

The magazine

## the world of Thea

OPHTHALMOLOGY WORLDWIDE, FIGHT AGAINST TRACHOMA, EDUCATION, ELLIS ISLAND PRESERVATIVE FREE, ART & MORE

Théa is a profoundly European company whose independence, stability and entrepreneurial spirit are safeguarded by the Chibret family, which has been instrumental in the field of ophthalmology for over 150 years. This family governance model focuses on Théa, its employees, people values and long-term development to fulfill our mission: to be the "Ophthalmology Specialist". Our commitment is to provide innovative products and a wide range of medicinal products (service products, daily-use products) to healthcare providers and patients in all ophthalmological therapeutic classes. We constantly reinvest in Théa's two priority areas of Innovation and Internationalisation, with long-term strategy outweighing short-term profit. Our objectives are continuity, enhancing long-term partnerships and collaborative research, transmitting our knowledge, tackling unmet medical needs by offering new treatment or patient support models. Internationalisation is rooted in our genes: Théa is currently the third largest ophthalmology laboratory in Europe, and aims to become a world leader in terms of export and international presence in compliance with the culture of each country where it is present.

It is this vision that makes Théa unique.

#### let's open our eyes



LABORATOIRES-THEA.COM





let's

our

open

eyes

"Open" results from the desire to open our doors ever wider.

Our occupation is the eye, the organ of sight, an inestimable treasure whose value often remains overlooked until we have lost it.

This scientific and human adventure has made us global pioneers in the field of preservativefree medications, not to mention several diseases of the eye. Today, Théa is one of Europe's leading ophthalmic groups.

Because much remains to be discovered, this adventure is constantly beginning anew: certain diseases can be eradicated, many treatments can be improved and the fundamental nature of the eye can be better respected.

In order to achieve these goals, Théa has always tried to transcend its strict vocation as a "pharmaceutical laboratory": it is a space for sharing knowledge, a space that is even more reputed now that we have become a major group, 100% dedicated to ophthalmology. We are an intellectually and financially independent family company. Lastly, our 150 years of experience have taught us that a long-term vision is essential.

This is indeed a scientific adventure, but it is also a human one. We listen to our partners throughout the world, particularly eye specialists—who are patients' first contacts. Developing medications needed by ophthalmologists, regardless of their mode of practice; giving life to their ideas; keeping products that they deem essential to their therapeutic arsenal on the market; responding to their training expectations by helping young practitioners succeed and meeting the aspirations of the best practitioners...

This is the adventure that we hope to share with you.



Henri Chibret President of Théa Holding and Founder

Jean-Frédéric Chibret President of Théa Group

#### By Henri Chibret, President of Théa Holding and Founder & Jean-Frédéric Chibret, President of Théa Group

## let's open our eyes!

EDITORIAL page 4

16

30

34

40

46

52

60

HENRI CHIBRET·JEAN-FRÉDERIC CHIBRET CONVERGING VIEWS page 8

150 YEARS OF EXPERTISE page 14

SPECIAL PRESERVATIVE-FREE page 16

**REVOLUTION UNDERWAY** page 16

DNA OF THE PIONEERS page 18

INTERVIEW CHRISTOPHE BAUDOUIN page 20

INTERVIEW ALEX SHORTT

page 24

FOCUS ABAK

page 28

PRODUCTION

FOCUS PRODUCTION

page 30

page 30

DEAL WITH THE BEST page 32

#### THE WORLD OF THÉA

page 34

EUROPE

page 34

WORLD

page 37

PAUL CHIBRET GOLD MEDAL page 38

EDUCATION page 40

FOCUS CHIBRET INSTITUTE

page 42

DRY LAB page 44

#### **OPEN INNOVATION**

page 46

INTERVIEW BERTRAND VALIORGUE page 46

THÉA OPEN INNOVATION page 49

#### **AFRICA**

page 52 FIGHT AGAINST TRACHOMA page 52

E-LEARNING IN AFRICA page 58

#### **OPEN OUR EYES AND MORE...**

YESTERDAY AT ELLIS ISLAND раде бо

ART page 62

THE THÉA COLLECTION page 64

THÉA KEY FIGURES page 66

## table of contents

**Open** inside



#### **OPEN BY THEA #1**

Publishing director Jean-Frédéric Chibret Editor in chief Lorraine Kaltenbach Project supervision Julie Ahmed Texts & interviews Lorraine Kaltenbach

Concept & production Bruno Benchetrit / 2be.company Photos Getty Images / Thea / Huyhn / NIH / Printed by Print Conseil - March 2019

© THÉA - ALL RIGHTS RESERVED - NO PART OF THIS PUBLICATION MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR OTHERWISE, WITHOUT PRIOR CONSENT OF THE PUBLISHER www.laboratoires-thea.com





Laboratoires Théa, 12 rue Louis Blériot, 63017 Clermont-Ferrand Cedex 2, FRANCE



#### "SINCE THE 1880'S, THE NAME OF CHIBRET IS LINKED TO RESEARCH"



#### THE CONVERGING VIEWS OF JEAN-FRÉDÉRIC CHIBRET, PRESIDENT OF THÉA SINCE 2008, AND HIS UNCLE HENRI, FOUNDER OF THE COMPANY IN 1994 AND THE CURRENT PRESIDENT OF THÉA HOLDING

#### Henri Chibret, what was your motivation for creating Théa in 1994?

"I wanted to continue the family's adventure after my father sold Chibret Laboratories, which was founded in 1902. Like him, I was swimming in eye drops before I left the cradle. I had this vocation in my blood. I wanted to dedicate myself exclusively to research, the most exhilarating aspect of the business. So, in 1976, I founded Transphyto, the first French startup dedicated to medical innovation. The company offered its breakthroughs to large pharmaceutical laboratories.

Théa was born because all start-ups have the same fate: they either go bankrupt, get sold or transform themselves so that they can market their own products. We chose the latter option. Transphyto was a scientific and financial success, but I was frustrated to see our innovations passed from hand to hand due to mergers and acquisitions. The same medication could successively line the pockets of three or four laboratories. And yet, ophthalmology wasn't a priority for all of them.

#### It took almost twenty years for this transformation to occur. In hindsight, could it have taken place earlier?

I wanted to return to the market, but not willynilly with a mediocre range or the umpteenth antiallergic drug or beta blocker. The Chibret name has been associated with research since the 1880s. We had to come back with a bang. At the time, the pharmaceutical industry's attempts to develop a multi-dose, preservative-free "eye drop" bottle remained unsuccessful. Théa was born when we found the solution, after ten years of research. It wasn't a simple pharmaceutical laboratory that was founded that day, but rather a pioneer and world leader in preservative-free ophthalmic medications. It was well worth the wait.

