open

The magazine BY THÉA

let's open our eyes

100% DEDICATED
TO OPHTHALMOLOGY

#3

let's open our eyes

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. Being a family-owned business has allowed Théa to develop over the long-term, focusing on employees and human values to fulfil our mission of being 'The' ophthalmology specialist. A pioneer in preservative-free treatments, we are committed to providing healthcare professionals and patients with innovative products and a wide range of specialty items (service products, daily-use products) across all ophthalmological therapeutic classes.
We are continually reinvesting in our two main areas of interest, Innovation and Internationalisation, with long-term strategy being favoured over immediate profit.
Our goal is to pursue and strengthen lasting partnerships and collaborative research, to share our expertise and address unmet medical needs to provide new methods for treating and supporting patients.
Internationalisation is in our genes : currently the leading independent eye care group in Europe, Théa has set its sights on becoming a world leader by continuing to export its products and establish itself internationally, while always respecting the cultures of each country.

This mission is what makes Théa unique.

THÉA

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THERAPEUTIC AREAS
IN OPHTHALMOLOGY


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eye

Editorial

by **JEAN-FRÉDÉRIC CHIBRET,** PRESIDENT OF THE THÉA GROUP

Théa is 30 years old

Founded in 1994 by my uncle, Henri Chibret, Théa is now an international group and a key player in ophthalmology.
A pioneer and world leader in preservative-free treatments, our group is now developing and marketing one of the most comprehensive and modern ranges in ophthalmology.
Over these 30 years, Théa has produced 30 innovations, major advances and new concepts in many ophthalmological therapeutic classes.
Alongside this, we have expanded cautiously but resolutely into new territories. We are currently present in 75 countries, particularly through some forty subsidiaries and an entire network of distributor partners.
Success that can also be attributed to our family model, which gives us financial independence, agility, a state of mind and a privileged relationship with time. At Théa, we have never been and never will be obsessed with the results of the 'next quarter'. Whether it is risks, opportunities or growth, we tend to think in both the short and long-term simultaneously. A major asset in an industry where development times are very long.
This model allows us to continuously reinvest in the company. Our roadmap for tomorrow? Continue to innovate while remaining true to our territorial roots. Preserve the culture, values and unique mindset that have made Théa successful these past 30 years: long-term vision, proximity and entrepreneurial spirit. And above all, not forget that a company's principal asset is its people.

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today,
tomorrow

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ANS
Théa

'Théa, serving eye practitioners yesterday, today and tomorrow'

FOCUS —— 150 YEARS OF EXPERTISE

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! In June 1871, Paul Chibret, a military physician under Napoleon III, was sent on an expedition in eastern Kabylia, Algeria. There, he experienced eye pain, which he attributed to the cool night air. In fact, the lieutenant was experiencing the first symptoms of an eye disease that would render him blind for several months. He swore to himself that if he saved his sight, he would become an ophthalmologist...

After Paul came Henry, then Jean, then Henri and Jacques and finally Jean-Frédéric Chibret: each contributing to this great industrial adventure in ophthalmic product research, development and marketing. An adventure that continues today at Théa, now Europe's leading independent ophthalmology group.

←
From left to right:
Paul Chibret,
Henry Chibret,
Jean Chibret,
Jacques Chibret,
Henri Chibret and
Jean-Frédéric Chibret

Preservative-free: A revolution in progress

In our consumerist societies, industrially manufactured products are now available to an increasingly wide public. This has led to the widespread use, and often abuse, of adjuvant chemical substances, such as preservatives, antioxidants and dyes. This phenomenon has extended to commonly used products (food, cosmetics, cleaning products, etc.), as well as pharmaceuticals.

→
From left to right, tube with 'AIRLESS PUMP' technology, the ABAK® and EASYGRIP® multi-dose bottles

The use of these substances has led to undeniable progress in terms of safety and shelf life. Nevertheless, repeated and daily use has gradually revealed their harmful effects and prompted scientific research. Related studies have demonstrated their harmful effects on both humans and the ecosystem. And ophthalmology is no exception to this rule.

In the 1950s, Jean Chibret (1915-1989) was the first to add preservatives to his solutions, and to introduce a use-by date for open bottles. His eye drops were the first that could be stored for up to 15 or even 30 days after opening, without the risk of contamination. At the time, he was imitated by all of his global competitors.
His son, Henri Chibret, would also become a trendsetter in 1994 when he removed the preservatives first introduced by his father. It was in this same year that Henri created ABAK®, 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 was not long before millions of patients were able to benefit from an array of ophthalmology medications that preserved eye health.
Simple in appearance, ABAK® is the fruit of technology and innovation. It keeps a solution sterile for up to six months after opening, depending on cases, thanks to its 0.2 µ filter membrane. Its development required ten years of research, and it took several more years to improve its design (making it smaller, more wieldable and more efficient while extending its shelf life).
The preservative-free revolution is of course one that is still in progress. It continues each year, thanks to the commitment of our researchers. We should mention that the development of a delivery system requires numerous rare talents and that it is just as much a scientific adventure as the search for an active ingredient. After this initial feat, we had to develop a second bottle for drugs that were incompatible with ABAK®: enter EASYGRIP®. This new technology is useful for many pathologies, including glaucoma.

Finally, Théa tackled the problem of gel contamination, particularly gels used for eyelid hygiene, by launching the Tube with 'Airless Pump' technology, which dispenses sterile gels around the eye contours throughout the product's use life. And, naturally, our researchers are currently working to meet new challenges.

Preservative-free: Pioneering is in our DNA

A finger, an eyelash, a warm spell, the slightest thing, and bacteria will 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.

Paul Chibret
(1844-1911)

One of the first individuals in Europe to promote ointments, which are much less susceptible to contamination. They are made from a new petroleum jelly called 'petroline', later known as Vaseline.

1870s

Henry Chibret
(1876-1943)

Also seeking to avoid contamination of eye treatments, he develops dry eye drops with dacryoserum. The product is a powder to dissolve in boiling water.

1920s

Jean Chibret
(1915-1989)

The first to add preservatives to his solutions and introduce a use-by date for open bottles. These are major innovations: Chibret eye drops are the first that can be stored for up to 15, and in some cases, 30 days after opening, without the risk of contamination. A true pioneer, Jean's competitors around the world would all go on to imitate him.

1950s

Henri Chibret
(1940)

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

1990s

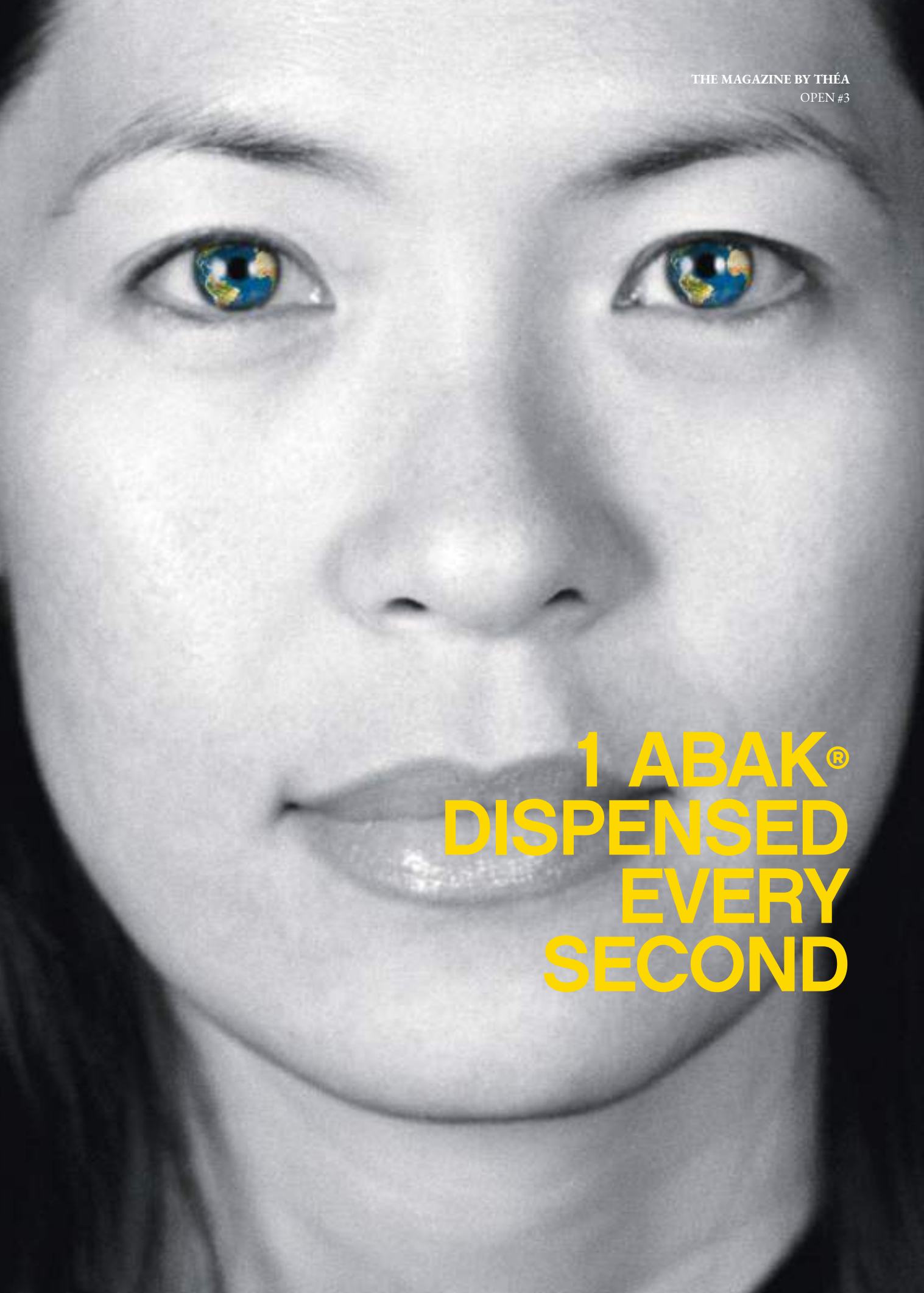
Jean-Frédéric Chibret
(1975)

He adds to the range of 'preservative-free' packaging with the AIRLESS PUMP and EASYGRIP® technologies.

2000s

300 preservative-free drops

Théa was the pioneer and remains the world leader in preservative-free ophthalmological products.
The high-security, high-technology ABAK® 10 ml bottle delivers up to 300 drops through a filter membrane that prevents contamination.
Ergonomic and efficient, it currently offers a shelf life and use that lasts for 2-6 months after opening, depending on the products, versus 2-4 weeks for a conventional bottle with preservative. This constantly evolving concept is also a step forward for the environment.
One 10 ml ABAK® bottle contains 300 drops for 150 instillations in each eye.


1 ABAK®
DISPENSED
EVERY
SECOND

Why create a pharmaceutical company?

Henri Chibret, Théa is celebrating its 30th anniversary. When you founded it in 1994, you were at the helm of Transphyto – a prosperous R&D start-up with a portfolio of some fifteen patents worldwide, and which took centre stage with its active substance to treat eye allergies, and the first gels for dry eye and herpes. Why the sudden decision to create a pharmaceutical company in its own right?

Henri Chibret —— Many pharma industry players found the idea to be crazy. According to some, the 'territory' was already occupied by the 'big Pharmas'. Listening to them, you would think there was no space left. I used to jokingly retort that there is always grass to be grazed between the feet of elephants. And then the main objection was that 1994 was a time when many pharmas were closing down or falling into decline. But none of these warnings stopped me because, to my mind, the R&D start-up system I had favoured until then had reached its limits. While scientifically and financially effective,

'Innovation is a passion that is passed on from generation to generation.'

it had several weaknesses. It did not enable my company[1] to be a brand recognised by ophthalmologists. And we were too dependent on our licensees, some of which would perform well in the first years and then lose interest in our discoveries to the benefit of more recent acquisitions. Also, some heads of research of major pharmas would express their biases about products 'not invented here', i.e. which were not the fruit of their own endeavours. Alongside this, a new phenomenon was developing: with all the mergers and acquisitions going on, no-one knew who was handling this or that medicine derived from our research, which could fall into three or four successive pairs of hands.

You like to say that we tend to innocently believe that the larger the buildings, the more innovative the research. And that we would be mistaken in doing so! Is a start-up not consubstantially more agile in terms of innovation than a major pharma, which Théa has become?

