coated with epoxy-powders.



**TiOX Filter** included.

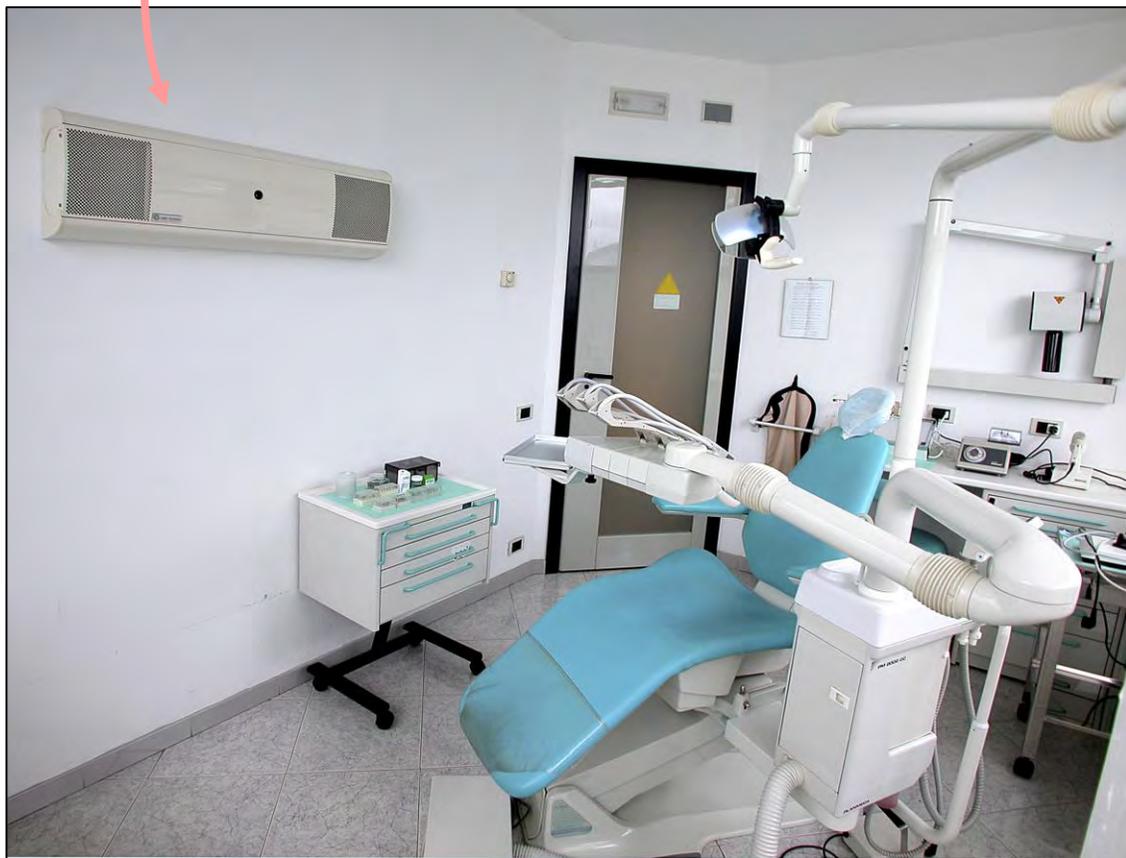
Titan Dioxide Nanoparticles with silver salts enhance the germicidal effect of UV-C light; Its photocatalyzation allows the elimination of VOCs and NOXs, too.