#### Apart from your success with the multidose bottle, were your development axes clearly established?

I don't have much to say about development axes, strictly speaking. It's true that we were able to rapidly develop our range because we had the expertise. But, starting out, I only had two ideas, two foolproof principles that I learned from my father. The first: companies who neglect research cease to exist. This has always been the case! The second: you must market your medications abroad to finance your research. The French market isn't sufficient. And you have to market your medications yourself! We did this gradually, in accordance with our financial means. Jean-Frédéric assisted me at the beginning of this process. He was the architect of Théa's internationalisation. Twenty-five years later, we have 30 subsidiaries throughout the world, and our products are marketed in more than 70 countries. '



#### reflections



"A NEW CULTURE, FAR BEYOND THE BORDERS OF THE COMPANY, INVITES US TO ENRICH OURSELVES WITH OTHER POINTS OF VIEW, SO AS NOT TO ALWAYS LOOK AT THINGS FROM THE SAME PERSPECTIVE"

#### Jean-Frédéric Chibret, were you also "swimming in eye drops before you left the cradle"?

"No, my father and Henri's brother, Jacques Chibret, didn't AMD or with a university hospital team trying to develop the immerse me in eye drops from birth. I should mention that he was interested in medical engineering, since he introduced the first European Argon ophthalmic laser and the first Yag laser to treat secondary cataracts. However, the family's proclivity towards pharmaceuticals "won me over" after my first experience at Théa, in Spain, in 2000-2001.

#### How are you reinterpreting the family legacy to adapt to the challenges of the 21st century?

Each generation contributes to its legacy in its own way. I place great importance on assisting young ophthalmologists during their training, much like my grandfather, Jean Chibret, who created the world's largest ophthalmology documentation centre. In the 1950s and 60s, the Chibret Institute was invaluable to students who were completing their thesis in this specialised field.

Do companies who neglect research cease to exist? Most certainly! But innovation processes have changed in the 21st century. Companies can no longer function as entities that act alone. Interdisciplinarity, the collaborative approach and open innovation are the bottom line. It's a new culture that surpasses the boundaries of the company. This culture encourages us to enrich our minds with other viewpoints, so that we don't always rely on the same tired perspective.

#### What about the second family maxim: "market your own medications abroad"?

in the Chinese market. which is our strength?"



In this new landscape, "in-house" R & D is becoming a catalyst for innovation. Théa can now collaborate with a Lyonnais immuno-oncology company working on an antibody to treat first corneal transplants capable of being stored in a bioreactor. The latter would be the holy grail for ophthalmic surgeons.

It presents two major challenges for me. The first? After covering Europe and Africa, which took a long time, we set out to conquer markets in other parts of the world. We have recently made headway not only in the Middle East, but also in the Americas, specifically South America, Central America and Canada. Suffice to say that we are slowly but surely targeting the United States, which remains in our line of sight for years to come. We are also interested in China, although we have no pre-determined plan since everything is a matter of opportunity

The second challenge is that the inroads we have already made have corollaries. How do we continue our expansion and pursue our internationalisation without losing our soul or any of our substance? How do we preserve the human dimension,







In recent years, the pharmaceutical industry has favoured what is referred to as the "blockbuster approach", focusing on just a few molecules, a few diseases and some very lucrative drugs. Thus, due to lack of profitability, physicians regularly see medications disappear from their therapeutic arsenal. These medications are sometimes those most appropriate and most effective for a given patient. Confronted with this logic, Théa's job is to continuously innovate without betraying its vocation as a generalist of ophthalmology.

We cover all therapeutic classes, from allergies to glaucoma, as well as dry eye, infections, inflammations and so on. Théa offers state-of-theart medications in each of these areas: not only do we them disappear. provide the most modern range of medications, but These essential products also include innovative we also keep so-called "service products" on hand.

Some are old molecules, discovered decades or even a century ago, whose therapeutic interest remains significant. Many of these molecules are used for diagnostic purposes (anaesthetics, mydriatics) and to fight infections (first-generation antibiotics). Laboratories who wish to maintain these "traditional" products face various difficulties in terms of raw material supply and registration

dossier updates involving the most recent analytical techniques. Nevertheless, practitioners believe that these drugs are irreplaceable and do not want to see

medications for orphan diseases and other rare conditions. For instance, Théa was the only laboratory to offer a new molecule for ocular herpes, a disease that ophthalmologists do not see every day in their practice, but whose consequences are potentially dramatic.

Théa's "service product" policy is part of our commitment to practitioners.

#### let's open our eyes

LABORATOIRES-THEA.COM



#### focus

Paul Chibret

Henry Chibret

Jean Chibret

## THE CHIBRET FAMILY 150 YEARS OF EXPERTISE









Destiny is a random path to which we give direction. Nothing predisposed the Chibret family to become major players in the European pharmaceutical industry. And yet they achieved this prominent status! In June 1871, Paul Chibret, a military physician under Napoleon III, was sent on an expedition in eastern Kabylia. There, he experienced eye pain, which he attributed to the cool night air. In fact, the aide-major was experiencing the first symptoms of an eye disease that would render him blind for several months.

#### Jacques Chibret

Henri Chibret

Jean-Frédéric Chibret

He swore to himself that he would become an ophthalmologist if his sight was fully restored... Henry, then Jean, then Henri and Jacques and finally Jean-Frédéric Chibret succeeded Paul: each contributed to this great industrial adventure in ophthalmic product research, development and marketing. At Théa, the adventure continues: we are now Europe's leading independent ophthalmic group.

The Abak® system is pure technology and innovation in a bottle Thanks its filtrating membrane with a 0.2 microns porosity, the solution remains sterile for up to 3 months after opening. This revolutionary membrane took 10 years of development.





In our consumerist societies, industrialised products are now available to an increasingly wider public. This has led to the massive, and often abusive, use of adjuvant chemical substances, such as preservatives, antioxidants, dyes, etc. This phenomenon has extended to commonly used products (e.g. food, cosmetics, cleaning products, etc.), as well as pharmaceuticals.

The use of these substances has led to undeniable progress in terms of safety and storage. Nevertheless, repeated and daily use gradually revealed their harmful effects and prompted scientific research. Related studies have demonstrated their deleterious effects on both humans and the ecosystem. Ophthalmology has not escaped these findings.

In the 1950s, Jean Chibret (1915-1989) first added preservatives to his solutions, and he also introduced a use-by date for open bottles. His eye drops were the first that could be stored for up to 15 (and, in some cases, 30) days after opening, without the risk of contamination. At the time, he was imitated by all his worldwide competitors.

His son, Henri Chibret, would also become a trendsetter in 1994 when he removed the preservatives first introduced by his father. It was this year that Henri created ABAK<sup>®</sup>, the first multi-dose bottle to dispense preservative-free eye drops. This was a world first and propelled ophthalmology into the preservative-free era. It wasn't long before

in-use shelf life.





OPEN BY THÉA

millions of patients were able to benefit from an array of ophthalmic medications that respected the fundamental nature of the eye.

Simple in appearance, ABAK<sup>®</sup> is the fruit of technology and innovation. It keeps a solution sterile for up to three months after opening, thanks to a 0.2 µ filtration membrane. Its development required ten years of research, and it took several more years to improve its design (making it smaller, easier to use and more efficient while extending its shelf life).

The preservative-free revolution is indeed one that is still in progress. The quest continues each year, thanks to the mobilisation of our researchers.