H.C. —— Generally speaking, this is true. I like to cite Czech chemist and inventor Otto Wichterle, born on the eve of the First World War and known for having invented soft lenses. At the end of his life, he very fittingly said that we have never seen a symphony orchestra compose a symphony. Innovation is rarely the feat of large structures but more often that of an individual, sometimes even a lone researcher. However, I believe that we in the Chibret family are by tradition vigilant and fully aware of this reality. It is no doubt thanks to this mindset that we have never wanted for innovations. Our ancestor, Paul Chibret (1844-1911), founder of the French Society of Ophthalmology (SFO), was a born inventor and developed multiple instruments for ocular examination and surgery.
He was a stakeholder in the revolution brought about by Louis Pasteur. In the aftermath of the Second World War, my father, Jean Chibret (1915-1989), was one of the first in Europe to integrate in ophthalmology treatments the fruits of the antibiotics revolution. In the 1970s and 1980s, my brother, Jacques Chibret (1941-1989), was a name linked to one of the 'Revolutions' in ophthalmology. With his company, Biophysic Medical, he began by devising an automated electrophysiology device, followed by a range of ocular ultrasounds developed by Dr Poujeol. What is more, he went on to launch the first European argon lasers thanks to Professor Jean Haut, followed by the world's first YAG laser for secondary cataracts with Dr Aron Rosa. Made in Clermont-Ferrand, his machines were sold throughout the world. His became the world's leading company in ophthalmic ultrasound and the second leading company in the field of lasers. Shortly before his death, in 1989, he was working on the Excimer laser for refractive surgery of the cornea.
Innovation is a state of mind. In our family we know that a company, whatever its successes, must ceaselessly challenge itself and be on the lookout for new things. I also believe that innovation is a passion that is passed on from generation to generation.
And then one final remark in support of creating a pharma company structure: Wichterle believed in the concept of teams for developing and industrialising the product of an invention!

Jean-Frédéric Chibret, you started out in the family business in 2000, taking the helm of Théa in 2008. Within fifteen years, Théa has gone from several hundred of employees in Clermont-Ferrand to 2000 worldwide. Your group has become one of the key players in ophthalmology. What are you doing to keep this pioneering spirit alive?

Jean-Frédéric Chibret —— Firstly, allow me to round off our family's history of achievements started by Henri by mentioning his own contribution: when Henri founded Théa in 1994, he simultaneously launched the first preservative-free multidose bottle – ABAK®. In the very same year, this coincided with the first publications to reveal evidence of the harmful effects of preservatives on the cornea, conjunctiva and tear film. So it was Henri who took ophthalmology into the preservative-free era. Thirty years later, the learned societies have come to universally acknowledge that 'preservative-free' is no longer an option

but a matter of public health. That being said, and to answer your question, I have also since 2008 been highly committed to innovation. We are in an era in which tiny start-ups can send shockwaves through large groups. Young players are emerging on the markets and very quickly competing in decade- or century-old professions, because they are more agile. These examples show just how much the current technological revolutions can trigger major transformations within the sector. We have entered an era of intensive innovation that is shaking up the established models. Which is why, beyond our internal research in which we continue to hone our expertise, we have adapted to attract external innovation and reinforce our collaboration capacities with the creation of Théa Open Innovation (TOI) in 2019.
Thanks to this new structure, we intend to reinforce our presence in certain eye diseases related to population ageing – especially glaucoma and retinal diseases, and also rare diseases.
TOI enables us to form multiple partnerships and position ourselves on programmes at a very early stage.

Final question: so we can be an international group and remain agile in terms of innovation?

J.F.C. —— Of course!
Especially since research knows no frontiers, whether in terms of geography, discipline or knowledge amassed. Our growing territorial presence brings us into contact with new scientific communities; it supports and reinforces the decompartmentalisation dynamic of our research to accelerate our development.
This international expansion also enables us to fund our innovation endeavours. France's mechanism of 'regulation through pricing' (setting of prices and reimbursement rates) penalises the model of Théa, a creator of innovation on the national territory.
For the rest, if an innovation is to be 'living' and benefit patients, certain irreplaceable know-how is needed. This is true in terms of development. This is where the expertise of our internal research comes in, which can take on projects created by our partners and run with them. This is also true in terms of industrialisation, regulatory aspects and market access, particularly to obtain registrations in the most exacting countries (Japan, USA, and those of Europe).
And last but not least: sales know-how! All domains that Théa has perfect mastery of.

[1] Transphyto

Jean-Frédéric Chibret, France's winner of the Entrepreneur Of The Year award

It was in the Salle Pleyel in Paris, on 20 October 2022, that E&Y presented Jean-Frédéric Chibret with its Entrepreneur Of The Year award for France. Barely 15 years after Théa was created, his uncle Henri had already received the Entrepreneur of the Region award.
This national prize honoured the various initiatives of the company's new president, from when he took up his position in 2008 to the internationalisation of the company and the creation of the sister company Théa Open Innovation in 2019.

←
From left to right, Melinda and Bill Gates, Ban Ki-Moon

Henri Chibret receives the Spirit of Helen Keller Award

On 14 June 2022, during an evening held at the Olympia in Paris, Henri Chibret received the Spirit of Helen Keller Award. This distinction was created in 1959, during Helen Keller's lifetime. It commemorates the unique legacy of this deaf and blind American who dedicated her life to reducing blindness worldwide and expresses her appreciation for the major contributions of certain personalities and institutions to this cause.
Henri Chibret, founder of Théa, was honoured with this prestigious award for having devoted his life to research in ophthalmology and to the prevention of blindness worldwide, particularly in the fight against trachoma. He joins the very select circle of recipients, including Mr Ban Ki-moon, Secretary-General of the United Nations (2016); Bill and Melinda Gates, co-chairs of the Bill and Melinda Gates Foundation (2015); William Foege, M.D., M.P.H., a world-renowned epidemiologist and pioneer in the eradication of smallpox, polio and onchocerciasis (2012); His Majesty King Mohammed VI, Kingdom of Morocco (2000); and Archbishop Emeritus Desmond Tutu, South Africa (1999).

30 innovations in 30 years. And tomorrow?

'Théa has adapted its research, from the model of a pole to that of a constellation.'

For 30 years, our company has owed its reputation to its in-house research, which remains its spearhead. In addition to the 'preservative-free' revolution, of which it was the pioneer and linchpin, it has developed, for the benefit of practitioners and patients alike, one of the most comprehensive and modern ranges in ophthalmology and across most of its therapeutic classes. It is responsible for major advances in areas such as glaucoma, allergy, infection, inflammation and dry eyes.
It has also contributed to creating new concepts, not only with 'preservative-free' products, but also eyelid hygiene, eye nutrition, antibiotic therapy and intracameral mydriasis.
At Théa, 'in-house' R&D is of strategic importance, to the extent that its premises have recently been expanded by 1000 m^2. Its teams have a modern and suitable workspace in which to continue to innovate on its in-house developments and take over certain projects initiated with the '**Théa Open Innovation**' partners.

Because alongside its internal R&D efforts, Théa has made a cultural change to adapt to all the revolutions that are transforming the world in which we live: gene and cell therapies, artificial intelligence, the Internet of Things, to name but a few. Théa has adapted its research, from the model of a pole to that of a constellation – made of flows and networks. It is now opening up to a multitude of players, deploying its capacity for innovation worldwide by multiplying its collaborations.

Launched in 2019, Théa Open Innovation brings together a multidisciplinary team whose mission is to identify innovative early-phase projects developed by start-ups, biotechs, universities, ophthalmologists and ophthalmology researchers in important fields such as the anterior segment (glaucoma, dry eye in particular) and the posterior segment (AMD, hereditary retinal diseases), but not only these.

Many projects are ongoing and Théa will continue to keep its eyes wide open to explore new avenues likely to offer eye practitioners and their patients the treatments of the future.

LEADER IN INNOVATION

Théa is a pioneer and a leader in:
→ Preservative-free (1990s)
→ Eyelid hygiene (1990s)
→ Eye nutrition (2000s)
→ Short-term antibiotic therapy (2010s)
→ Antibiotic therapy and mydriasis by intracameral route (2010s)
→ Trehalose-based treatment for dry eye (2010s)

Théa is responsible for major advances in:
→ Glaucoma
→ Dry eye
→ Infection
→ Antibiotic therapy
→ Etc.

Prof. Jay S. Pepose

—

Anterior segment specialist and the recipient of numerous awards in cataract, corneal and vision correction surgery, Professor Jay S. Pepose is the founder and medical director of the Pepose Vision Institute, and a professor at Washington University School of Medicine, Saint Louis, Missouri (USA). He also serves as board member in several biotech for anterior segment drug development.

Professor Pepose, what do you think are the unmet needs in the anterior segment? Which diseases are suffering from inadequate or no treatment?

Prof. Jay S. Pepose —— There are many unmet needs. Take myopia, for example. It is becoming one of the main causes of irreversible blindness in South-East Asia. According to some studies, the incidence of its severe form, currently 5%, is set to rise to 9% by 2050. Of course, it is the result of a number of factors, not least genetic. Nevertheless, we are beginning to understand just how important it is to be exposed to outside light, particularly violet wavelengths. The sharp rise in myopia worldwide is thought to be due to the fact that more and more of our time is spent indoors, putting excessive strain on our near vision. Children who are regularly active outdoors are generally less myopic. Research and development into the prevention and treatment of this ocular refractive anomaly is therefore vital, otherwise we will have to contend with an explosion in the number of cases of "myopic" degeneration, retinal tears and detachment, and even optic neuropathies linked to myopia.

If the priority is myopia, are you thinking of other conditions, such as orphan diseases, certain corneal dystrophies or others, which you feel deserve an equivalent degree of commitment?

Prof. Jay S. Pepose —— Yes, dry eye syndrome, among other things. Until now, we've concentrated on treating inflammation problems. In the United States, we have seen the appearance of the first agents that replace, in a way, the outer layer of the tear film, produced by the Meibomian glands, which heretofore have been neglected.
The other area where we are still in our infancy is the neurosensory component of dry eye. The cornea is the most densely innervated and sensitive tissue in the human body. When there is insufficient innervation, the cornea is no

longer sufficiently lubricated. Thanks to the data collected using confocal microscopy[1], we are now learning more about the links between the loss of nerve fibres and dendritic cells, the key cells in our immune system. This is an area of interest that we will need to explore further in the future.
Glaucoma is another disease that deserves an improved therapeutic arsenal. At present, most treatments are designed to lower or control intraocular pressure (IOP), which can damage the optic nerve. In my opinion, we should be thinking more about neuroprotection.
To illustrate my point, you can treat your glaucoma with a choice of molecules, brimodinine or timolol, and have the same effect on IOP, but completely different effects on the patient's ocular health. At five years, progression of galucoma may have been influenced by the treatment chosen due to effects that go beyond IOP control alone.
From this point of view, it seems clear to me that the theme of neuroprotection has the potential to become an important new area of research.
Another idea: intravitreal injections (IVT). These are now part of the daily practice of retinal specialists, i.e., those working on the posterior segment of the retina. We could consider this method of administration in the field of glaucoma. This would make it possible to deliver a greater volume of active ingredient and a longer duration of treatment. Compliance problems would be drastically reduced if we could inject the equivalent of 6 months to a year's treatment in one go.
This method of administration could therefore be considered for the treatment of glaucoma, as well as for neuroprotection. IVT would become the common road for the entire segment. I would add that although my generation was not necessarily familiar with this technique, all young ophthalmologists practise IVT and have mastered it perfectly.

Let's go back to the previous segment in general terms. What do you think will be the next big innovation? A new drug with a new mode of administration, a new medical device, a new digital diagnostic tool or one based on artificial intelligence (AI)? In what area will the next major step be taken?

Prof. Jay S. Pepose —— Presbyopia is probably the result of a reduction in the accommodation capacity of the crystalline lens, the natural lens of the eye. In 2022, corrective drops were given the green light by the Food Drug Association (FDA). This is the very first medical treatment of its kind. It contains a molecule that is not new, based on diluted pilocarpine. In practical terms, these drops reduce the size of the pupils, to increase depth of field and therefore focus, just like a camera. That said, at this stage, the results do not appear to be optimal, either in terms of efficacy and duration, or in terms of side-effects such as retinal detachments and tears. They are undoubtedly a solution for the early stages of presbyopia, but I doubt they will be of much help for people with more severe problems. So, glasses still have a bright future ahead of them!
There are also new approaches to laser presbyopia surgery (known as laser scleral microporation surgery) and the first multifocal and depth of focus intraocular lenses (IOLs), which unlike externally applied contact lenses, are implanted directly behind the eye's iris, and can compensate for the progressive effects of presbyopia.

Last question. If you had a magic wand, what pathology would you like to see treated in your practice?

Prof. Jay S. Pepose —— In the anterior segment? Instinctively, I'd say something that would decisively improve quality of life... Why not a drug to prevent cataracts? Think of the number of people in the world who do not have access to appropriate care and end up blind, even though this disease is a typical case of avoidable blindness...
A way of preventing cataracts from forming - that would be the ultimate dream!