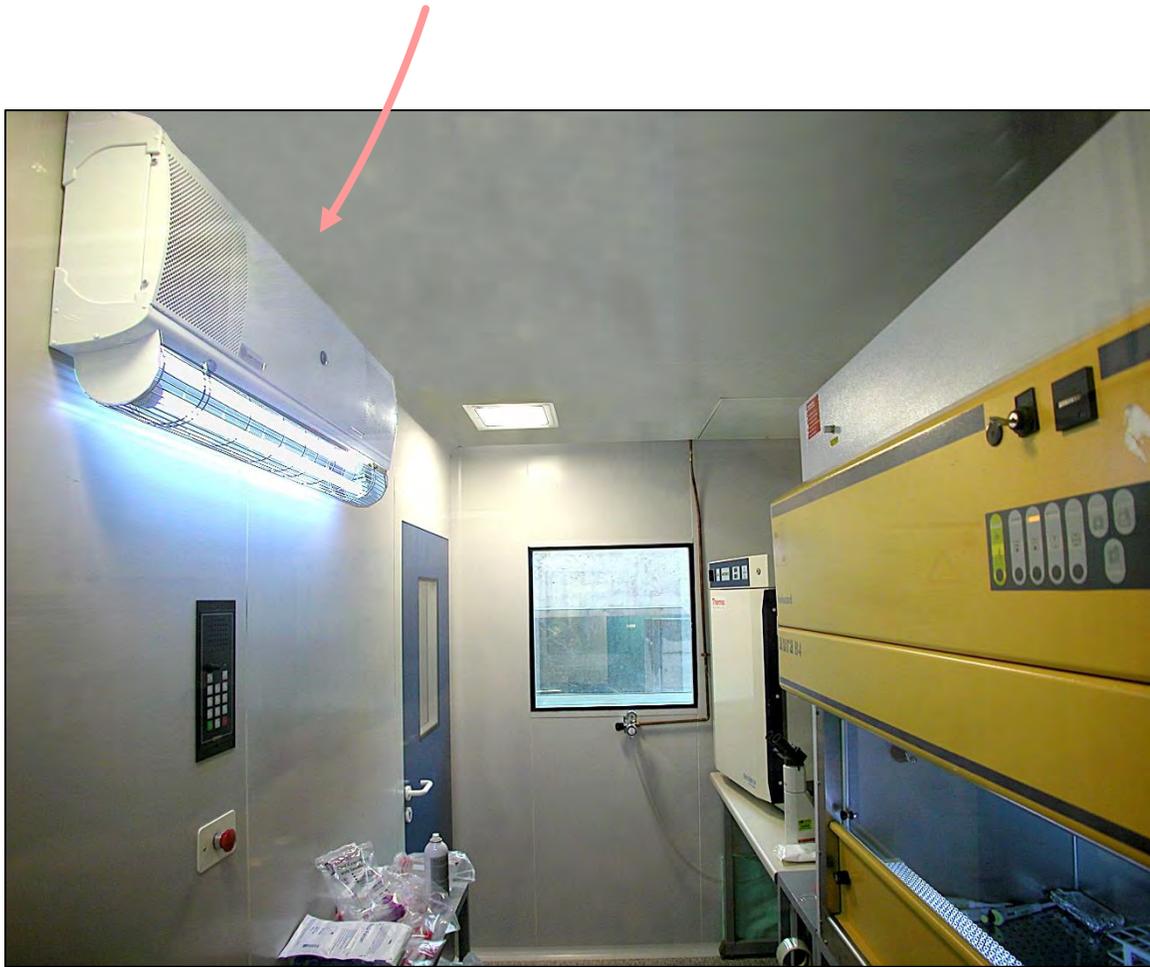




-BD model with integrated external lamp. Besides the normal purifying action, it provides the possibility of having a deeper disinfection treatment during non operational hours (i.e. night).

-ST model with four wheels stand available.





# Special Areas Environments

- Controlled Areas (clean rooms, filter passages, etc)



# UV-FLOW



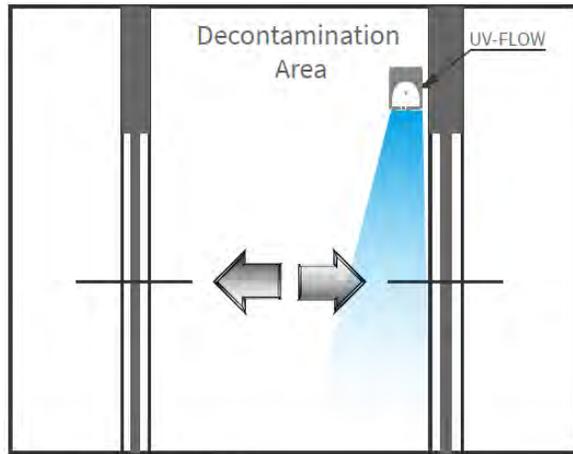
Monodirectional UV-C flow device;

it creates a UV-C barrier if placed above an opening (door) and/or it treats the upper air layers when installed pointing

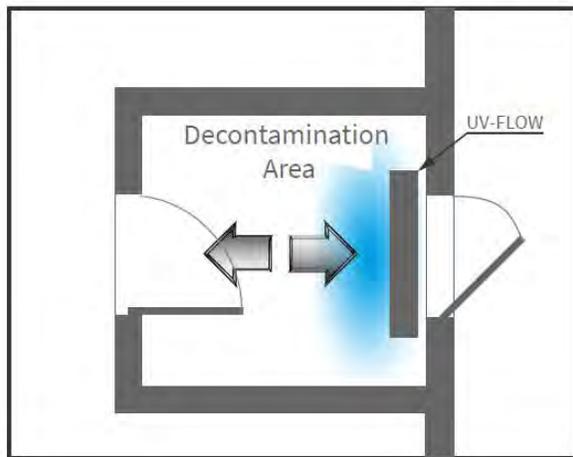
Made in high quality SS.

