

13 | 14

ACTIVITY REPORT



DigestScience

Digestive tract diseases and nutrition
research Foundation

Founders





Medicine is still helpless against digestive diseases, and there is an unmet therapeutic need for full treatment and effective prevention.

DigestScience is the first public purpose foundation in France entirely dedicated to these diseases.

2

For over a decade, the foundation has been working toward raising funds for research development, providing patient support, training care providers, and raising awareness and recognition of these incapacitating, chronic and too often tabooed diseases.

Over these 10 years, there has been some progress, both in research and in the eyes of the general public and of health professionals.

The road is long. Let's carry on!

Prof. Pierre Desreumaux

President

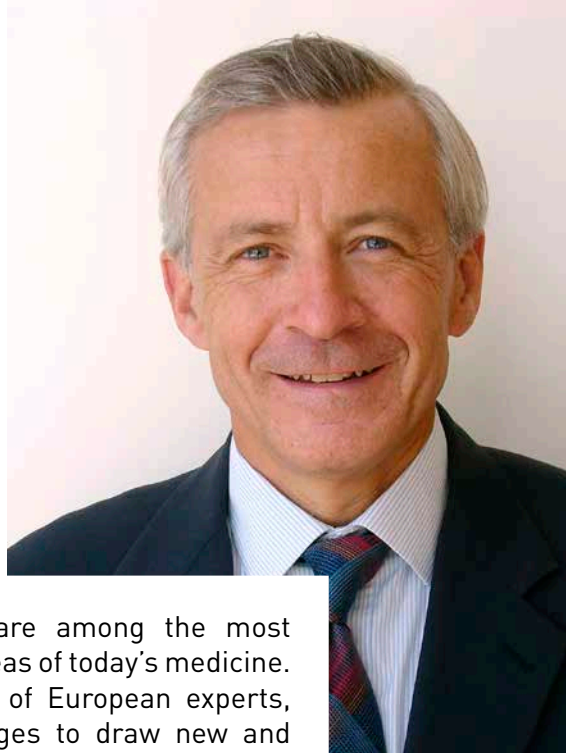
Crohn's Disease

Ulcerative Colitis

Celiac Disease

Irritable bowel syndrome or mucous colitis

Incapacitating, chronic, painful, taboo - digestive diseases currently affect almost one in five French people, often young people. These little-known diseases are a serious public health issue, especially since their occurrence is inexplicably increasing. Most of these diseases are so far incurable. The pains they cause continue throughout life, affecting school, occupational, social, family and love life.



Digestive diseases are among the most complex scientific areas of today's medicine. Guided by a council of European experts, DigestScience manages to draw new and promising lines of research.

Daring, our action is based on innovative and transversal projects, involving scientists, doctors, and members of the food and pharmaceutical industry.

Ambitious, it has successfully mobilized some of the most important funds at the European level, in addition to significant public research investments.

Efficient, it has advanced our understanding of inflammatory digestive diseases and helped identify new research objectives.

The road is long. Let's carry on!

Prof. Jean-Frédéric Colombel

President of the scientific council

200,000

persons suffer from a chronic inflammatory bowel disease (IBD) in France. In 10 % of cases, the disease onset occurs during childhood.

600,000

persons suffer from celiac disease in France.

9,000,000

persons have an irritable bowel syndrome.

Summary

Missions	5
Supports	6
Governance	7
Events	8
Research program	10
Training of care providers	14
Patient support	16
Recognition of the disease	18

The missions of our foundation all aim at improving the management of digestive diseases and the patients' quality of life. They focus on four major areas: promoting and funding research, training care providers, supporting patients and raising awareness of these taboo diseases.

FUNDING RESEARCH



DigestScience supports research programs defined by an international Scientific Council, that may provide direct and quick benefit to the patients.

DigestScience's research strategy is based on ambitious and specific programs that provide selected teams with appropriate means to carry out their investigations. The funds offered by DigestScience are among the most significant at the European level, as far as these diseases are concerned.

Our sole goal: discovering new treatments.

CARE PROVIDERS TRAINING



Chronic digestive diseases such as Crohn's Disease or Ulcerative Colitis (UC) are little known and often tabooed, while they require very specific, long-term care.