We should mention that the development of a dispensing technology requires rare and numerous talents and that it is just as much a scientific adventure as the search for an active substance.

After this initial feat, we had to develop a second bottle for molecules that were incompatible with ABAK<sup>®</sup>. So, we created **EASYGRIP**<sup>®</sup>. This new technology is of interest for many pathologies, including glaucoma. Finally, Théa tackled the problem of gel contamination (particularly gels used for eyelid hygiene) by launching the **STERI FREE**<sup>®</sup> tube, which dispenses sterile gels, around the eye contours, throughout the product's

And, naturally, our researchers are currently working to meet new challenges.







1990's

Paul Chibret (1844-1911) is one of the first individuals in Europe to promote ointments that are much less susceptible to contamination. These ointments are made from a new petroleum jelly called "petroline", later known as Vaseline.

#### THE PRESERVATIVE-FREE pioneers

1870's

COLLYRE

STERILISÉ

ISOTONIQUE

SPECIAL

preservative-free



1920's

A finger, an eyelash, a warm spell -the smallest thing can cause bacteria to proliferate. Solving the problem of ophthalmic product contamination was a challenge for 19th and 20th century ophthalmologists—and a major undertaking for the Chibret family.

Jean Chibret (1915-1989) is the first individual to add preservat his solutions and introduce a use-by date for open bottles. These are innovations: Chibret eye drops are the first that can be stored for up to in some cases, 30) days after opening, without the risk of contamina true pioneer, Jean will be imitated by his worldwide competitors.

Henry Chibret (1873-1943) develops

dry eye drops containing dacryoserum. The

product is a powder to be dissolved in boiling

water.

950's



SINGLE-DOSE, ABAK<sup>®</sup>, STERI FREE<sup>®</sup>. et EASYGRIP<sup>®</sup>

Numerous publications demonstrate the harmful effects of preservatives on the cornea, the conjunctiva and the tear film, leading to irritation, inflammation and dry eye. To overcome these drawbacks, "single-use" eye drops are created. In 1994, with the ABAK® bottle, Henri Chibret (1940) puts an end to the use of preservatives, first introduced by his father. Alongside Henri Chibret and Théa, ophthalmology enters the preservative-free era.

$\rightarrow$	20	00's
tives to e major 15 (and, tion. A		
lean-Frédéric ( preservative-free" pao nd STERI FREE® teo	<b>Chibret (1975)</b> ckaging range with t chnologies.	extends the the EASYGRIP*
STERL-FREE		
T	A	

19



#### "I KNEW THAT A FRENCH MANUFACTURER IN AUVERGNE WAS PROFOUNDLY INTERESTED IN THE TOPIC: HENRI CHIBRET!"

Interview with Prof. Christophe Baudouin, Department Head at the Quinze-Vingts National Ophthalmology Hospital and Director of the Paris Vision Institute



PRESERVATIVE-FREE raising awareness Your research in the 1990s demonstrated, for the very first time, that ophthalmologic medications containing preservatives can cause significant irritation and inflammatory reactions, not only in patients with dry eye, but also in those with glaucoma. How did you come to this conclusion?

"My reasoning was as follows: dry eye is an inflammatory disease and glaucoma patients have an inflamed ocular surface. In both cases, the problem worsens whenever more medications are taken. After conducting extensive experimental, clinical and laboratory research, I identified the relationship between preservatives and these side effects.

#### Did your work immediately receive the recognition that it deserved from manufacturers?

My findings were published in 1994, at a time when the problem remained completely unrecognised. The vast majority of laboratories weren't concerned with this issue. However, I knew that a French manufacturer in Auvergne was profoundly interested in the topic: Henri Chibret! I had already met him in 1988 at an international congress. I knew he was looking for a way to rid ophthalmic medications of their preservatives. The year that my work was published, he had just launched Abak, the first preservative-free eye drop dispenser in bottle form.

That's when things really started to change. Other companies followed Théa's example and got on board. Preservative-free eye drops were first marketed for dry eye. Single-use eye drops appeared on the market, followed by drops with "alternative" preservatives that are less harmful for the eye.

#### Has the preservative-free battle been won?

Alas, not yet, beca this field, as are ph is a perfect examp of developing less the appearance o molecules contain a day and thus h profile, making it The downside is discovery, manufa be tempted to a altogether. Some prescribing them may insidiously pl more complicated The global R & respect the funda this is the danger. And yet, in terms a longer optional. It health of our patie Théa was keen to c With respect to gla like to see every l and dedicate them Preservative-free everyone, not just

Alas, not yet, because cyclical phenomena are common in this field, as are phases of regression. Glaucoma medication is a perfect example. This virtuous cycle, which consists of developing less chemical eye drops, has been slowed by the appearance of prostaglandins. Although these new molecules contain preservatives, they are only used once a day and thus have a very interesting "safety/efficacy" profile, making it possible to offer them to patients.

The downside is that, in the aftermath of this type of discovery, manufacturers, practitioners and patients may be tempted to abandon preservative-free medications altogether. Some ophthalmologists wind up exclusively prescribing them to hyperallergic patients. Laboratories may insidiously phase out these medications, since they are more complicated to develop and therefore less profitable. The global R & D effort to develop medications that respect the fundamental nature of eye may be curtailed: this is the danger.

And yet, in terms of public health, "preservative-free" is no longer optional. It's a necessity. We can no longer allow the health of our patients' eyes to be compromised.

Théa was keen to develop a preservative-free prostaglandin. With respect to glaucoma and other ocular diseases, I would like to see every laboratory work towards the same goal and dedicate themselves to preservative-free medications. Preservative-free products should be the standard for everyone, not just a select few.

(...)



Interview with Prof. Christophe Baudouin, Department Head at the Quinze-Vingts National Ophthalmology Hospital and Director of the Paris Vision Institute



I do indeed! In the last 25 years, other teams around the world have demonstrated the determining role of preservatives in causing irritation, dryness and allergies. It has been confirmed that we need to reduce the amount of preservatives as much as possible, or even eliminate them altogether. And yet, at international congresses, I still meet renowned specialists who ignore this imperative.

As for the health authorities, their methodology for assessing a drug's contribution is inadequate for understanding the medical benefit rendered by these "new generation" products as compared to "preserved" medications. For example, the harmful effects of preservatives only become apparent in the long term. When health authorities examine the side effects of "preserved" eye drops and restrict their monitoring to 6 months, in studies that exclude patients with allergies and fragile or impaired ocular surfaces, the long-term, real-life consequences of the administered product escape them completely. The result is that the "preservative-free" movement is far from being promoted and supported as much as it should be. This "short term" policy makes prevention difficult. Patient health, as well as health insurance expenses, will be negatively impacted in the long run. Here's an example to help shed light on this issue: 50% of patients being treated for glaucoma also use lubricant eye drops for dry eye, but the prevalence of this condition should only be 15% in this population. This means that 35% of glaucoma patients (and there are millions of them) are taking medication for an iatrogenic disease predominately caused by preservatives!

#### Your prognosis for the years to come?

I remain confident. The preservative-free movement has been hindered by the cyclical phenomena I've just described. But these products will soon establish themselves as the benchmark treatment. It's inevitable!"