[1] Confocal microscopy can be used to study fixed material, but it can also be used to study dynamic phenomena in living cells or tissues,

Frank G. Holz
—
Chairman of the Department of Ophthalmology, Bonn Hospital (Germany)

Professor Frank G. Holz, can you tell us about innovation in the posterior segment?

Prof. F.G.H. —— Research in the posterior segment is particularly dynamic. Numerous innovations are in the pipeline that should soon benefit patients. I'm thinking in particular of therapies for age-related macular degeneration (AMD). The main cause of severe vision loss in people over 60 in developed countries, this multifactorial disease results in progressive loss of central vision, and is linked to rapid abnormal aging of the macula, the central part of the retina.
At present, only the severe wet form is treatable (10% of cases). Incidentally, it cannot really be cured, but its evolution can be stabilized by repeated intra-vitreal injections of anti-vascularizing agents directly into the eye.
Advances and new treatments for AMD are eagerly awaited, as the incidence of this disease is set to rise steadily over the next few years as life expectancy increases. The other severe form of AMD, known as "geographic atrophy", currently untreated in Europe, has just seen the emergence of 2 promising treatments: two agents that inhibit "complement", i.e. the cascade of enzymes involved in the body's defense system, have recently shown positive results in phase III trials[1]. This is the first time we have been able to prove that a treatment can slow disease progression.

When will this type of treatment be available to European patients?

Prof. F.G.H. —— So far, only the US Food and Drug Administration (FDA) has given its approval. The European Medicines Agency (EMA) is also due to make a decision shortly*. These new developments offer tremendous hope, in that they will meet therapeutic needs that have so far gone unsatisfied. I would add that, even before approval by the ad hoc administrations, the announcement of all these positive results has been beneficial in that it is mobilizing both investors and the specialized research community in support of the search for new treatments for AMD.

Are these recent discoveries the most important of recent years, or do you feel that past years have brought even more decisive innovations in the field of the retina?

Prof. F.G.H. —— Over the past fifteen years, interventional medicine, which combines advanced imaging techniques with conventional medical or surgical approaches, has opened up new prospects. Of course, the Holy Grail of AMD therapy will be anything that enables us to intervene at the earliest stage of the disease, i.e. before the degradation towards the so-called geographic atrophy form, which is the stage of AMD that causes blindness. There's a huge unmet need here.

Do you see any other unmet need for posterior segment treatment?

Prof. F.G.H. —— Needless to say, we are faced with a wide variety of diseases. That said, our biggest challenge is probably chronic diseases, which are on the increase. We have, for example, chronic causes of retinal vein occlusion (a sudden circulatory disturbance in a vein at the back of the eye), or other vascular problems. Then there's diabetes, which is affecting an ever-increasing number of patients in both industrialized and developing countries. So we need to be prepared to deal with a growing population suffering from

diabetic complications, and in need of appropriate treatment.

In the field of chronic diseases, the question of how to administer treatments is obviously crucial. Undergoing repeated injections into the eye is not the optimal solution, either for the patient or for eye care professionals. However, from this point of view, new and rather promising avenues have emerged. For example, we have new agents that enable us to space out injections, a major advantage since we mainly treat elderly people who sometimes find it difficult to get to the doctor.

Artificial Intelligence (AI) should also bring us its share of advances, particularly in the diagnosis of posterior segment diseases. Today's computers, which "learn" from data, have the potential to sort, analyze and interpret large volumes of medical images better than we ourselves can, and to detect suspicious images that require priority treatment of a patient. Considerable progress has already been made in the diagnosis of AMD. AI-based algorithms help us to read images faster and more efficiently.

A word about hereditary retinal diseases?

Prof. F.G.H. —— These include hereditary retinal dystrophies, which result from bi-allelic mutations in the RPE65 gene. In concrete terms, this is a crippling orphan disease which progresses to blindness, and which has had no treatment to date. In this field, we have just reached an important milestone in therapeutic strategy with the approval of the first gene therapy for the posterior segment - a major breakthrough in recent years! An orphan disease means a restricted population. At the same time, we know that there are 200 genes responsible for hereditary retinal diseases, and that it is difficult to tailor gene therapy to each rare disease. So, the good news is that there are new developments, notably optogenetics, which are effective in treating pathologies whose etiology is heterogeneous, but which have a common pathway leading to functional loss of the retina. Gene therapy paves the way for treatments that could potentially be adapted to treat patients with distinct but similar diseases.

If, tomorrow, you could magically make one of these future treatments appear, what pathology would it target?

Prof. F.G.H. —— There are a number of obvious reasons for this. The rare diseases we have just mentioned, for which there is virtually no treatment in the current therapeutic arsenal. I would also opt for very common diseases, such as AMD, venous occlusions, retinal diseases, diabetics, as well as the huge "tsunami" looming in the posterior segment, namely myopia. We know that 80-90% of teenagers in Asia are myopic. Europe is also experiencing a similar trend. The use of tablets and smartphones, especially at a young age, is particularly harmful, especially over the long term. Myopia is on the rise. As a result, retinal detachments will multiply. We'll have myopic maculopathy. We'll have other complications, notably glaucoma. So there's a huge need to prevent myopia or to slow down very severe myopic diseases, with all the complications I've just mentioned.

In conclusion, we'd like to come back to your opening remarks. At the end of the day, what kind of treatment can we expect in the near future? You mentioned a number of new treatments that have been approved in the USA but not yet in Europe. What do you think will be the next novelty on the Old Continent?

Prof. F.G.H. —— A major milestone has just been reached. For the first time, a treatment seems possible for macular telangiectasia type 2. This disease, which affects men and women from the age of 50-60, manifests itself as saccular dilatations[2] of the terminal vessels of the macula. Long considered a rare disease, it has recently been revealed that it is not. It was simply under-diagnosed. These are encapsulated cells implanted in the eye, which produce CNTF[3] and other cytokines[4]. Phase 3 trials showed that this new treatment slowed disease progression. Approval is pending in the US and will also be sought in Europe. This would represent an absolutely unprecedented advance in the treatment of this disease.

**At the time of this interview, pegcetacoplan had not yet received European marketing authorization. It is rejected in January 2024.*

[1] Phase III is the final phase before marketing. It is used to evaluate the drug's efficacy on a larger cohort of patients: from a few hundred in the case of cancer, to thousands for very common diseases such as hypertension.
[2] Shaped like a bag.
[3] Ciliary neurotrophic factor (CNTF) is one such candidate with strong preclinical evidence for retinal neuroprotection.
[4] Cytokines are a heterogeneous group of soluble proteins or glycoproteins that play a major role in immune response, inflammation, wound healing and other processes. They represent a rapidly developing therapeutic target.

CASE STUDY

GLAUCOMA

Glaucoma is an eye disease associated with the progressive destruction of the optic nerve, most often caused by excessive pressure inside the eye. If left untreated, it can lead to visual impairment through reduction of the visual field. After age-related macular degeneration (AMD), it is the second leading cause of blindness in developed countries. While it can occur at any age, including at birth, its frequency increases over time, especially after the age of 40. Glaucoma affects 1-2% of the population over the age of 40 and around 10% after the age of 70[2].

Screening, risk factors, more or less rapid progression, treatments and research challenges? Three renowned experts have agreed to look at the state of play with us.

[2] INSERM data – *Glaucome / Mieux dépister pour lutter contre une cause majeure de cécité*. 2013

Dr Anton Hommer

—

Ophthalmology and optometry specialist and Head of Ophthalmology at Hera Sanatorium in Vienna (Austria), Dr Anton Hommer has agreed to take a look back over the changes in glaucoma care.

My aim will be to present a broad-brush history of the molecules and drugs that have been successively used in the treatment of glaucoma. When it comes to glaucoma, the only proven method of treating it is to reduce intraocular pressure. In addition, the regulation of this pressure is the result of a balance between the production, circulation and drainage of aqueous humour.

The first glaucoma treatment was discovered in the 19th century by Professor Ludwig Laqueur from the University of Strasbourg. A sufferer of glaucoma, he tested eserine (a reversible cholinesterase blocker) on himself and found that it reduced eye pressure. This is how the first local medical treatment was born. Until then, glaucoma was only treated with iridectomy[1], an operation popularised by the German von Graefe (1856). However, an even more effective substance was soon to become the first real glaucoma drug: pilocarpine. This alkaloid extracted from jaborandi[2] leaves was discovered in 1875, more or less at the same time by two chemists, E. Hardy in France and A. W. Gerrard in England. Two years later, a clinician wrote a publication about its utility in ophthalmology in the treatment of glaucoma[3]. From 1910, pilocarpine was then included as a reference treatment in ophthalmology treatises. This pilocarpine acts directly on the eye and is therefore used topically. It causes constriction of the pupil and its miosis[4] (narrowing), and it also increases or improves drainage of the aqueous humour through the trabecular meshwork[5]. In 30 to 45 minutes, the interocular pressure is reduced and the effect lasts between 6 and 8 hours. This is why it should be administered 3 or 4 times a day. Pilocarpine has long been the treatment of choice for glaucoma. However, it was used at high concentrations (4%, 6%, 8%, or even 10% in the United States),

which resulted in many side effects. Today, it is still used, but at considerably reduced concentrations, from 1 to 2%.

Carbachol, a parasympathomimetic drug launched in the 1970s, was once used. Blocking the mechanism of acetylcholine, it was more effective than pilocarpine in reducing intraocular pressure (IOP) and for miosis. Unfortunately, since it was not very soluble, it had to be mixed with methylcelluloses[6] and preserved with benzalkonium chloride. It was also abandoned due to its side effects, such as eye discomfort, headaches, blurred vision, red eyes, etc.

Then we had echothiophate treatments that reduced pressure for 24 hours, or even up to four days with a single drop, but they are no longer marketed, especially because of their side effects (blurred vision or a change in near or far vision and eye pain). Incidentally, they were only active on a small number of patients.

We then saw the emergence of another therapeutic class, beta-blockers, introduced in 1978 to reduce intraocular pressure in open-angle glaucoma by reducing the production of fluid that the eye continuously produces, called the aqueous humour. They were the gold standard until the introduction of prostaglandins. Until these arrived, each new medicine had to be compared to the beta-blocker. Today, timolol (0.25% and 0.5% concentration) remains the most frequently used beta-blocker. The introduction of its preservative-free form in the 1990s gave it excellent tolerance. In addition to timolol, other beta-blockers should be mentioned, such as befonolol and betaxolol; the latter being, to a certain extent, 'cardioselective'[7]: it has less influence on pulse rate. It was given to patients for whom such a mechanism was required. Levoponolol, catiolol, metipranolol and pindolol have also been marketed, but have all been withdrawn since then.

The last step is the arrival of the prostaglandins which, for about a quarter of a century, have transformed our methods of prescribing. Their names include latanoprost, travoprost, bimatoprost, among others. These drugs are increasingly used in the first-line treatment of glaucoma and are now the gold standard against which all potential new glaucoma drugs are compared when undergoing their regulatory registration.

Prostaglandins are fat-soluble cytokines and immune system hormones produced in response to various stimuli. They increase the reabsorption of aqueous humour to lower intraocular pressure. Drugs called prostaglandin 'analogues' help reduce intraocular pressure by allowing the fluid in the eye to drain more efficiently. Their efficacy rapidly proved to be superior to previous therapies. With a single drop daily, the decrease in IOP was around 25 to 30% greater. A notable advantage in terms of composition: these eye drops have been available for a few years without preservatives. And 'unpreserved' eye drops are particularly recommended for chronic treatment such as in glaucoma: better tolerance of the product, better surgical prognosis in the event of eye surgery, particularly glaucoma, less eye surface inflammation and decreased dry eye syndrome, etc. The European Medicines Agency[8] rightly points out that preservatives in eye drops may, in the event of chronic administration, induce inflammatory conjunctival adverse effects and ocular surface toxicity and that preservative-free eye drops should be favoured as a result.

[1] Surgical removal of an iris fragment. Iridectomy is performed in narrow-angle glaucoma to allow the circulation of aqueous humour in the eye, and thus prevent the increase in intraocular pressure due to the accumulation of humour behind the iris.
[2] Pilocarpine comes from a South American tree, Jaborandi, hence its name 'pilocarpus jaborandi'.
[3] Weber (A.) : Die Ursachen des Glaukom. Albrecht v. Graefe's Arch. Ophth. 1877, 23, 1, 1.
[4] If light conditions are poor, the pupil dilates (mydriasis), while in better light conditions, it retracts (miosis).
[5] The trabecular meshwork is a connective tissue mesh located around the iris root and has a slit opening onto the Schlemm's canal that drains aqueous humour to the venous vessels.
[6] Methylcellulose is used as a thickener, gelling agent, stabiliser or coating agent.
[7] Cardioselective beta-blockers reduce heart rate and myocardial contractility, and reduce the heart's oxygen consumption.
[8] European Medicines Agency (EMEA) public statement on antimicrobial preservatives in ophthalmic preparations for human use. December 8th 2009.