Directional honeycomb filter to create a «UV blade»





SECTION / SEZIONE



Filter Room are very important to separate areas with a different grade of microbiological control (i.e. Clean Rooms, separated sectors).

Treating upper air layers enables a general enhancement of air decontamination, thanks to air natural convective motions.



# Tools Sterility Maintenance

- Germicidal Box
- Germicidal Cabinet

# UV-CABINET



Cabinet to preserve sterility maintenance, for any type of equipments, tools, containers.

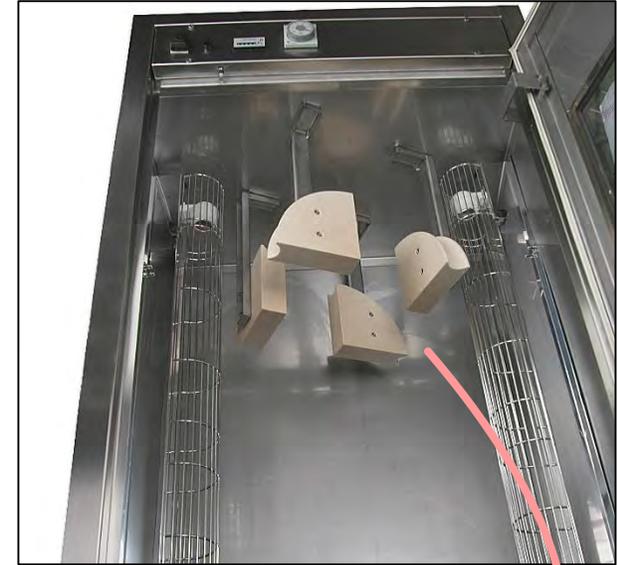
Automatic switching ON-OFF to set disinfection cycles with a settable timer.

Available with multiple doors, wall-mounted or floor standing.

High quality Stainless Steel AISI 304.



Wall mounted model is also available



-E model includes a special endoscopic probes holder (just for floor standing structure).

# UV-BOX



Box to preserve sterility maintenance, for any type of equipments, tools, containers.

Automatic switching ON-OFF to set disinfection cycles with a settable timer.

Table model available (UV-BOX-E2/40H).

High quality Stainless Steel AISI 304.





The transparent door with the anti-UV LEXAN® window allow you to check the proper operation at any time.

# Why **LIGHT PROGRESS** ?

We offer the **widest product range** of UVGI Devices on the market, providing different solutions, specifically designed for HEALTHCARE ENVIRONMENTS application.

Our Team sizes and projects every application designing a **custom solution** for each specific case.

Our products are born solving **real market issues coming from Healthcare field**, our first mission is to fit UV-C technology in already existing environments and habits, satisfying exactly the clients requests.

# Why **LIGHT** PROGRESS ?

30 years of Health Quality improvements, **30 years of happy customers.**

**Air, Surfaces, Water disinfection.** Over 200 products within the same catalogue, 360° solutions.

Good **value for money**, great Quality level, devices are 100% Made in Italy and CE marked.

# Certificates



**LIGHT PROGRESS**

**CE**

**DECLARATION OF COMPLIANCE**

We, LIGHT PROGRESS S.r.l., hereby declare under our own responsibility that the following units of own production:

are in accordance with EEC directive 2014/30/EU (Electromagnetic Compatibility)  
 are in accordance with EEC Machinery Directive dispositions 2006/42/EU  
 are in accordance with EEC Low Voltage Directive 2014/35/EU  
 are in accordance with EEC (RoHS) directive 2002/95/EU and 2011/65/EU

**TECHNICAL STANDARDS APPLIED**

**UNI EN ISO 12100:2010** Safety of Machinery - Basic Concepts, General Principles for Design - Risk assessment and risk reduction  
**UNI EN ISO 13857:2008** Safety of Machinery - Safety Distances to prevent danger zones being reached by the upper and lower limbs (2008)  
**ISO 14120:2015** Safety of Machinery - Guards - General Requirements for the Design and construction of fixed and movable guards  
**UNI EN ISO 13849-1:2016** Safety of Machinery - Parts of the Control System related to the Safety - Part 1: General Design Principles  
**UNI EN ISO 14119:2013** Safety of Machinery - Interlocking devices associated with guards - Principles for design and selection  
**CEI EN 60204-1/EC** Safety of Machinery - Electrical Equipment of Machines. Part 1: General Rules (2010)  
**EN 61439-1:2011** Low-voltage Switchgear and Control Gear Assemblies. Part 1: General rules

**FURTHER TECHNICAL STANDARDS APPLIED:**

IEC EN 60335-1 "Safety of household electrical appliances and similar"  
 Electronic Ballasts for the control of the lamps in accordance with the standard EN 60928.  
 Germicidal UV-C Lamps in accordance with EN 61199.  
 Electrical Protective Measures in accordance with IEC 70-1, EN 60229.