**PRESERVATIVE-FREE** in particular by European Medicines **MEDICATIONS ARE RECOMMENDED BY** MULTIPLE ORGANIZATIONS



Agency (EMEA), the European Glaucoma Society (EGS), the Tear Film and Ocular Surface society (TFOS DEWS II), the Haute Authorité de GANIZATIONSSanté (HAS), the National GlaucomaAROUNDSociety (NGS), the Nordic Guidelines,THE WORLDthe Sociedad de Superficie Ocular y Córnea (SESOC), and the UK National Institute for Health and Care Excellence (NICE)



Interview with Alex Shortt, Consultant Eye Surgeon & Clinical Academic Ophthalmologist

OPPO

 $(\mathbf{+})$ 

Mr Alex Shortt is a highly trained academic researcher and consultant ophthalmic surgeon in London's famous Harley Street medical district. He trained and worked as a consultant for 14 years at London's Moorfields Eye Hospital and specialises in advanced technologies for correcting vision, including stem cell transplants, corneal transplants, lens implants and laser vision correction. His motivation for helping people with poor eyesight grew from witnessing his great-aunt having life changing cataract surgery when he was 7 years old. Since then he has qualified first in his class in both medical school and the Royal College of Ophthalmologists' Membership examinations and has been awarded numerous prizes and distinctions for his work and research in helping the blind to see.

#### "I ALWAYS EMPHASISE THE IMPORTANCE OF PRESERVATIVE-FREE MEDICATION IN THEIR TREATMENT. THE HEALING OF THE OCULAR SURFACE IS SUCH A SLOW AND DELICATE PROCESS THAT THERE IS NO PLACE FOR PRESERVATIVES IN THESE PATIENT GROUPS"

#### For which types of patients do you recommend preservative-free?

"In my practice, there are 4 very clear indications for preservative-free treatment. The first is patients with symptoms and signs of ocular surface disease (OSD) or dry eye disease (DED). In these patients, the ocular surface is already damaged and inflamed. Adding preservative to this stimulates further cell death and tear film instability this driving the vicious cycle of OSD/DED rather than correcting it. The use of preserved eyedrops in this patient population simply does more harm than good. The second indication is post-surgery, especially refractive surgery. I would go so far as to state that all post-operative eyedrops regardless of the type of eye surgery should be preservative-free. We know that laser vision correction causes a temporary neurotrophic effect and secondary DED. To administer frequent doses of preservative in this situation is a recipe for exacerbating the signs and symptoms of tear film instability and ocular surface damage. In refractive surgery, patient satisfaction is everything and preservatives lead to unhappy patients.

Switching way of redu applies to the ocular increases. I is more prosensitive to post-surger common in treatment p essential in **The third** are expose for long poshort term, surface, tra toxicity and The fact th and in par for glaucor body of evthe inflam

Switching to preservative free treatment is an excellent way of reducing the chance of unhappy patients. This also applies to older patients undergoing cataract surgery. As the ocular surface ages, the incidence of the OSD/DED increases. In addition, the ocular surface of older patients is more prone to preservative induced toxicity and is more sensitive to dessicative stress and subsequent inflammation post-surgery. Preservative toxicity post-surgery is very common in elderly patients and therefore preservative free treatment post cataract surgery in this group of patients is essential in my practice.

The third indication is glaucoma. Glaucoma patients are exposed to low to medium doses of preservatives for long periods. Whilst this is rarely problematic in the short term, the accumulation of preservative in the ocular surface, trabeculum, lens and choroid eventually leads to toxicity and immuno-allergic reactions and inflammation. The fact that inflammation is bad for glaucoma patients and in particular, the outcome of surgical interventions for glaucoma is universally accepted. There is a substantial body of evidence linking pre-operative preservative and the inflammation it induced to poor surgical outcomes.



#### Interview with Alex Shortt, Consultant Eye Surgeon & Clinical Academic Ophthalmologist

Therefore, glaucoma patients who display signs of ocular surface disease or glaucoma patients who may require subsequent surgical intervention should be treated with preservative free drops.

The final indication for preservative free eyedrops is patients undergoing any form of corneal transplantation. Preservatives prime the immune system, induce conjunctival inflammation and cause dendritic cell infiltration of the conjunctiva and cornea. All of these are undesirable in corneal transplantation as they increase the likelihood of corneal allograft recognition and rejection.

#### Do you explain to your patients the interest of preservative-free?

Given that the typical patients in my practice are in one of the above four categories I always emphasise the importance of preservative-free medication in their treatment. The healing of the ocular surface is such a slow and delicate process that there is no place for preservatives in these patient groups and I insist that patients source the correct preservative-free formulations of their medicines and are not diverted to preserved alternatives.

#### Do you consider, before prescribing a product, the deleterious effects from preservatives?

As I have explained above there is a very substantial and evidence based scientific rationale for using preservative free medication in the patients I treat. Preservative stimulates apoptosis of the ocular surface cells and induces inflammation. This drives the vicious cycle of OSD / DED and leads to medication doing more harm than good. In patients who have any form of tear film instability, DED, OSD or ocular surface inflammation secondary to surgery the use of preservative is simply counterproductive.



#### "THERE IS A MYTH THAT PRESERVATIVE FREE PRODUCTS ARE MUCH MORE EXPENSIVE THAN THE EQUIVALENT PRESERVED PRODUCTS. THIS IS SIMPLY NOT TRUE"

#### What is your perception about prices in preservative-free products?

There is a myth that preservative-free products are much more expensive than the equivalent preserved products. There are three groups of patients in my practice in whom This is simply not true. The use of multi dose preservative free delivery system such as the ABAK® bottle and advances in manufacturing have seen the cost of preservative free I. Refractive surgery patients. In these patients, the tear medication reduce to similar levels as their preserved counterparts. There is also false economy in prescribing preserved products because many of these patients will need to be co-prescribed lubricants and other medications known DED/OSD. The ocular surface of older patients to treat the ocular surface inflammation induced by the and patients with OSD / DED have a limited capacity preservative. If preservative-free medication had been used in the first place such polypharmacy would not be required and the total cost of treatment would be lower.

surgery?

#### In the operating room, do you prefer to use preservative-free products before and after

I will not compromise on prescribing preservative-free treatment post operatively:

film instability and ocular surface toxicity induced by preservative are simply unacceptable.

2. Cataract surgery in the older patient or the patient with to cope with the stress of cataract surgery. The use of preservative in these patients can push the ocular surface over the threshold and into epithelial breakdown.

3. Glaucoma patients. Everything we have learned over the past 20 years of glaucoma surgery has taught us that inflammation and fibrosis are the enemy of successful glaucoma surgery. Preservative induces inflammation and subsequent fibrosis both pre and post operatively. For that reason it is essential that glaucoma patients receive preservative free treatment not only post operatively but also pre-operatively."