SURGERY

Prof. Gus Gazzard

—

In recent years, the role of surgery in glaucoma care has changed. Head of the Glaucoma Service at Moorfields Eye Hospital, London, and Professor at the UCL[1] Institute of Ophthalmology, Professor Gus Gazzard takes stock with us.

We cannot talk about glaucoma care without mentioning a few salient points, such as the new surgical developments of the last decade and the prospects in this area. It should be noted that each of these points alone could be the subject of a congress in its own right! Having said that, I will address, in this order:

1. Minimally invasive glaucoma surgery, commonly referred to as MIGS;
2. Selective laser trabeculoplasty (SLT);
3. The impact of preserved products on surgery, and conversely the added value of preservative-free products.

The first point is the evolution of glaucoma surgery with MIGS. Until a few years ago, glaucoma surgery was mostly limited to traditional trabeculectomy, a half-century-old technique in which a passage is created for fluid to evacuate outside the eye to reduce eye pressure, or a plastic tube is inserted to achieve the same result. Remember that glaucoma is most often caused by the accumulation of aqueous humour, resulting in increased eye pressure, which damages the optic nerve and leads to loss of visual field and then vision. Major surgical advances in recent years have consisted of optimising healing around this drainage route and limiting complications. There was a need for surgical techniques that are less invasive than trabeculectomy or tubular drainage[2].

These new techniques are referred to as minimally invasive glaucoma surgery (MIGS). Less invasive surgery, lower risks, faster healing and recovery? This opens the door to a lower intervention threshold. To preserve vision, we can now offer surgery to our patients earlier because this more benign procedure also becomes safer.

Today there are a large number of minimally invasive procedures, essentially divided into two categories: either an incision or an excision of the tissue of the drainage channel – the trabecular meshwork itself in the anterior chamber angle or by circumventing this drainage route.

Some of these techniques involve incisions, others the insertion of stents, tubes, or other devices to circumvent the obstruction. Some procedures allow fluid to be drained from the anterior chamber to the suprachoroidal space[3], a completely new route, although it is not the natural route through which fluid normally drains from the eye.

This evolution of glaucoma surgery has radically changed how we manage the disease. With MIGS, there are now intermediate treatments between daily drops and full surgery. These techniques are increasingly safe and now routine in many practices.

Another development involves combined surgeries, in patients presenting with both cataract and glaucoma. The addition of a Hydrus micro-stent (among others) in Schlemm's canal combined with cataract surgery is associated with decreased intraocular pressure (IOP) and reduced medication use in patients with both cataract and glaucoma, five after surgery, according to a study published in the journal 'Ophthalmology'. This interesting development in the evolution of glaucoma surgery has moved the intervention threshold to a much earlier stage in the disease.
Nevertheless, when faced with this profusion of new techniques (ocular stent, viscocanalostomy, trabecular meshwork excision, Hydrus, Omni surgical system, Schlemm's canal dilation, trabecular meshwork excision with Kahuk's double blade (KDB) or other techniques, etc.), we still lack randomised controlled trials in order to rigorously assess the effect of each of these approaches. Other procedures continue to develop in parallel, such as tubular drainage implants (e.g. pore drainage tube). It will be very interesting to see where we will be in five to ten years' time.

The second point concerns the big change of the last five years, namely the repositioning of selective laser trabeculoplasty (SLT). Although this procedure has been available for a few years now, it had only been used in a limited way. What are we talking about? It is a laser that promotes easier drainage of the trabecular meshwork, the exit route for most of the aqueous humour: a 'trabeculoplasty' will improve this flow. Although this procedure is nothing new, it was most often recommended in second-line when the medication no longer worked.
Some very encouraging trials, published in the Lancet, have recently compared the six-year results of randomised patients treated with either SLT in first-line or with medication. Outcome: SLT has become the mandatory first-line treatment in the UK (NICE). It is strongly suggested from the start of glaucoma treatment in many countries, and the European Glaucoma Society (EGS) and American Academy of Ophthalmology (AAO) have also adapted their guidelines to this effect.
In summary, between the developments in minimally invasive surgery and the repositioning of SLT, we are beginning to get a glimpse of new avenues for treating glaucoma by limiting eye drops and developing less consequential surgeries. Of course, the prospect of being able to dispense with daily drops is a pleasing idea, given the difficulties with adherence in glaucoma patients. Therefore, we have shifted from a paradigm of drop treatment first, and surgery after, with a desire to avoid surgery at all costs, to a paradigm of laser first, drops for a certain time, early mixed surgery as soon as the cataract is operated. In ten years, we have evolved towards an arsenal involving fewer drugs but earlier laser surgery with better visual field preservation and less glaucoma blindness. It is exciting.

My third point concerns the impact of preserved products on surgical procedures. There is ample evidence to suggest that surgical success rates are significantly reduced after prolonged use of preserved therapies. Professors Christophe Baudouin in France[4] and David Broadway in the UK[5] highlighted the harmful effects of these preservatives administered over the long term (including excessive fibrosis on histological tissue samples and chronic inflammation). They can lead to a reduction in surgical and trabeculectomy success rates. By extrapolation, this also applies to the results of the new micro-drainage options[6] that are so popular today for the control of ocular hypertension. In general, we can reasonably say that if we were to ban prolonged exposure to preserved treatments, our vision would be all the better for it!

[1] UCL: University College London.
[2] Surgical procedure that involves inserting a tube that connects the intraocular space to a device under the conjunctiva to drain aqueous humour from the eye.
[3] The suprachoroid: a virtual space that separates the choroid from the sclera.
[4] Centre Hospitalier National d'Ophtalmologie des Quinze-Vingts.
[5] Spire Norwich Hospital, UK.

Professor Miriam Kolko

—

Senior Physician and glaucoma Specialist at Copenhagen University Hospital (Denmark) and the University of Copenhagen

Professor Miriam Kolko, what are the advantages of preservative-free products in the management of glaucoma?
At present, the majority of prescribed anti-glaucomatous eye drops contain benzalkonium chloride, BAK, the most widely used preservative. In the past, BAK was necessary to prevent bacterial growth in the bottles and to extend shelf life. This is no longer the case, as effective filters and valves can now be made to keep eye drops sterile for as long as preservative-containing eye drops. Therefore, in my opinion, there is no good argument in favour of adding preservatives to eye drops for chronic use. Although the active ingredients as well as other inactive ingredients in eye drops can cause side effects, numerous studies have shown that particularly BAK, like other preservatives, is toxic to the ocular surface. Its side effects include increased inflammation, dryness, and general irritation of the ocular surface. Conversely, "preservative-free" products offer patients the advantage of reducing these unnecessary side effects. As compliance with treatment is a key factor in optimising medical therapy and reducing the rate at which glaucoma worsens, it is easy to see why "preservative-free" eye drops are beneficial.

I would add that since glaucoma most often is a silent, asymptomatic disease until advanced stages, we treat patients who have no symptoms at all, by giving them daily treatments which, in turn, cause a great deal of discomfort. Naturally, this treatment does not receive their full cooperation. Hence, it is crucial to limit as far as possible the irritation factors and other harmful effects of anti-glaucomatous eye drops. In this respect, preservative-free treatment most likely leads to better compliance and thereby, ultimately, less progression of glaucoma.

Another remark on a similar question: "tolerability", which is characterised by the patient's ability to tolerate side effects. Tolerability increases as the treatment has fewer side effects. Eye drops containing

preservatives, such as BAK, have been shown to sting more, to cause more redness, dryness, and inflammation. These side effects can have a significant impact on quality of life. On this point, the European guidelines are clear: the aim of glaucoma care is to promote the well-being and quality of life of patients with, or at risk of, having glaucomaIn prioritising our treatments, we must therefore take into account not only the efficacy, but certainly also other factors, such as side effects, ease of use, the patient's life situation and potential comorbidities that may affect adherence. All in all, we must take a holistic approach to each individual patient and neither, efficacy, side-effects, adherence, or quality of life can be neglected.

A final question arises in this regard. What is the public authorities' attitude to "preservative-free"? Is it promoted? Can a prescribed preservative-free treatment be automatically replaced by a "preserved" generic?

On this point, it is clear that generics are cheaper than the brand name eye drops. But it is also true that generics are not the same as the original brand name. They differ in terms of physical and chemical properties; this point is well documented. They may also vary in terms of efficacy, as there are no specific requirements for generics. Nor are there any requirements in terms of side effects when a generic eye drop is introduced onto the market. For our part, we do not yet know whether these more economical treatments are sufficient. At the same time, there are no regulations governing the preservatives used in these generic medicines. Until recently, BAK could be included in the composition of a generic eye drop, even though the original brand name did not contain it.

Fortunately, in my country, Denmark, the law has changed. It is now illegal to introduce BAK if the original brand does not contain it. This is good news for the patients! However, the generic may not be as effective as the reference drug and may have a different side-effect profile.

In conclusion, there is a lot of educational work to be done. We should at least convince ophthalmologists and other healthcare providers, or at least inform them, that a generic can have an entirely different profile to the original brand name.

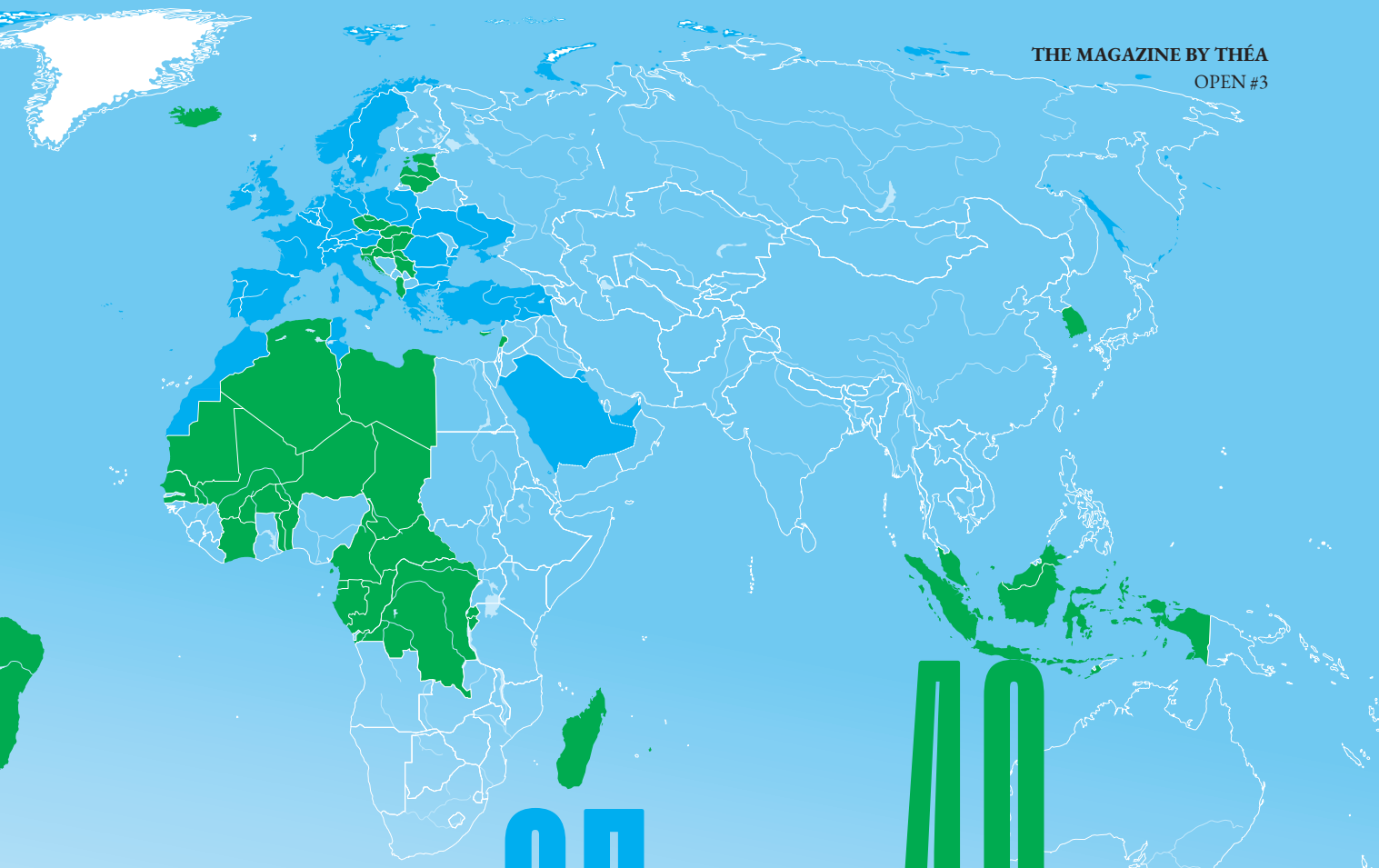
THE WORLD OF THÉA

AN INTERNATIONAL PRESENCE

In the early 2000s, Théa entered the select circle of French pharmaceutical companies with subsidiaries at the four cardinal points of the European continent. Its presence was built starting with a certain number of key 'demographic' countries, such as Italy, Spain, Germany and the UK.