Anghiari, 05 January 2017

**Responsible for Standards: Dr. Aldo Santi**

LIGHT PROGRESS S.r.l. Via G. Marconi, 81 - 53031 ANGIARI (AR) - ITALY - <http://www.lightprogress.com>

Jan-2017 Pag. 22/24

**kiwa**  
Partner for progress

Reg. Number	6950 - A	Valid From	2016-07-26
First issue date	2007-12-21	Last modification date	2013-07-24
Following renewal date	2019-07-29	EA Sector	EA: 19

**Quality Management System Certificate**  
**ISO 9001:2015**

We certify that the Quality Management System of the Organization:  
**LIGHT PROGRESS S.r.l.**  
 is in compliance with the standard UNI EN ISO 9001:2015 for the following products/services:  
 Design and production of UV-C rays disinfection systems

Chief Operating Officer  
 Giampiero Balcredi

Maintenance of the certification is subject to annual survey and dependent upon the observance of Kiwa Cermet Italia contractual requirements.

This certificate consists of 1 page.

**LIGHT PROGRESS S.r.l.**  
**Registered Headquarters**  
 - Via Guglielmo Marconi, 81 52031 Anghiari ( AR ) Italia  
**Certified sites**  
 - Località San Antonino 40 52043 Castiglion Fiorentino ( AR ) Italia  
 - Via Guglielmo Marconi, 81 52031 Anghiari ( AR ) Italia

**CERMET** **IAF** **ACCREDIA** SGQ N° 807A - ISO N° 9006  
SISA N° 0160 - FISM N° 0041  
PRG N° 0698

**CERTIFICATE OF COMPLIANCE**

Certificate Number	20130702-E362672
Report Reference	E362672-20130628
Issue Date	2013-JULY-02

Issued to: LIGHT PROGRESS SRL  
 VIA G. MARCONI 81  
 52031 ANGIARI AR ITALY

This is to certify that representative samples of ACCESSORIES, AIR-DUCT MOUNTED Duct-Mounted UV Lamp Assembly, Models UV-RACK, followed by 3I, 4I or 6I, followed by 40H, 60H or 90H.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Bi-National Standard for Heating and Cooling Equipment, ANSI/UL 1995-2011 and CAN-CSA C22.2 No. 236-11  
 Additional Information: See the UL Online Certifications Directory at [www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Classification Mark for the U.S. and Canada should be considered as being covered by UL's Classification and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Classification Mark includes: the UL in a circle symbol, with the word "CLASSIFIED" (as shown), a control number (may be alphanumeric) assigned by UL, a statement to indicate the extent of UL's evaluation of the product, and the product category name (product identity) as indicated in the appropriate UL Directory. The UL Classification Mark for Canada includes: the UL Classification Mark for Canada, with the word "CLASSIFIED" (as shown), a control number (may be alphanumeric) assigned by UL, a statement to indicate the extent of UL's evaluation of the product, and the product category name (product identity) in English, French, or English/French as indicated in the appropriate UL Directory.

Look for the UL Classification Mark on the product.

**William R. Casey**, Director, North American Certification Programs  
 UL LLC  
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Page 1 of 1



UNIVERSITÀ  
DI SIENA  
1240

# University Tests - Air Treatment



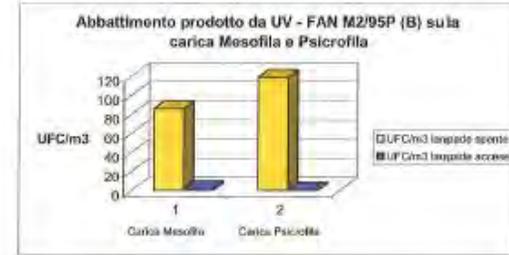
Dpt of Physiopathology, Experimental Medicine and Public Health University of Siena Via Aldo Moro 1, 53100 - SIENA - ITALY Tel: +39 0577 234134 - Fax: +39 0577 234090 e-mail: epidma@unisi.it	MOLECULAR EPIDEMIOLOGY Research Division 
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Valutazione dell'effetto che purificatori d'aria a raggi UV-C prodotti da **LIGHT PROGRESS®** hanno sulla carica microbica e fungina presente nell'aria.