#### focus Abak®

Théa was the pioneer and remains the world leader in preservative-free eye care products. The ABAK® bottle is a high-security, high-technology dispenser which delivers up to 300 drops through a filter which prevents microbial contamination. Continual improvements have made it smaller, more user-friendly, more effective, and the contents can now be used for up to 3 months after opening as opposed to between 2 and 4 weeks for a classical preserved multi-dose bottle. This continually evolving concept constitutes real progress for the environment. A 10 ml ABAK® bottle contains 300 drops, enabling the contents to be administered 150 times in both eyes, in other words the equivalent of 150 single dose units.

#### 1 ABAK<sup>®</sup> PRESCRIBED EVERY 3 SECONDS AROUND HE WORLD

9

Abak

Collyre en solution Eyedrops solution 5 ml

Abak Collyre en solution Eyedrops solution 5 ml  $\mathbf{O}$ 

Abak Collyre en solution Eyedrops solution 5 ml 0

Abak

Collyre en solution Eyedrops solution 10ml 9

Abak

Collyre en solution Eyedrops solution 10 ml 9

Abak

Collyre en solution Eyedrops solution 10ml Collyre en solution Eyedrops solution 10ml

Abak

Collure en solution Euedrops solution 10 ml

								-		S	3		
		SALE SALE					1	ŀ	49	S	SI	N	
				-		-							
	 	 	 			-							
								 			 		and the second s
	 	 	 					 			 		Contraction of
	 	 	 								 		and the second s
	 	 	 								 		The state of the s
	 	 	 		In-section of			00	10		 10	10	and

Abak

Collyre en solution Eyedrops solution 10 ml Abak

Collyre en solution Eyedrops solution 10ml





Abak

Collyre en solution Eyedrops solution





### focus production MADE IN EUROPE **EUROPEAN QUALITY EXPORTED TO MORE THAN 70 COUNTRIES**



IAA A CUR

OPEN BY THÉA



#### PRODUCTION

Théa's treatments are produced on the European continent, mainly in France, through solid partnerships with leading manufacturers or in its own factories: a winning strategy that continues to yield positive results.

## **DEAL WITH** the best

Théa is involved in formulation and routes of administration, one of the company's development axes. What exactly is formulation? It's the art of making an active ingredient administrable to a given patient in a given form. Because formulation has a significant impact on drug availability in the body, it represents a keystone of innovation.

In the past, people mainly used eye drops and ointments to care for their eyes. Nowadays, ophthalmologists have a wider array of treatment options at their disposal: eye drops in single-use vials and multi-dose bottles, ointments, gels, wipes, injectables, ophthalmic inserts, oral solutions, etc. A laboratory like Théa, 100% dedicated to ophthalmology, offers approximately twenty different dosage forms.

As you may suspect, the production of each one of these forms requires know-how, highly specific skill sets and the ultramodern equipment that makes it all possible. Everyone truly has a specialised role to play! To better support

innovation, Théa identified production outsourcing as a strategic axis from the outset. The Laboratory focuses on its main mission: research and drug development. Manufacturing, processing and packaging are entrusted to the very best subcontractors, according to product type. Certain subcontractors are familiar with the constraints of wipe production, while others specialise in injectables. We have created reliable partnerships, guaranteeing that each of our pharmaceutical forms are of the highest quality. Our products are manufactured at ten sites, mainly in France, in Amiens, Annonay, Coutances, Dammarie-les-Lys and Tours, but Théa also has manufacturing sites abroad —in Rome and Madrid. This activity generates some 1,000 jobs for our partners.



The *ABAK*<sup>®</sup> bottle (for preservative-free eye drops) and the STERI FREE<sup>®</sup> tube (for preservative-free gels) are manufactured at our factory in Farmila, Milan (Italy)

Meanwhile, Théa maintains control over certain strategic technologies. For example, the ABAK® bottle (for preservativefree eye drops) and the STERI FREE® tube (for preservativefree gels) are manufactured at our factory in Farmila, Milan (Italy). This site has just increased its capacity and can produce up to 60 million units of ABAK® medications. Our oversight also extends to an ophthalmic insert for cataract surgery and certain ophthalmic diagnostic tools produced near La Rochelle (in Charente-Maritime). Thanks to Théa and its partners, quality European products are in demand and exported to 70 countries around the globe each and every day.





Théa belongs to a select circle of pharmaceutical companies with subsidiaries at the continent's four cardinal points. A return on performance is never a foregone conclusion...





and solidarity was born when the Treaty of Rome was signed more than 60 years ago. Nevertheless, in the field wishful thinking. Article 36 of the Treaty grants states waiting for a given state's answer for up to 5 years. the "right to regulate the importation of certain goods very permissive on the issue of drug patentability, helped of intra-Community trade.

Thus, the advent of a unified "pharmaceutical Europe" has been a slow process. It required the harmonisation of legislation, which intensified in the 1980s, just as the that a unified "pharmaceutical Europe" was born just after regional markets for future pursuits. Théa's creation, with the London launch of the European Medicines Evaluation Agency (EMEA) on 26 January

One of the world's largest spaces of shared prosperity 1995. Simplified Community procedures for European marketing authorisations were instituted: the wait time was set at 18 months, with procedures running simultaneously of medicine, the founding fathers' intent to create a space in all EU member states—prior to this, pharmaceutical for the free movement of persons and goods has long been companies had to file in each member state, sometimes

In 1996, Théa opened its first subsidiary in Spain. It is for the purpose of protecting public health", a phrase important to note that, from the outset, the group had that has long been used by each country for protectionist approved a global projection strategy in the European purposes. Moreover, international legislation, which was economy to finance its research. Théa soon had subsidiaries in Switzerland, Belgium, Italy, Portugal, etc. A quarter of facilitate duplication and counterfeiting to the detriment a century later, Théa is one of the largest ophthalmologic stakeholders in Europe, with a network of nearly 25 European subsidiaries. Europe is indeed Théa's foothold and our flagship for conquering additional world markets. The group has recently opened establishments in the European Economic Community (EEC) was expanding Maghreb, Middle East, South America, Central America from six to fifteen states. In hindsight, it would appear and Canada. And Théa's eyes remain focused on other



**ASIA** 





## **45 YEARS OF** *franco german friendship*

This medal was the creation of Henri Chibret and Pierre Alsace-Lorraine. He chose to hold the French Congress in Czapinski, the director of "Chibret Germany" (the former family-owned laboratory), a man who dedicated his life to Franco-German reconciliation. At the time, the founder of Théa was in charge of all Chibret Laboratories' export activities. Europe had a renewed outlook in the wake of Chancellor Adenauer and General De Gaulle, who had laid the foundations for Franco-German friendship.