With this first step completed, Théa then expanded into countries such as Belgium, the Netherlands, Sweden, Norway, Finland, Denmark, Austria, Turkey, Ukraine and Romania.

Alongside this 'European construction', the company has set out to gain a foothold in sub-Saharan Africa, the Maghreb, the Middle East and the American continent, opening subsidiaries in Latin America and Canada, and more recently in the United States. This expansion has taken place while continuing to distribute Théa products in 75 countries worldwide via its partners.



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SUBSIDIARIES AND OFFICES

EUROPE
Austria, Belgium, Bulgaria, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom

AMERICA
Canada, Chile, Mexico, Peru, USA

AFRICA and the MIDDLE EAST
Kuwait, Morocco, Saudi Arabia, Tunisia, United Arab Emirates

40
PARTNERS

EUROPE
Albania, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Iceland, Latvia, Lithuania, Serbia, Slovakia, Slovenia

AMERICA
Brazil, Colombia

ASIA and OCEANIA
Hong Kong, Malaysia, Philippines, Singapore, South Korea, Thailand

AFRICA and the MIDDLE EAST
Algeria, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Gabon, Guinea, Ivory Coast, Lebanon, Libya, Madagascar, Mali, Mauritania, Mauritius, Niger, Rwanda, Senegal, Togo

PRODUCTION

100% MADE IN EUROPE

With Théa, European excellence is exported and in demand every day around the world.
The recent COVID health crisis highlighted the risks faced by pharmaceutical companies that were reducing production costs by relocating their production and entrusting manufacturing to subcontractors in countries where social standards are less demanding.
Because the quality of a medicine is guaranteed at every stage of its life, from design through to pharmacy dispensing, all Théa products have been made in Europe for the past 30 years, with 60% in France – a country that hosts several world leaders in pharmaceutical contract manufacturing.
While always being at the cutting edge of progress means calling on the best in Europe, it also means keeping control of our strategic technologies.

Working only with the best

Théa entrusts part of its production to renowned manufacturing leaders via reliable partnerships that enable us to guarantee the excellence of each of our pharmaceutical forms. Explanation: eye drops in single-dose units or in bottles, ABAK®, ointments, gels, wipes, injectables, ophthalmic inserts, etc. Théa offers nearly twenty different forms that require know-how, very specific skills, and the ultra-modern and sterile equipment that goes with it. Manufacturing and packaging are entrusted to the very best subcontractors, according to product type, on European – and mainly French – sites.

European quality exported to 75 countries

Benac

Our ophthalmic insert for cataract surgery and certain ophthalmic diagnostic tools are produced by us in our Benac factory near La Rochelle (in Charente-Maritime). A new factory using state-of-the art technology will soon be built here in order to boost capacity by 20 to 30% to keep pace with the growth of a product whose sales are increasing in Europe.

Farmila

The ABAK® bottle (for preservative-free eye drops) and the AIRLESS® tube (for preservative-free gels) are filled at our factory in Farmila, near Milan, in Italy; a site which has just increased its capacity and can now produce up to 55 million ABAK® treatment units every year. The challenge for Théa is to maintain – beyond its alliances with external partners – a certain degree of control over its production.

In 2002, Théa arrived in Italy thanks to the acquisition of the Italian pharmaceutical group Farmila. Founded in Milan in 1946, this family-run company specialising in the marketing and manufacture of ophthalmology and ear, nose and throat products offered products highly appreciated by Italian ophthalmologists. Its Settimo Milanese factory, obtained as part of the acquisition, would undergo considerable technological adaptations to meet the highest quality standards, including in environmental performance (ISO 14001/2015) and the management of occupational health and safety (ISO 45001/2018). Farmila is now one of the most state-of-the-art factories in Europe.

CSR or the challenges of tomorrow

CSR, or corporate social responsibility, is not just a theoretical concept, it is a reality, a commitment to be made. It occupies a prominent place at Théa which, through its history, its very nature and also through its practices, has applied and embodied the fundamental principles of social responsibility since its creation.

While Théa's CSR approach was only made official in 2022, it was built on solid foundations. In many respects, it was already rooted in the company's DNA! This is because Théa has first and foremost been a family governance that facilitates long-term relationships and, as a result, a mindset that places corporate responsibility at the heart of what we do. And the examples do not stop there.

When Théa focuses on **innovation** while keeping low-profit **everyday products** on the market, it demonstrates its commitment to patient health. When it invests in its **employees**, it shows that it considers human capital to be just as essential as financial capital. We also need to talk about all the initiatives in favour of healthcare professionals to promote knowledge sharing. Then of course there are the **preservative-free treatments**, since Théa, a pioneer

and world leader in this field, was the one that brought ophthalmology into the era with the launch of ABAK®, one of the **first multi-dose preservative-free bottles**, 30 years ago. Not to mention all the actions in support of local associations and players for the development of the territories in which Théa operates. At the request of the World Health Organization (WHO), Théa has also developed **a treatment for trachoma**, a disease that affects nearly 2 million people, particularly in Africa. The **Théa Foundation** works on this continent. Created in 2012, it endeavours to foster eye health in French and Portuguese-speaking African countries, perpetuating the work initiated by Paul Chibret (1844-1911) in 1870.

This gives a glimpse of what the existing system was. On this foundation, since 2022, a CSR policy has been structured around a vision and three pillars of commitment. Naturally, this approach takes into account our international and multicultural dimension. Applicable to all Group sites, subsidiaries and production sites, this new common framework allows for local particularities.

Our CSR vision?

'Théa acts to give each generation the opportunity to open their eyes to a sustainable world.'
This sentence encapsulates how Théa chooses to exercise its corporate responsibility. It reflects our values, upholds the fields in which we want to act, taking into account the stakeholders we are committed to, namely ophthalmologists, patients, our employees, the territories in which we operate, but also future generations...

In order to implement this mission, we have defined three pillars of commitment: 'Ophthalmology', 'Employees' and 'Ecosystem'.

The first, **'Ophthalmology'**, concerns our responsible practices throughout the lifecycle of our products, from R&D to patient use and disposal, spanning the preclinical and clinical phases, production and our relations with and requirements of our subcontractors, logistics, relations with healthcare professionals, etc. It is also our desire to keep on the market certain service products under threat of disappearing from pharmacies, i.e. old treatments that are not very profitable but still as effective, without which ophthalmologists cannot practise.

The '**Employees**' pillar aims to maintain the best working conditions for our teams by ensuring their health and safety, but also by supporting them in developing their skills, and by taking into account the diversity of profiles and people, etc.

Finally, we are committed to making a positive contribution to our '**Ecosystem**'. One of our ambitions is to better understand the environmental impact of our activities to reduce them more effectively. We also want to play our corporate citizen role to the full and strive for the societal, cultural and economic development of the territories in which we are established. While this is particularly true in Auvergne, where we have our head office, it is also the case of all our global sites. And we must not forget the work of the Théa Foundation.

In Clermont-Ferrand, the CSR team supports the roll-out of this approach throughout the Group, facilitates its ownership by everyone, and initiates projects. So, for example, we must act to limit our environmental footprint. An illustration? We have analysed the greenhouse gas emissions of Théa's activities in France. This will enable us to draw up an action plan to reduce these emissions in the short, medium and long term.

We have also embarked on eco-design work on our products and their packaging. Here, the aim is to identify possibilities to minimise their environmental impacts from the design stage, while also considering the future of existing products and packaging. The pharmaceutical industry is facing many regulatory constraints in this context, but that is what makes this challenge motivating!

In addition to the theme of the environment, we aim to deploy our CSR policy at every level, in our relations with our partners, within our teams or to serve the territories in which we operate. And our ambition will always be to be one step ahead, to always be in 'pole position' in relation to the national or international rules that exist or will be enacted in the years to come.


CENTER
OUT

EDUCATION

PRIORITY TO EDUCATION

Education has always been a tradition for Théa, which we perpetuate with an ever-increasing number of knowledge-sharing programmes. These initiatives are grouped under the banner of the 'Théa Academy'.

In a world where scientific progress is transforming the field of possibilities day after day, Théa is here to serve all ophthalmologists – from junior doctors to experienced practitioners – who aspire to keep up regular training to maintain the quality of their practice.

The Théa Academy brings together actions dedicated to young people. In fact, Théa is assisting tomorrow's ophthalmologists:

→By supporting initiatives designed by and for young ophthalmologists at **E.M.Y.O.** events, whether their own meetings or their sessions at learned society congresses.

→ By enabling new surgeons to learn or perfect their technique on **Dry-Labs**, **Wet-Labs** or surgical simulators, whether by holding training sessions or funding Dry-Labs or even simulators, there where the need is greatest.

→ By inviting residents and fellows to participate, in a spirit of emulation, in **TROPHY**, our international clinical case competition which offers the winners the opportunity to present their work to their peers at renowned congresses.

→ And finally, by providing long-term institutional support to examination of the **E.B.O.**, which gives new practitioners freedom to set up in Europe.

Of course, this knowledge-sharing dynamic is not limited to young professionals. It is aimed at all practitioners, both beginners and experienced. This global and transgenerational 'continuous training' effort is reflected in numerous events dedicated to various pathologies.
Théa supports prestigious meetings such as the **Moorfields International Glaucoma Symposium**, a unique and rare learning opportunity where leaders in the field share their experiences and approaches to glaucoma. Every year, thousands of ophthalmologists attend Théa meetings around the world, particularly themed meetings such as: **the Educational retiNa Meeting, the Ocular Surface Master Class and the European Club of Ocular Surface in Glaucoma**,

EDUCATION

which brings together experts in ocular surface and glaucoma. Not to mention the Théa Vision Tour, which raises awareness of the major relevance of preservative-free products, or the **Théa Surgery Event**.
This calendar is accompanied by editorial activity, as part of the '**Théa Medical Library**' collection, which focuses on various subjects or pathologies in collaboration with renowned international experts.
Throughout the year, Théa supports young people towards success while responding to the aspirations of experienced practitioners.

TROPHY, a competition for young people.

Among the ever-increasing number of educational activities offered by Théa, some aim specifically to support those who will take care of our eye health in the future. This is the case for **TROPHY**, the first annual international competition for clinical cases in ocular pathologies, launched in 2012. **TROPHY** or Théa interRnational cOntest of clinical cases in PatHologies of the eYe is designed to encourage the presentation and communication skills of residents and fellows in ophthalmology. Participants submit a clinical case they were involved in, and which is original from a scientific standpoint. These cases must be related to a condition that may differ from one year to the next. For example, the topics of glaucoma (2012-2013), the management of corneal disorders (2015-2016) and new methods of managing ocular surface diseases (2017-2018) were addressed. The subject title for the 2023-2024 edition is: 'The secret to ocular surface success: don't forget eyelids!'
Each edition of **TROPHY** takes place from May to May and has two stages. First, a national jury selects the best case out of those submitted by the candidates from a given country. Next, a second panel of European experts meets to select, in order, a winning trio. At the end of the contest, the three winners have the opportunity to present their work to an international audience at the annual Théa symposium held at the congress of the Association for Research in Vision and Ophthalmology (ARVO) in the United States. In addition, all participants in the final phase will attend the European Association for Vision and Eye Research (EVER) congress and their clinical case will be available on the dedicated website.

3 questions for...

Prof. Benjamin Thabo Lapp
—
TROPHY 2015 winner

Professor Benjamin Thabo Lapp is currently practising at the University Ophthalmological Hospital of Freiburg im Breisgau (Germany).
He was one of the first TROPHY winners.

Professor, in what year did you compete and what was the theme? Could you explain in lay terms the case you submitted to the jury?

I was in my fourth year of training to become an ophthalmologist. In Germany, the training usually lasts five years, so I was already at the end of my course when I applied for the Théa TROPHY. My case involved eye disorders that can occur with atopic dermatitis. In this case, the patient had a tumour on the eye surface caused by atopy, which required a corneal transplant. My presentation focused on the diagnosis, treatment and follow-up of such a complex case.

The year of your victory coincided with the annual ARVO Congress held in Denver. What memories do you have of your presentation to your peers?