University of Siena  
Department of Physiopathology,  
Experimental Medicine and Public Health  
Lab. Molecular Epidemiology  
Prof. Emanuele Meroneci

*Emanuele Meroneci*  
*Stefano Biondi*

**Grafico 1**



**Grafico 2**



University of Siena  
Department of Physiopathology,  
Experimental Medicine and Public Health  
Lab. Molecular Epidemiology  
Prof. Emanuele Meroneci

*Em*



UNIVERSITÀ  
DI SIENA  
1240

# University Tests - Microbial Load Reduction



Dept of Pathopathology, Experimental Medicine and Public Health  
**University of Siena**  
Via Aldo Moro 3, 53100 - SIENA - ITALY  
Tel: +39 0577 234134 Fax: +39 0577 234090  
e-mail: [gid@msl.unisi.it](mailto:gid@msl.unisi.it)

**MOLECULAR EPIDEMIOLOGY  
Research Division**  
**EpidMol**

**Valutazione dell'effetto battericida, sporicida e fungicida  
dei raggi UV-C emessi da apparecchi LIGHT PROGRESS®**

University of Siena  
Department of Pathology,  
Experimental Medicine and Public Health  
Lab. Molecular Epidemiology  
Prof. Emanuele Montanelli

*Emanuele Montanelli*

## Aspergillus niger



*Aspergillus niger* su Sabouraud dextrose Agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC.

University of Siena  
Department of Pathology,  
Experimental Medicine and Public Health  
Lab. Molecular Epidemiology  
Prof. Emanuele Montanelli

*EM*

## Escherichia coli

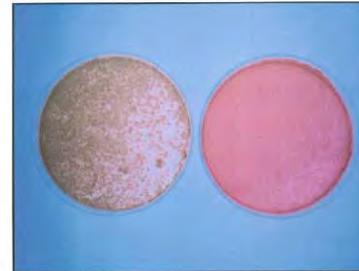


*Escherichia coli* su MacConkey Agar n.3, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC.

University of Siena  
Department of Pathology,  
Experimental Medicine and Public Health  
Lab. Molecular Epidemiology  
Prof. Emanuele Montanelli

*EM*

## Staphylococcus aureus



*Staphylococcus aureus* su Mannitol salt agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC.

University of Siena  
Department of Pathology,  
Experimental Medicine and Public Health  
Lab. Molecular Epidemiology  
Prof. Emanuele Montanelli

*EM*

Gráfico 1

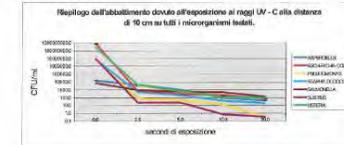
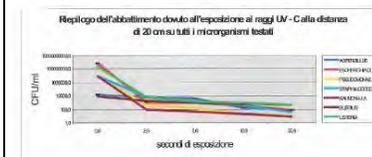


Gráfico 2



University of Siena  
Department of Pathology,  
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Lab. Molecular Epidemiology  
Prof. Emanuele Montanelli

*EM*

Member of IUVA - International UV Association



AWARD WINNER  
BEST UV PRODUCT  
INNOVATION 2016

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References





SAPIENZA  
UNIVERSITÀ DI ROMA

Universitätsbibliothek Basel



CASA DI CURA MADONNA DELLE GRAZIE  
 VILLA MARGHERITA SPA  
 ESTETA MEDICA  
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 USL 14 Omegna VB  
 USL 9 PRESIDIO OSP. DI CORNIE' TN  
 ASL RMH PRESIDIO OSPEDALIERO Genzano RM  
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 DIA.SO SRL CLINICA S.MICHELE Sorrento NA  
 AZIENDA AUTONOMA DI STATO DI PRODUZIONE RSM  
 ISTITUTO REUMATOLOGICO MUNARI S.P.A. FI  
 TERME DI CHIANCIANO Spa  
 SANATRIX S.R.L. CASA DI CURA AQ  
 CROATTO DOTT. GIULIANO CENTRO KOFLER  
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 A.S.S. N.5 BASSA FRIULANA UD  
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 A.I.L. Sez A. Piceno ONLUS  
 CENTRO ONCOBIOLOGIA SPERIMENTALE PA  
 I.P.A.B. Residenza per Anziani "G. Francescon" VE  
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# laftech

Contamination Control Solutions

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LAF Technologies Pty Ltd

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**Sydney:** Level 14, 309 Kent Street, Sydney, NSW 2000. Ph: +61 2 8221 8864

**Brisbane:** 1/25 Granite Street, Geebung, QLD 4034. Ph: +61 7 3865 7003



Accredited Laboratory