The name to be given to this award was self-evident. Paul Chibret founded the French Ophthalmological Society in 1883. He had already invited scientists to reconcile 140 years ago, after the Franco-Prussian War. A former pupil of the Imperial School of Medicine in Strasbourg, a city that had been the "theatre" of all rivalries between the two nations, he had insisted that the SFO be accessible to all foreign ophthalmologists and, in particular, to the Germanswho had been victims of ostracism since the annexation of

#### **COMPLETE LISTING OF RECIPIENTS**

1974: Prof. F. HOLLWICH, Münster (Germany) • 1976: Prof. H. REMKY, Munich (Germany) 1978: Prof. A.BRONNER, Strasbourg (France) • 1979: Prof. W. STRAUB, Marburg (Germany) 1980: Prof. H. SARAUX, Paris (France) • 1981: Dr. P. AMALRIC, Albi (France) • 1983 - Prof. E. KLOTI, Zürich (Suisse). 1984: Prof. F.C. BLODI, Iowa (USA • 1985: Prof. J. ROYER, Geneuille (France • 1986: Prof. J. MICHIELS, Louvain (Belgique) 1989 : Prof. J.WOLLENSAK, Berlin (Germany) · 1990: Prof. M. BONNET, Lyon (France) 1991: Prof. H. BAURMANN, Königswinter (Germany) • 1992: Dr. J.L. SEEGMULLER, Strasbourg (France) 1993: Dr. R. GREWE, Münster (Germany) • 1994: Prof. H. HAMARD, Paris (France) • 1995: Prof. Chr. HARTMANN, Berlin (Germany) 1996: Prof. H. BOURGEOIS, Paris (France) • 1997: Prof. H. NEUBAUER, Cologne (Germany) 1998 : Prof. G. SOUBRANE, Créteil (France) • 1999: Dr. K. DILGER, Ingolstadt (Germany) 2000: Prof. J. FLAMENT, Strasbourg (France) · 2001: Prof. H. BUSSE, Münster (Germany) 2002: Prof. J. P. ADENIS, Limoges (France) • 2003: Prof. A. KAMPIK, Munich (Germany • 2004: Prof. J.-L. DUFIER, Paris (France) 2005: Prof. P. RIECK, Berlin (Germany) · 2006: Prof. J.-L. ARNE, Toulouse (France) · 2007: Prof. G.E. LANG, Ulm (Germany) 2008: Prof. S. MORAX, Neuilly (France) • 2009: Prof. F. GREHN, Würzburg (Germany) • 2010: Prof. J.-A. BERNARD, Paris (France) 2011: Prof. Dr. K.G. KRIEGLSTEIN (Germany) · 2012: Prof. P.Y. ROBERT, Limoges (France) 2013: Prof. T.REINHARDT, Münich, (Germany) · 2014: Prof. C. ARNDT, Reims (France) 2015: Prof. B. SEITZ, Erlangen (Germany) · 2016: Prof. C. SPEEG SCHATZ, Strasbourg (France) 2017: Prof F. HOLZ, Bonn (Germany) · 2018: Dr J.M. PERONE, Metz-Thionville (France) 2019: Prof. C. CURSIEFEN (Germany)



May, thus allowing German practitioners to come to Paris; then, once summer arrived, French practitioners would be free to participate in the Heidelberg Society Congress.

On the German side, the young Theodor Axenfeld was the most ardent proponent of these new relations, accepting the role of rapporteur at one of the SFO's first congresses. A coincidence, perhaps? In 1925, his peers would select him to preside over the prestigious Deutsche Ophthalmologische Gesellschaft (DOG), the oldest medical-scientific professional society in the world.

Researchers sometimes play a mediating role for exchanges that would never have occurred otherwise. Progress entails sharing scientific advances, devising joint solutions to health challenges and making said solutions available to the greatest number of people.



#### **#NeverStopLearning** EDUCATION PROGRAMME BY THEA

Education and the sharing of knowledge have always been a tradition for the Chibret family.

THÉA SUPPORTS MANY PROJECTS AND PEDAGOGICAL ACTIVITIES.





hoto Getty Images

#### **focus** Chibret Institute

Jean Chibret (1915-1989) believed that research and development must be the cornerstones of the expansion of Laboratoires Chibret. In the early 50's, he created an internal R&D structure to develop a "pipeline" of new products. He recruited a multidisciplinary team to study all the new possibilities of physical, chemical and biological technologies to develop the pharmacopoeia. In parallel, he relied on all the institutional research networks. Finally, he opened the world's biggest documentation centre - the Chibret Institute - frequented by entire classes of young specialists from the 50's. This "institute" published the Chibret Journal which was sent to 15,000 ophthalmologists and organised various symposia. Each year, it also organised symposia on ophthalmology for residents in Clermont-Ferrand. The reputation behind the Chibret name soon became synonymous with rigour, ethics and quality.

R



INSTITUT CHIBRET





#### "One's first operation should never be on a patient"

Recent years have seen the advent of several essential tools for beginning and experienced surgeons alike, most notably the simulator and the Dry Lab. The dry lab, a more recent arrival, uses artificial eyes that are typically made of silicone. There are also training devices for lasers and for certain specialised surgical techniques like those used to treat trachoma complications (HeadStart).

The surgical simulator: directly inspired by aviation flight simulators, surgical simulators resemble a 3D video game. As in the operating room, the (artificial) head is reclined, facing the surgeon. The surgeon inserts his/ her instruments into an artificial eye and wields them accordingly. The mechanism can be configured for different types of operations: cataract surgery, refractive surgery, etc. At any given time during the intervention, physicians can correct their mistakes, familiarise themselves with the appropriate surgical gestures and hone their expertise. The device provides a detailed and objective assessment of the physician's training and progress.

"Dry Lab" sessions provide an alternative to the simulator. In this case, artificial eyes made of silicone are used for training purposes. The tool's merit consists of moving beyond the traditional use of animal eyes. Formerly, surgical training relied solely on companionship. Two surgeons were assigned to a patient, allowing the novice to observe the seasoned practitioner. The latter would then allow the novice to operate under his/her guidance. This method of training remains essential, and a large number of surgeries are still performed on humans under direct supervision. Nevertheless, its sole use will soon be relegated to the past.

practitioners.

The real difficulty in moving forward is the cost of the training equipment, particularly the simulator. Due to a lack of resources, few hospitals have them. Hence Théa's commitment to help a maximum number of young ophthalmologists access these new educational tools.

To this end, Théa co-financed the Clermont-Ferrand Hospital Centre's surgical simulator. Young interns in the region are now trained using this ultra-modern tool. At the request of the Théa Foundation, Prof. Frédéric Chiambaretta has agreed to welcome African students into his ophthalmology department. We also regularly organise European Dry Lab sessions, which are open to young

New ophthalmologists require access to these tools to ensure that patients receive care from highly trained healthcare professionals. Thanks to these modern tools, practitioners can safely hone their techniques.





#### **INNOVATION**

come to

e world o



INNOVATION

and Governance and Incumbent of the Alternative Governance Chair, University of Clermont Auvergne

#### **"OPEN INNOVATION MEANS REALISING THAT** THERE MIGHT PERHAPS BE SOLUTIONS ELSEWHERE AND THAT PARTNERS MIGHT HAVE COMPLEMENTARY EXPERTISE"

#### How would you define Open Innovation in simple terms?

"Before defining this concept, let us recall that innovation is consubstantial with the idea of enterprise. This having been established, I would first identify a traditional model, that of internal innovation, in which the organisation operates in isolation, relies entirely on its in-house researchers, and jealously guards its "discoveries", as the American Federal Reserve used to hide gold reserves in Fort Knox. We start speaking of Open Innovation when the organisation takes the view that it will innovate faster and on a larger scale by collaborating with external parties.