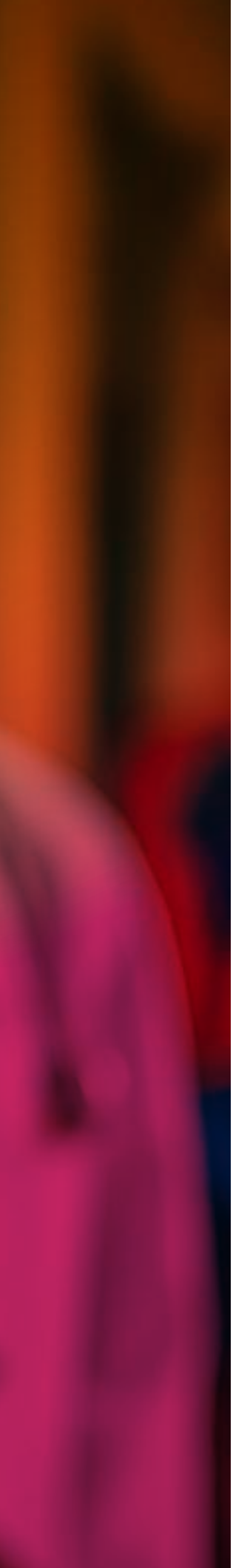
The presentation took place in the conference room of a Denver hotel. There were around 150 to 200 people in the audience. After my presentation, the case was discussed. I found the audience, the discussion and the other winning cases particularly interesting.

Would you advise young practitioners to participate in TROPHY? With hindsight, how do you think you have benefited?

I would recommend to all interested young colleagues to apply for the Théa TROPHY. It was a very exciting opportunity for me at the time. In addition, I had the opportunity to participate in ARVO – so it was a wonderful experience for me not only clinically but also scientifically.

FOUNDATION

THE THÉA FOUNDATION beyond priorities, a state of mind



Fondation Théa

The Thea Foundation aims to promote or assist humanitarian or general interest initiatives to fight blindness and improve eye health.

Registered in April 2012, the Théa Foundation aims to promote or assist initiatives to fight blindness and improve eye health, with two priorities: fight trachoma and train medical staff; all in French and Portuguese-speaking African countries, which generally receive less help than their neighbours. Its launch aimed to structure and deepen the long-standing work carried out there by the Chibret family.

It must be said that despite progress in the health sector, Africa faces several challenges, the most recurrent of which is access to an ophthalmologist. Out of the sixty or so countries facing a critical shortage of healthcare professionals, more than half are in Africa. At the same time, many health problems continue to affect the region severely, especially in rural areas. Alongside the major scourges of blinding tropical diseases such as trachoma – which had inspired Paul Chibret (1844-1911) so much – statistics show that chronic glaucoma and operable cataracts are reaching worrying levels. Increasing the number of eye health professionals is imperative. Because there are either no or too few ophthalmologists. This means no diagnosis, therefore no treatment. As a result, every year men, women and children become blind in cases that could have been prevented. In a decade or so of existence, the impact of the Théa Foundation's actions has continued to grow and now concerns virtually all of the French and Portuguese-speaking African countries. But the Théa Foundation is not only characterised by its priorities – training and the fight against trachoma – nor by its constantly expanding geographical area, but above all by a state of mind, encouraged by its Scientific Committee of international experts familiar with African realities.

This state of mind can be summed up in a few requirements.

Target 'development'

Over ad hoc interventions or responses, the Théa Foundation prefers structuring commitments that provide long-term support to communities in the face of fundamental concerns. This is the case in the Kolofata region in northern Cameroon, which we have supported since the 1990s. At the same time, at the request of the World Health Organization (WHO), Théa Laboratories was working to adapt antibiotic therapy for trachoma, and after extensive research, was going to develop new eye drops for short-term treatment to overcome this disease. 115 000 inhabitants of this remote region of Cameroon were going to benefit first from this new treatment. Since then, the Théa Foundation has faithfully supported the healthcare professionals working in Kolofata.

Another particularity: taking into account the African duality and our attention to remote regions. Africa is experiencing both the rise of a creative youth with many talents (half of its population is under 30) and rapid urbanisation, with large modern urban centres open to the world. But far from these large centres, the reality is also often much harsher, with isolated, remote communities that remain cut-off, lacking traffic and exchange infrastructures, energy and digital equipment, and functional healthcare structures.

Supporting communities remote from major centres, such as that of Kolofata, is one of the characteristics of the Théa Foundation. For eight years, it has been supporting surgical campaigns and medical training in the Mopti region of Mali; an isolated area with only three ophthalmologists for over two million inhabitants. The same concern led us to equip with solar panels a bush ophthalmology clinic in Bitkine, Chad located 350 km as the crow flies from its capital N'Djamena.

Opt for innovative solutions

Another distinctive sign: the Foundation is attentive to the rise of new technologies. And this is particularly true of its second priority, the training of human resources in healthcare. Across French-speaking Africa, it provides access to e-Ophta, the e-learning developed by the College of University Ophthalmologists of France (COUF), intended for young French ophthalmologists.

Enabling young Africans to train also means giving them access – in their countries, or at least on their continent! – to the best surgical training tools, such as 'Dry-Labs' (training on silicone eyes). The Théa Foundation has equipped hospitals in Cameroon, Mozambique, Senegal and Togo, and is in the process of doing so in Tunisia, Morocco and Ivory Coast. Finally, it promotes the same training of tomorrow's surgeons on simulators that Théa Laboratories has partially funded. Having co-funded a simulator in France for Clermont-Ferrand University Hospital, Théa wished to repeat the experience in Africa by joining the funding round held for the simulator acquired by the Moroccan Society of Ophthalmology (SMO) which, in addition to the residents of Morocco, can now host Théa Foundation interns from Sub-Saharan Africa* in Casablanca.

Foster African solutions

Because, in the end, while the Théa Foundation supports a large number of training courses for African doctors in Europe, it focuses on helping the various African centres of excellence. By doing so, it intends, to the extent of its possibilities, to contribute to the enrichment of an 'African space for higher education in ophthalmology', and to enable future regional leaders in African ophthalmology to also train in their home countries and be internationally competitive.

* Previously, a first surgical simulator had been co-funded by Théa Laboratories in France at Clermont-Ferrand University Hospital. Several waves of African residents were trained on this tool in Auvergne.

558 668

DONATION

558 668 boxes*

Benin, Burkina Faso, Cambodia, Cameroon, Gabon, Haiti, India, Madagascar, Mongolia, Senegal, Tibet, etc.

Since the creation of Théa, more than fifteen countries have benefited from its humanitarian donations. Outside of its Foundation, the Auvergne group regularly donates treatments to teams of medical staff who operate in disadvantaged regions of Africa, Asia or South America. In 30 years of existence, over half a million boxes have been donated. Of course, medicines are not ordinary goods. They may present health risks when not used in the right conditions. For this reason, these donations always meet several principles set out in a donation agreement. They are made directly to associations or organisations accustomed to field medicine, and who are completely familiar with the environment in which they operate. They are based on clearly expressed needs, because the idea is to help on an ad hoc basis and not to disrupt local circuits. Finally, it goes without saying that these treatments offered meet the highest quality standards in every respect.

* Figure at the end of 2023.

FOUNDATION

Théa employees on a humanitarian mission in the Comoros

FOUNDATION

As part of its Foundation, Théa offers its employees the opportunity to put their talents to work for humanitarian operations through skills-based sponsorship. Since the Théa Foundation's field of intervention is eye health in French and Portuguese-speaking Africa, several missions have already taken place in Morocco. In the future, other departures will be scheduled, probably for Madagascar, Algeria, Tunisia or elsewhere. In the meantime, Maria Molina-Duran, Global Scientific Training Manager and Julien Blanchet, a pillar of our General Services, took off for the Comoros.

They landed on 22 October 2022 at Prince Said Ibrahim International Airport, about 20 km north of the capital, Moroni. Shortly before, Maria and Julien had applied to take part in the mission supported by the Théa Foundation, and conducted by 'Terres d'Ophtalmo'[1]. This French NGO is an official partner of the National Programme to Fight Blindness (PNLC) of the Ministry of Health of the Union of the Comoros; a programme whose current coordinator is Dr Mohamed Chanfi, head of the ophthalmology department of the National El-Maarouf Hospital in Moroni.
Maria and Julien were selected by drawing lots from all Théa employees tempted by the humanitarian action: 'I wanted to experience volunteering in a much less favoured region than what prevails in our privileged countries,' reports Maria Molina-Duran.
In fact, the Comoros archipelago, located at the northern entrance of the Mozambique canal between Madagascar and the east coast of Africa, is still experiencing problems in terms of access to healthcare. While the Union of the Comoros is committed to improving supply, quality and accessibility, in particular via several national plans in the health sector; while ophthalmology facilities are equipped with an adequate technical platform, there are still recurring difficulties: insufficient human resources and their unequitable distribution across the territory.
This is ultimately what constitutes an obstacle to the management of curable and/or preventable blinding diseases in eye care.
However, in the Comoros, as elsewhere in sub-Saharan Africa and throughout the world, cataracts are the leading cause of blindness; a serious public health problem in terms of frequency and severity, particularly among people over 45. The country has only three ophthalmologists to treat a good one million inhabitants; a very young population that, given how it is expected to age, promises to provide an ever-increasing proportion of cataracts in the future...
We therefore understand the importance of missions such as that conducted by 'Terres d'Ophtalmo' and the Théa Foundation as part of the activities of the PNLC: Maria and Julien accompanied a delegation comprising no fewer than five ophthalmologists, most of whom specialise in refractive surgery[2]!
They had come to exchange with their counterparts in the Comoros and temporarily increase a local team of three ophthalmologists and six ophthalmic nurses (ISOs)[3]. As for the mission itself, it consisted of four components: a school screening operation in which 200 children were examined; around 100 ophthalmology consultations; 50 cataract surgeries;

'This week was one of profound reflection, day after day'

TERRES D'OPHTALMO

[1] www.terresdophtalmo.org
[2] The medical team from France included Doctors Clémentine David, Stacy Charpentier, Jade Luzu, Alexandre Hage, Sarah Ouardani and eye health nurse Clémentine Bourdareau.
[3] The local team is composed of Doctors Ali Ahmed Nourdine, Soihihadine Ali, Mohamed Chanfi. The ISOs are Alhadhur Chanfi, Fatima Djae, Kadria, Antufia, Zalhata, Sawaf Thabit.

and finally, the monitoring of patients operated on during previous missions. Our 'Théa' volunteers were called upon to assist patients who were to undergo surgery: reception, assistance with pre-operative examinations, support in the theatre, preparation of post-operative treatments. They also participated in screening sessions for refractive disorders (mainly myopia) in three schools.
Before returning to France, they celebrated both the retirement of the senior nurse from the ophthalmology department and the birthday of a French ophthalmologist around what is known in the vernacular as a 'Pilaou': a national gastronomic must-try and festive dish par excellence. Since their return, Maria and Julien have described their experience as an incredible tribute to life and humanity. 'This week was one of profound reflection, day after day,' insists Julien Blanchet. In the Comoros, they encountered the smiles and kindness of which African resilience is made of, but also a team of eye health professionals who refuse to consider their careers without volunteering their time to save sight and help disadvantaged populations access the healthcare they need.

←
Ms. Schultze defending her doctoral thesis at the School of Medicine

HISTORY

OPHTHALMOLOGY'S PIONEERING WOMEN

'Women cannot seriously pursue medical careers (...) unless they stop being women: due to physiological laws, women doctors are ambiguous, hermaphrodite or sexless creatures, monsters at any rate. Let those who fancy such a distinction try to acquire it.' *

Yes, at the end of the 19th century, this is what women were still up against. Which just goes to show the fortitude, nerve and enthusiasm to move mountains needed by the great female pioneers to pursue a career in medicine – particularly ophthalmology. Their names were Maria, Evgenia, Clara, Rose, Isabel and Trinidad. Having fallen into historical oblivion, these eye health pioneers deserve to have their stories told.

* Lucas-Championnaire, Just, 'article 9997' J. méd. chir. prat., June 1875 issue. p. 241-242.

Maria Bokowa

(1839-1929)

THE WORLD'S FIRST FEMALE OPHTHALMOLOGIST

Originally from St. Petersburg, this woman is considered to be the world's first female ophthalmologist. She is one of the 'Zurich Seven', the first group of ladies to have been admitted to and graduated from the Faculty of Medicine of the University of this Swiss city. Maria Bokowa later worked in the clinic of Professor Friedrich Horner, the former assistant to the great Albrecht von Gräfe; she then joined the Russian Academy of Medicine as a researcher.