Smart provided the best example of this, ahead of its time. In the 1990s the mathematician and physicist Nicolas G. Hayek, having made a tremendous success of his Swatch® watch, dreamed of perfecting a small car especially for big city centres. He was convinced that the production strategies he had developed for watchmaking could be applied to the large-scale manufacture of vehicles. In a departure from traditional approaches, he joined forces with Daimler-Benz AG<sup>®</sup> to "co-design" the little car that, as we all know, has been so successful. He also managed to mobilise an entire network of partners to design, manufacture and market the Smart<sup>®</sup>.

Open Innovation means realising that there might perhaps be solutions elsewhere and that partners might have complementary expertise. It's the opposite of the stubborn determination to do everything internally. It's a collaborative entrepreneurial approach, under which organisations will open themselves up to other players, other resources and other talents. I should point out

exception.

#### Is the shift from closed to open innovation a matter of degree, or of two different things?

innovation.

#### Is this approach only for large organisations?

that recent sociological and technological changes have profoundly altered our behaviour and influenced business strategy. Among other things, the Internet has made it possible to develop interactive relationships between firms and individuals, thus challenging the way all channels and networks are organised. The pharmaceutical industry is no

Your question raises the issue of whether the new model will be substituted for the old one. The answer is no! The one will be superimposed on the other. Organisations will retain their internal R&D, but that department will be induced to be far more open to external contributions, and to increase the number of partnerships. The idea is not "internal" versus "external", but rather to work together and introduce complementarity. We must take care not to re-engage in the battle of traditional versus modern. The key to success lies in adding and reducing approaches to

No, of course not. In fact, large organisations have lagged behind. They were coasting, relying on the power of their hierarchical and often over-staffed R&D departments. As a result, the phenomenon of Open Innovation initially appeared among start-ups. Lacking resources, they were the first to open themselves up. I would thus rank startups among the pioneers and trailblazers, alongside some

#### **INNOVATION**

very specific sectors, especially digital technology. All these environments were incubators for young people, who were more inclined to adopt these new practices.

It took time for large organisations to get involved. Today, many of them are falling into step. Just look how much SNCF has changed! When the first car-sharing platforms appeared, the French rail network reacted immediately by opening a budget-priced bus network so as not to lose young customers. Better still, during the episode of strikes in 2018, the rail transport giant was able to form an alliance with one of these car-sharing platforms to ensure continuity of service for its users.

#### Doesn't Open Innovation risk turning into a tool for large organisations to poach innovation?

That is indeed the risk. Apple provides us with an interesting perspective on this. In 2018, its AppStore® celebrated its 10th anniversary. Over 4.5 million apps have been distributed via the platform, with a total of 170 billion downloads. This is a lucrative business for Apple<sup>®</sup>. In 2017 alone, users spent 42.5 billion dollars on AppStore®. We can see how the biggest companies can poach start-ups' innovations and cash in on them.

That said, Apple<sup>®</sup> does enable us to fully grasp the issue of these new practices. Originally a product developer, it has broadened its expertise to become a service and content distributor. This strategy has brought in a very high level of profit, enabling the company to invest in research and development and thus creating a virtuous circle that places Apple ahead of its competitors once again. At the same time, Nokia<sup>®</sup>, the undisputed mobile phone leader,

was launching mobile phones connected to the internet. These ran with the internally-developed operating system, without any major innovation. The Finnish manufacturer had not questioned its own approach. As a result, it failed to change direction when it should have, and would later plummet into a hellish situation.

#### What are the secrets to developing an "ecosystem" that encourages and supports **Open Innovation?**

Today, growth is a shared issue on which competitors collaborate, with small players supporting big ones and disruption actually bringing players closer together. Open Innovation is thus a matter of trust and confidentiality. A big group ought not to behave like a predator towards a start-up, but collaborate with it, support it. This approach requires governance: to be able to set operational objectives together, develop monitoring of relationships between partners, and be in agreement on the key issue of sharing out the profits. Each party must have a guarantee that the advantages are mutual and shared by all."

With digital transformation and the growing pace of technological renewal, we are now in an era of intense innovation that shakes up established models. In a world where expertise is increasingly scattered, a single company simply cannot know it all. It needs to operate in a wider ecosystem, attract external innovation, build ever more bridges and strengthen its ability to collaborate.

This is what Théa is doing by forming new partnerships with universities, R&D start-ups and biotech companies.

"Théa Open innovation" is the new operational structure of the group based in the Auvergne. It will help multiply the potential for collaboration and maximise the laboratory's assets to move forward in biotechnology and new chemical entities.

## O Théa open innovation

the new tool to complete the growth of R&D projects



HUYNH

## etsopen our e

The Fondation Théa aims to promote or assist initiatives to improve eye health and aid the fight against blindness.



#### **focus** Africa

#### FIGHT AGAINST AGAINST TRACHOMA

Trachoma is an ancient scourge that insidiously leads to blindness. The interior surface of the eyelid becomes sclerotic and turns inwards. The eyelashes rub against the eyeball, which can cause intense and permanent pain for years. The cornea then becomes opaque, and irreversible blindness sets in.

ALLALAS STR



## Africa FIGHT AGAINST TRACHOMA

## 2 million doses of the new product were transported and administered in the Kolofata District of northern Cameroon.

# AN URGENT APPEAL FROM WORLD HEALTH ORGANIZATION

Throughout the 19th century, scientists searched in vain for the causes of this keratoconjunctivitis. They had to wait until 1907 to identify the agent responsible for the disease and then until 1950 to learn that it was not a parasite or a virus but rather a bacterium.

In 1997, the World Health Organisation made an urgent appeal to the scientific community to eradicate trachoma in impoverished nations. The organisation called for the development of antibiotic eye drops for short-term treatment based on a new molecule: azithromycin.

Théa did not allow this call to go unheeded. A century earlier, in 1890, Paul Chibret (1844-1911) had been asked by his colleagues to present a report on the subject to the International Congress of Medical Sciences in Berlin.

In 1999, Théa launched a lengthy development programme that was to last 8 years, primarily due to the technical difficulties involved in solubilising and stabilising this molecule, which was intended for use in countries with warm climates. Promising clinical development would eventually begin in areas selected in cooperation with the

World Health Organisation (WHO): "virgin" areas, where azithromycin had never been previously used, even orally. Thanks to this work, Théa was able to obtain product registration for both trachoma and bacterial conjunctivitis. The experts from the World Health Organisation then asked us to confirm the obtained results as part of a mass treatment, which prompted Théa to make a substantial donation of this medication.

In 2009, 2 million doses of the new product were transported and administered over the course of three campaigns in the Kolofata District of northern Cameroon. With the help of Ophthalmologists without Borders (Ophtalmos sans Frontières or OSF in French), 115,000 people were treated. This region has definitely seen its share of eye disease: the prevalence of active trachoma was estimated at 21% among children one to ten years of age.