Evgenia Serebrennikova

(1854-1897)

Her relatives called her Venochka. She was born in Yekaterinburg, in the governorate of Perm. Daughter of an engineer and child prodigy, after schooling in the Urals Evgenia enrolled in special courses for women to obtain the 'scientific midwives' diploma from the St. Petersburg Academy of Medicine and Surgery. While there, she met a young medical student and married him. In the late 1870s, the young couple volunteered to go to the front during the conflict between the Ottoman and Russian empires. While serving in military hospitals, they were both distinguished by the Red Cross. After this episode, and motivated by a desire to serve the people, they left St. Petersburg for good to join the hospital of a steel complex in Nijni Novgorod.
Then came the appointment of Evgenia as an ophthalmologist at Alexander Zemstvo Hospital in Perm. In her first year, she created an ophthalmology department there.
Her reputation soon went beyond the bounds of her province. Patients came flocking from all over the country. For 11 years, Evgenia alone received some 30 000 people and performed over 6 300 operations, refusing payment when patients were poor and sometimes even paying for their treatments herself. During her career, she kept up research activities that led her to publish (particularly on the optic nerve), but also to travel (Berlin, Wiesbaden and Paris).

Rose Bonsignorio

(1868-19??)

THE FRENCH WOMAN WHO DREAMED OF BEING A PROFESSOR OF OPHTHALMOLOGY

Born in Cochinchina in 1866, Rose lived in Paris. A rare occurrence for the time, she took her arts and science Baccalaureate. At the age of 31, she obtained her Doctor of Medicine. As soon as she arrived at the faculty, the male students made her feel the superiority they believed was inherent to their sex. When she entered the dissection pavilions, one of the masters, who had little taste for the presence of ladies in medicine, made such crude comments in his anatomical demonstrations that the few female students were forced to leave the premises. His aim, of course, was to keep them away from the profession.
About to take her fifth exam, she was assigned to the department of Professor Panas, at the Hôtel-Dieu in central Paris. This was where she discovered and became passionate about ophthalmology. Naturally, she was very quickly informed that this speciality, which requires patience and skill, was not for the 'weaker sex'. Rose, who dreamed of advancing the cause of women, would soon make headlines. Having become a doctor, she offered to open an ophthalmology class at the Faculty of Medicine. Fully satisfying the conditions required, she did not anticipate that her application might be rejected. And yet! There was no rush to give a woman the opportunity to apply for the most prestigious roles in the profession. Instead of humbly surrendering, the young oculist would challenge the refusal before the Council of State, France's highest administrative court. The dean of the faculty, displeased with this insubordination, raged in an interview:

> *'With regard to Ms. Bonsignorio's application, we had to examine two points: 1) Is the proposed class useful? Does the candidate have exceptional value, an indisputable scientific authority? 2) Will the proposed class not present any drawbacks in terms of inner discipline? And who could say that the teaching of ophthalmology at the faculty needs to be supplemented? The chair of the ophthalmology clinic, whose seat is at the Hôtel-Dieu, is currently held by Professor Panas; is that not enough?'*

He would also argue that it was not because Ms. Bonsignorio was a woman that the faculty rejected her application:

> *'Let a woman take one of our chairs. It's an experiment to try. But who knows for sure how it will turn out? We have decided to wait for a female candidate whose teaching will impose itself more.'*

Clara Knieper

(1881-1914)

THE FIRST FEMALE MEMBER OF THE GERMAN SOCIETY OF OPHTHALMOLOGY

Clara Knieper was born in 1881 in Pomerania. Keen for her to be educated, her father offered her many private lessons and then – a rare event at the time – sent her to take the classes of the feminist teacher Helene Lange in Berlin-Moabit, who prepared a few handpicked girls to take the secondary school diploma at the Royal Luisengymnasium, a grammar school in Berlin. This school would be one of the first in Prussia where young women could qualify for a secondary school diploma. At the end of her studies, Clara became an ophthalmologist and spent most of her career in Mittweida, Saxony. In 1911, she was the first of her sex to attend a DOG* congress and become a member of that same society. However, it was not until 2001 that a woman, Gabriele Lang, became president of this illustrious learned society.

Isabel Hayes Chapin Barrows

(1845-1913)

THE AMERICAN

Born in 1845, Isabel was the daughter of a doctor and a primary school teacher who instilled in her the desire to study. After mourning the loss of a child, then that of her first husband – ravaged by diphtheria, the young woman aspired to become a doctor. She was 19 when she began her medical training at a sanatorium in Danville, Virginia, where she would soon meet her second husband. Like many other women attracted to medicine, she would continue her studies in Switzerland. She arrived in Zürich in 1869 and quickly became interested in ophthalmology. She would soon be seen in the ophthalmology clinic in Vienna led by Ferdinand von Arlt performing a cataract extraction, 'without any tremor of the hand'. Back home, she would become the first woman to have a private ophthalmology practice in Washington. Soon, she would teach at Harvard Medical College, where she would be one of the first female professors. The university would take a big risk by hiring a woman because members of the honourable American Medical Association (AMA), founded in 1847, considered such a decision to violate the code of medical ethics.

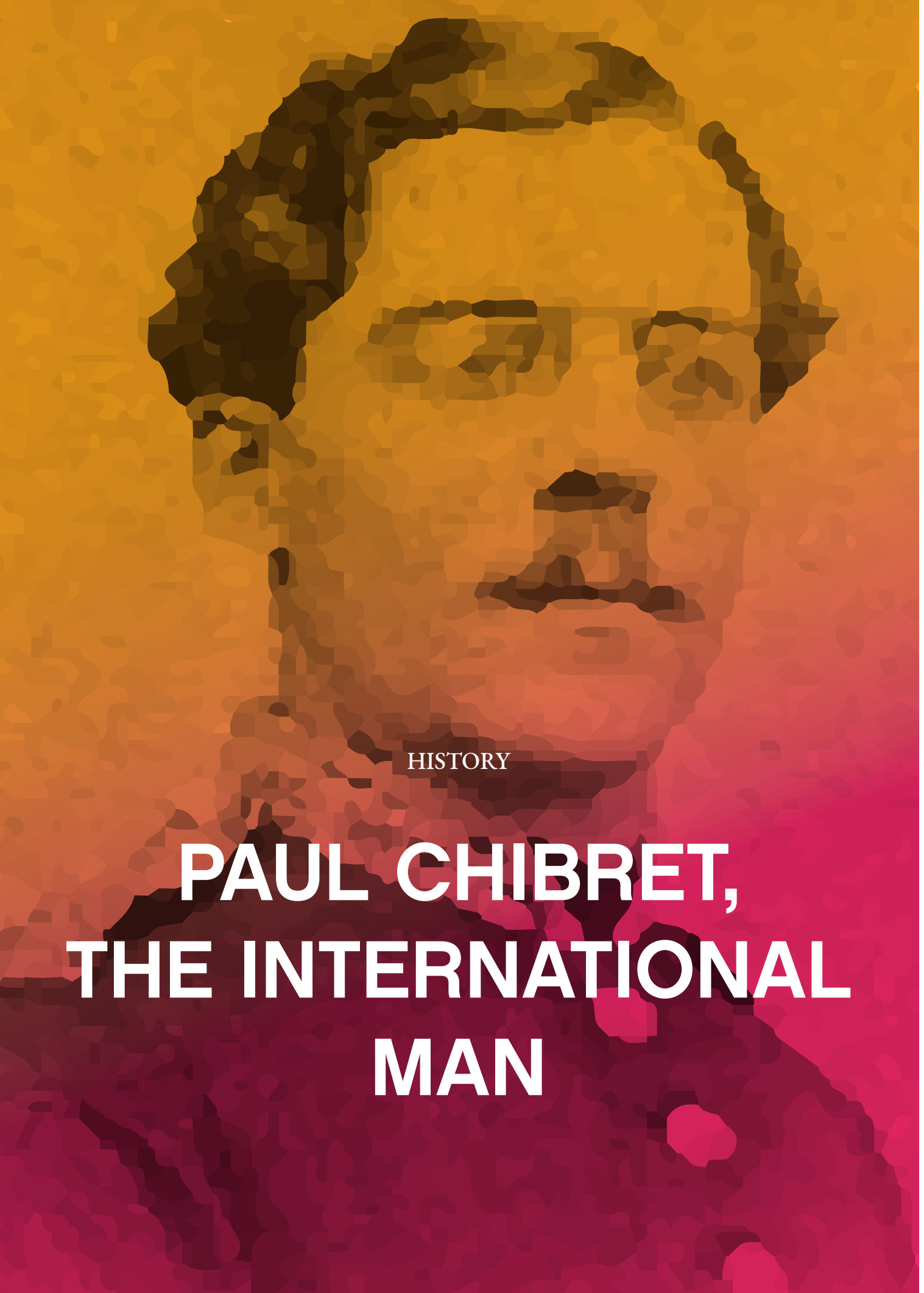
* At that time, the DOG was still meeting under the name 'Heidelberg Ophthalmological Society'.

Trinidad Arroyo Villaverde

(1872-1959)

THE FIRST FEMALE SPANISH DOCTORAL STUDENT IN OPHTHALMOLOGY

She was one of the first Spanish women to obtain a medical diploma from the University of Valladolid (1895), and the first to obtain a doctorate in ophthalmology (1896), earning an A for her thesis on the internal muscles of the eye. Born into a privileged family of industrialists in Palencia, she lived like her fellow women at a time when women did not have access to higher or even secondary education. Her father would go out of his way at every stage to get the necessary waivers so that she could continue her studies, including at the University of Valladolid. Refused by its rector, she would exceptionally obtain authorisation to continue her course, but 'subject to an examination in September of the following year'. Translation? Women – these fickle and fragile beings! – had to prove their academic assiduity. That was the 'uphill battle' of Spain's first female ophthalmologist. Trinidad practised in Palencia, León and then in Mexico where she lived until her death.



HISTORY

PAUL CHIBRET, THE INTERNATIONAL MAN

In 1875, Paul Chibret (1844-1911) was 30 years old. He decided to leave the army and become an ophthalmologist in the capital of his ancestral region of Clermont-Ferrand, in Auvergne, France. Until then he knew Nevers, where he was born; Chaumont, where his father worked; Strasbourg, a city bordering Germany, where he studied medicine; Algeria, where he had his first assignment as a military doctor; and finally Paris, where European ophthalmology masters based in France would treat his sick eyes, spark his vocation as an oculist and, no doubt, also arouse his appetite for international exchanges. Suffering from irido-choroiditis in 1871, two foreigners saved the sight of the future founder of the French Society of Ophthalmology (SFO).

The first was a Pole born in Lipowiec: Xavier Galezowski. His ophthalmology clinic on Rue Dauphine in Paris was the rallying point for all doctors from Poland, Lithuania, the Urals, Moscow and St. Petersburg passing through France. This hub would one day enable Paul to undertake a long journey in the countries of Central and Eastern Europe.

The second was born in Frankfurt am Main in Germany. His name was Louis de Wecker. A former private doctor to Count Stroganoff, he was above all a former student of the illustrious Albrecht von Graefe, father of German ophthalmology, and also the world's first ophthalmology journal* and founder of the DOG**, the German Society of Ophthalmology.

The young Doctor Chibret left the French capital to settle in the centre of France... In the morning, he treated the needy at the Hôtel Dieu in Clermont-Ferrand free of charge, as he once did with nomadic tribes when he was stationed in Algeria. In the afternoon, he returned to his office on Rue de la Croix Morel. The only ophthalmologist in the whole of Massif Central, his appointment book was always full.

But Paul was not only an excellent practitioner. He was actively involved in the knowledge and research effort. He regularly published publications that attracted the attention and esteem of his European colleagues. Staying in touch with the great professors he met in Paris, he regularly wrote to them to share his doubts and scientific discoveries.
It is worth mentioning that in those years when science triumphed, a tight network of congresses, learned societies and academies had been formed, linking an increasing number of specialists across Europe. Ophthalmologists were also the first specialists to organise international meetings around their discipline. It is true that the advent of the railway had changed the game. Only a few years earlier, it took 40 to 50 hours to travel from Clermont to Paris (about 400 km/250 miles). Now, one day was enough; the journey only took about a dozen hours.

Paul therefore became one of those scholarly travellers who travelled across Europe from academies to congresses. The great dislocation of 1914 had yet to happen, and this European elite gave the sense of belonging to the same civilisation. These scientists who came from different countries were linked by a general resemblance. They all came from the same culture shaped from key episodes or shared values: classical Greece, Rome, the Renaissance and the Enlightenment. Above all, they all came together around the notion of moral as well as material progress.