## THE PREVALENCE OF ACTIVE TRACHOMA WAS ESTIMATED AT 21% AMONG CHILDREN ONE TO TEN YEARS OF AGE

The campaigns enjoyed a rapid success. Treatment tolerance was excellent, with no ocular or systemic side effects. The disease incidence rate fell to 3% one year after the third campaign. Three years later, Jean-Frédéric Chibret returned to Cameroon with a team of specialists to assess the viability of supplemental care. Incidence medications intended for infants.

Prior to this, the only medication for children under six months of age was an ointment that had to be applied twice daily for six lengthy weeks. This duration and frequency of administration is not feasible in practice, meaning that infants receive no treatment or inadequate treatment. The first pilot treatments using eye drops developed by

Théa began in 2015. The feedback was so positive that the Théa Foundation decided to sponsor a large-scale treatment campaign in the Mayo-Kebbi West Region of Chad, conducted by the Organisation for the Prevention of Blindness (Organisation pour la Prévention de la Cécité or OPC in French). A total of 90,000 infants were treated, rates remained remarkably low, prompting new hope for over a territory larger than France, with no reports of side effects or adverse reactions.

> Promising results continue to accumulate, attracting the attention and interest of the scientific community and NGOs. We will continue to monitor this Chadian experiment, which represents hope for better infant care.



## 115,000 PEOPLE WERE TREATED



#### Africa EDUCATION

## 

In 2011, Stanford University (California) launched the very first "Massive Open Online Course" (MOOC). In just a handful of years, the passion for e-learning has flourished. American campuses have posted courses for students around the world. Unfortunately, while there are millions of hours of classes on nearly every subject available in English, courses offered in French remain limited. The French University Council in Ophthalmology (Collège des Ophtalmologistes Universitaires de France or COUF in French) studied this problem and decided to launch an e-learning course in ophthalmology, to be conducted in French.

The Théa Foundation immediately requested to take part in this initiative, and for good reason! The Foundation has two priorities: the fight against trachoma and the training of healthcare professionals in French and Portuguese speaking Africa.

Several African countries now have bold policies to open up high-level training centres. Such policies will help increase the number of graduates and promote continuing medical education. Nonetheless, we must continue to support continent-wide efforts to find "African solutions"

for the developme education is fully E-Ophta, African sequences of adva tutoring system a Higher Education This is indeed g Foundation has connection reques Faso, Cameroon, Democratic Repu countries. We exp very near future... In Africa, eye disea onchocerciasis and of blindness each dire need of ophth today.





for the development of human health resources. Distance education is fully in line with this philosophy. Thanks to E-Ophta, African students will be able to benefit from 200 sequences of advanced level courses, supplemented by a tutoring system and validated by the French Ministry of Higher Education and Research.

This is indeed good news! Just launched, the Théa Foundation has already received several hundred connection requests. These requests come from Burkina-Faso, Cameroon, Côte d'Ivoire, Mali, Niger, Togo, the Democratic Republic of Congo and several Maghreb countries. We expect that we'll receive a lot more in the very near future...

In Africa, eye diseases such as trachoma, cataracts, glaucoma, onchocerciasis and xerophthalmia lead to significant cases of blindness each year, despite being treatable. Africa is in dire need of ophthalmologists. We need to find a solution,



**yesterday** AT ELLIS ISLAND

# <text>



1910 – United States Public Health Service physicians checking immigrants' eyes for signs of trachoma.

Trachoma was already quite prevalent in the southern Mediterranean in the late 19th to early 20th centuries. It affected parts of Europe as well as the Indies, China and Japan. The disease remained rare in the United States, hence the vigilance of the health inspectors on Ellis Island...

60

From 1892 to 1924, a flood of European emigrants passed through this island, often referred to as the "Isle of Tears". Just a few hectares in size, this islet in New York, across from the Statue of Liberty, was converted into an immigration station. The new arrivals had to climb a set of stairs. They arrived in a large registry room, an immense arched nave divided by partitions. At the top of the stairs, physicians in uniforms identified those who had difficulty climbing the stairs or were showing clear signs of illness. They marked a letter, in chalk, on the clothing of these emigrants: C for tuberculosis, H for heart problems, X for mental disorders and, finally, TC for trachoma. Government officials opened the new arrivals' mouths, lifted their eyelids and palpated them, for a few seconds or even several minutes. These officials then decided whether or not to send them to administrative control. Once there, immigrants in pursuit of the American Dream were subjected to a series of questions amidst the immense noise—a cacophony of multiple languages. Two percent of the newly arrived would never lay eyes on the New World, apart from the Statue of Liberty. Half of those denied entrance were rejected for legal reasons and the other half for medical reasons. Among the latter group were trachoma sufferers. This percentage may seem small, but considering the 16 million people who passed through this station from 1892 to 1954, it represents a tragic number of shattered dreams.



#### let's open our art



«What I painted was more and more muted, more and more "old school" and, when I compared it with what I used to do, I would fall into a frantic rage and slash all my canvases with my penknife... »

who inspired modern art, complained of seeing "false" colours. In one of his works, a very blue sky was rendered lemon yellow. The same bridge, in Giverny's garden, had changed completely. Other painters, including Degas, Turner, Renoir, Bonnard and Piero della Francesca, suffered the same torment: the cataract, an opacification of the crystallin (eye lens) which obstructs the passage of light. Cataracts are the leading cause of blindness

Towards the end of his life, Claude Monet, the painter in the world. They mainly occur in the elderly. Today, the unrivalled sight of these masters could have been preserved. The visual outcome of cataract surgery is quite good. Thanks to the medications that are used in tandem-products to dilate the pupils, antibiotics, antiinflammatory drugs, and so on-it is possible to reduce the risk of infection. This operation is ranked first among the five most effective health interventions.



Claude Monet, La plage de Trouville, 1870, National Gallery, London

Pierre-Auguste Renoir, Portrait of Claude Monet, 1875, Musée d'Orsay

#### **"BEAUTIFUL THINGS DON'T COST** ANY MORE THAN UGLY ONES"

Our architectural approach entailed letting in as much natural light as possible. Théa's head office is a labyrinth: an elegant, yet unostentatious, edifice. Everything breathes art. Interspersed on office walls and at the bend of corridors are superb photographs juxtaposed with canvases fruitful decompartmentalisation of various components painted by unknown artists-time will undoubtedly of our society", adds Jean-Frédéric Chibret. Nothing do them justice. "Beautiful things don't cost any more constructive is ever built in a cultural desert. This is indeed than ugly ones", Henri Chibret mischievously suggests,



# Théa collection

**ART** 

quoting a maxim that was dear to his father. "We are very involved in the local artistic scene. The way we see it, cultural patronage, whether within our walls or in our region of Auvergne, contributes to the necessary and the philosophy at Théa!



FOR THE LAST 150 YEARS, WE HAVE BEEN PIONEERS IN OPHTHALMOLOGY. BY DEVELOPING TREATMENTS, PROVIDING INFORMATION AND SHARING KNOWLEDGE WITH SPECIALISTS AROUND THE WORLD, WE ENABLE EVERYONE TO KEEP THEIR EYES WIDE OPEN.

#### let's open our eyes

LABORATOIRES-THEA.COM