Paul participated in international meetings wherever he could. In 1879, he was in Amsterdam for the International Congress of Medical Sciences, where for the first time the question was to create a French ophthalmology society. Three years later, in 1883, it was none other than Paul who founded this learned society. He insisted that it be open to all nationalities, in particular to his German colleagues, ostracised since France's humiliating defeat to Prussia in 1870. From 1883, Paul Chibret became not only the almost systematic envoy of the French Society of Ophthalmology (SFO) internationally, but also the man of appeasement between France and Germany.
In August 1883, Paul attended the Congress of Medical Sciences in Copenhagen, with

HISTORY

no fewer than 1200 delegates from all over the world, from all over Europe, Russia, North America and the southern hemisphere. Among them, a certain Louis Pasteur gave a memorable address on the general principle of vaccinations against virulent illnesses. Malmö, Stockholm, Motala, Uppsala, Gothenburg, Christiana, Trondheim, Lillehammer, Kirkestuen, Gardermoen, Rodsheim, Kristiansund, Aalesund, Faleide, etc. After this congress, he would embark on a 5 000 km journey in Scandinavia. In 1896, on the occasion of the medical congress in Moscow, he travelled some 10 000 km (i.e. more than 6 000 miles) through Germany, Poland, Georgia, Ukraine and Austria.
It would be a long list of the cities he had visited, and also of the European masters who would become his friends and faithful correspondents for these journeys: J.B. Coppez, Professor at the University of Brussels, founder of the Belgian Society of Ophthalmology; Ferdinand Suarez de Mendoza, Doctor of Medicine at the Faculty of Madrid; Edmund Hansen Grut, first professor of ophthalmology in Denmark; the Greek Photinos Panas, holder of the Paris Chair of Ophthalmology; De Vincentiis or Anttonelli of Naples, Reymond of

↑
Eighth International Ophthalmological Congress, Edinburgh, 1894
© BIU Santé Pharmacie

↖
This medal was the creation of Henri Chibret and Pierre Czapinski, the director of Chibret Germany, the former family-owned company; a man who dedicated his life to Franco-German reconciliation.

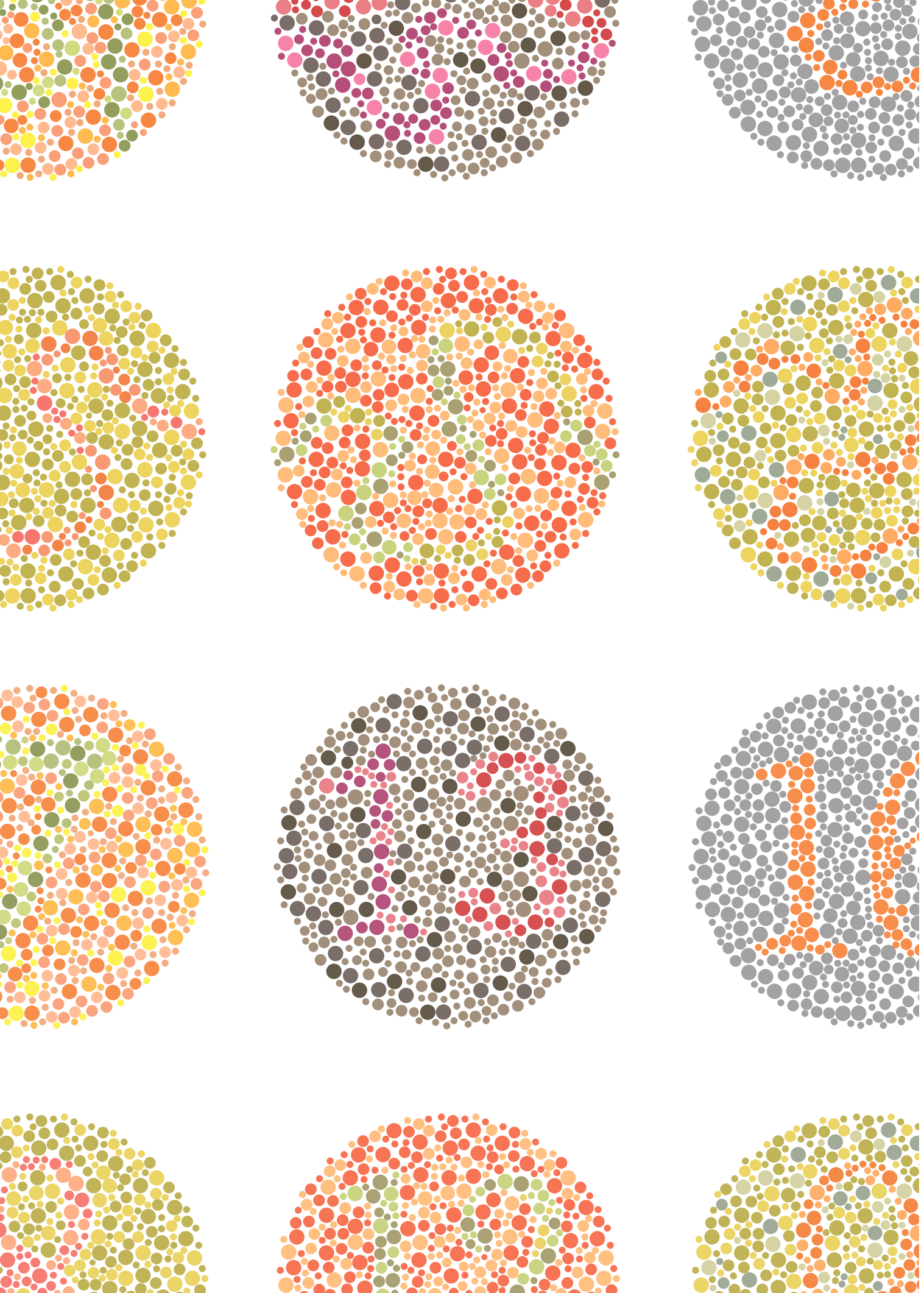
↙
Clermont-Ferrand, Hôtel Dieu

*1854: 'Archiv für Ophthalmologie' in Berlin.

**Die DOG – Deutsche Ophthalmologische Gesellschaft/German Society of Ophthalmology founded in 1857.

Turin, Gama Pinto of the Royal Ophthalmic Institute of Lisbon; Franciscus Cornelis Donders, the greatest Dutch ophthalmologist of his time; Switzerland's Edouard Landolt; Herman Knapp, the first ophthalmologist in New York and founder of the 'New York Ophthalmic and Aural Institute' and the 'Archives of Ophthalmology and Otology'; etc. But, of course, the most striking mutual understanding would remain with his German colleagues. Relentlessly, Paul Chibret would try to reconnect with his colleagues across the Rhine. In the aftermath of France's military debacle of 1871, French and German doctors were separated by a preventative divide. At the meetings, both sides were careful not to attend the same conferences. Paul Chibret, for his part, would pay public tribute to German ophthalmologists in the French specialised press, thanking them for having trained many eye health practitioners in France. He pushed the candidacy of his friend Meyer, originally from Saxony in Germany, and translator into French of the works of the great von Graefe, to become part of the 1st Executive Office of the SFO. In 1884, he travelled to meet his German colleagues in Cologne and Hamburg. In 1888, he was the French envoy of the SFO to the Congress of Heidelberg. In 1890, he attended the International Medical Congress in Berlin where he made a presentation on trachoma; while many of his French colleagues had decided to boycott the event. Finally, in 1897, he crossed the Rhine and visited the hospitals of Frankfurt, before heading for Leipzig, Dresden and other German cities.

As his illustrious German predecessor Albrecht von Graefe did before him, at the time of the Austro-Prussian War (1866), Paul Chibret repeatedly called on the old European nations to stop devouring each other.
In 1974, some sixty years after his death, the French Society of Ophthalmology (SFO) he founded, and the German Society of Ophthalmology (DOG) created by Albrecht von Graefe, decided to award alternately the Paul Chibret Gold Medal, which continues to honour personalities who have distinguished themselves in the field of international ophthalmology.



ARTS & LITERATURE

THE GREAT AND SMALL EYE TROUBLES OF OUR FAMOUS AUTHORS

Joseph Conrad, Charles Darwin, Charles Dickens, René Descartes, Johann Wolfgang von Goethe, Ernest Hemingway, Edgar Allen Poe and Mark Twain all had several things in common. As well as being authors, they were also... Daltonians!

Daltonism? It was the English physicist John Dalton, himself suffering from this visual abnormality, that gave it his name in the 18th century. Hereditary in the vast majority of cases, and mainly affecting men, this disorder (also known as colour-blindness) is characterised by a lack of colour perception, or an inability to differentiate between certain shades or colours. A person with red-green Daltonism (the most common type) may see reds as browns or greenish shades, yellows as whites or light greys, and greens as blacks or dark greys. Both Descartes and Goethe said they rely on touch to 'feel the colours.'
As yet, there is no treatment for Daltonism, although there are some ways to improve colour perception, such as wearing glasses or contact lenses made up of filters that alter the vision of certain colours and improve contrasts. Daltonism is considered a disorder and not a disease. It does not prevent people from living normally, even if certain professions requiring perfect vision will be inaccessible to Daltonians. Therefore, none of the illustrious literary authors mentioned above could have aspired to the career of airline pilot, air traffic controller or mine clearer.
Let us mention the most famous strabismus in literature, in the person of Jean-Paul Sartre. In the aftermath of the Second World War, he was the father of Existentialism, summed up by the famous formula: 'existence precedes essence' and which states that every individual emerges into the world initially without purpose or predefined values.

But let us leave philosophy to discuss the strong 'exotropia' of the right eye that the illustrious author never tried to correct.
What does exotropia mean? Strabismus is classified by taking into account the direction of the gaze, as follows: - 'convergent' (esotropia), the gaze deviates towards the nose. - 'divergent' (exotropia), the gaze deviates outwards. Finally, when the eye is facing up or down, this is called 'vertical' strabismus.

Until the middle of the 18th century, strabismus, which still affects some 3% of the population today, was attributed to obscure and diabolical phenomena.
Its treatment has long remained archaic. For example, in the 7th century, strabismus was addressed by wearing a totally opaque mask, leaving only two central orifices, located in front of each pupil.
Real progress in this area would occur around 1750 with the appearance of the first treatment

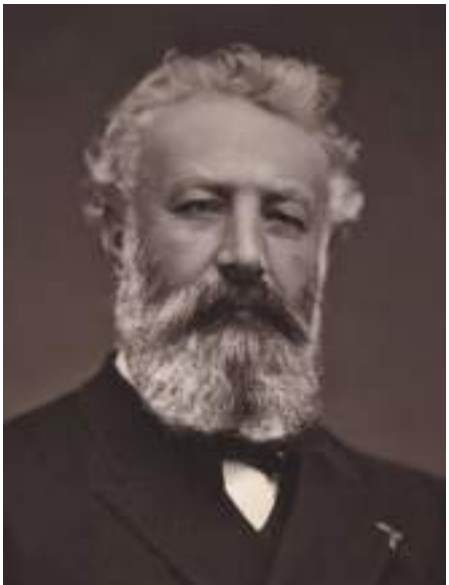
↖ Jean-Paul Sartre
↑ James Joyce

↑ Ernest Hemingway
↗ Helen Keller

for amblyopia, and from 1840 with the first surgery for strabismus; two steps that would inexorably lead to our modern-day management of strabismus with its various treatments: glasses, rehabilitation of amblyopia and surgical intervention in more severe cases.

We could then go on to talk about the cataract of Jules Verne, father of science fiction, Phileas Fogg, Michel Strogoff and Captain Nemo. But we prefer to dwell on one of the unluckiest authors in terms of visual health: the **Irishman James Joyce**. Considered one of the most influential authors of the 20th century, he penned masterpieces such as 'Ulysses' or 'A Portrait of the Artist as a Young Man'. He suffered from severe eye problems for most of his adult life. Glaucoma, cataract, iritis, ocular synechia...
Joyce underwent more than a dozen eye operations. '*So far, my eyesight is practically no better and it depresses me a lot*,' he would one day confide to his friend and patron Harriet Shaw Weaver. Since then, many literary critics have argued that if this author is difficult to read, especially if his punctuation is haphazard, confusing or sometimes non-existent, it is mainly due to the diminished visual acuity of the famous Irishman.

Jules Verne ↓



A final mention for the young deaf and blind

American woman **Helen Keller**, who would learn the alphabet with her hands thanks to the patience of her tutor, determined to pull this child out of her world of darkness and silence. Helen began her career as an author with the publication in 1903 of her autobiography 'The Story of My Life', translated into 50 languages. She then became one of the global ambassadors for the cause of people with disabilities. Since 1959, the Spirit of Helen Keller Award has recognised an individual or institution's outstanding contributions to reducing blindness worldwide. Ban Ki-moon, Secretary-General of the United Nations, Bill and Melinda Gates, co-chairs of the Bill and Melinda Gates Foundation and His Majesty King Mohammed VI, Kingdom of Morocco were honoured, as was a certain Henri Chibret, founder of Théa Laboratories.

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