In order to address the numerous requests from health care professionals dealing with digestive diseases, DigestScience funds and conducts trainings and clinical workshops to teach care providers how to manage these patients and provide them with the most appropriate care. These trainings are also open to students.

PATIENT SUPPORT



DigestScience has initiated exemplary programs for the therapeutic education of patients with inflammatory bowel diseases (IBDs) in the North of France. Within this framework, dedicated events help patients better comply with and accept their treatment, take charge of their health and remain hopeful.

DIGESTIVE DISEASES EDUCATION AND AWARENESS



Digestive diseases remain little known by the general public. DigestScience has a mission to improve education about and awareness of these conditions, raise funds for research, encourage patients to overstep their fear, renew social links, do or get back to sport, etc.

To do so, several events are organized every year. A nice way to get committed, communicate positively and rise to challenges!

Through catalyzing projects and harnessing energies, DigestScience has brought together numerous supporters, all committed to advancing research and fighting these diseases.

FOUNDERS

■ Professor Pierre Desreumaux

Pierre Desreumaux, the founder and President of DigestScience, is a professor of gastroenterology and Director of an INSERM research unit. He is one of the best world specialist of inflammatory bowel diseases (IBDs) and a tireless driving force behind the development of the foundation and of its research programs.

■ Lesaffre Group

A key leader at a global level, Lesaffre designs, produces and provides solutions for bread-making industries, nutrition, health and protection of living organisms, based on yeasts and other fermentation products. A family group founded in Northern France in 1853, Lesaffre has achieved a turnover of 1.5 billion euros in 2013 and has a total of 7,700 employees, including 1,600 in France. Fully invested in health and nutrition challenges, this group was one of the first funders of DigestScience.

■ Roquette Frères

Roquette, a French family group with a global dimension, processes vegetable raw materials : corn, wheat, potatoes, peas and micro-algae. Roquette is one of the 5 top-ranked processors of starch in the world and provides a wide range of products and solutions in the fields of food, nutrition and health, as well as plant-based chemistry. For more than 80 years, they have been experiencing growth driven by innovation, passion for the job and entrepreneurial spirit. Present in over 100 countries, Roquette achieves a turnover of more than 3.4 billion euros. The company currently has 8,000 employees. Its mission: "Serve men and women by offering the best of nature"

SPONSORS

Artists, athletes, entrepreneurs: many public figures, touched by the foundation's battle, got involved and used their aura and celebrity to promote research.

■ Cédric Vasseur

Former racing cyclist, hailing from Northern France, who has won 2 stages of Tour de France (1997, 2007), ex-president of the international association of professional cyclists (CPA), now a consultant for France Télévisions and BelN Sports regarding international cycling events, Cédric Vasseur shares common values with DigestScience, such as emotion, courage, effort... to advance research, find appropriate treatments and improve the patients' quality of life. A sponsor of the foundation, he is also the captain of its sport team.

■ Nobuko Takahashi

When she was young, world-famous opera singer Nobuko Takahashi hesitated between a singing and a medical career. She is now very happy to offer her art to researchers who work with the DigestScience foundation.

PARTNERS

Research organizations, medias, patients associations: DigestScience develops within a growing network of partners. Our goal: joining forces and harnessing energies.

Lille 2 University of Law and Health - French Association of Gluten Intolerance (AFDIAG) - Association François Apetit (AFA) - INSERM (French national institute of health and medical research) - Lille CHRU - Ministry of Higher Education and Research

PATRONS

Actively raising funds for medical research, DigestScience currently has 124 patrons involved in the development of the foundation.

Abbvie - Activia - AEAC - AFA - AFDIAG - AG2R La Mondiale - Algofit - Amival - Anios - Antaris - ASO - Association des Hautes Voies - Association Transhépatite - Auto école Elsa Permis - Aviesan - Axis Experts Conseils - Banque Populaire Bayer Healthcare - BioCodex - Brin de Folie - Bruker - Bulteau - C du Bien Etre - Calinauto - Carrefour - Cheops Informatique - Christian Delcambre Limited - ChronoDrive - CHRU de Lille - Club 41 - Club Gagnants - Cofidis - Comité départemental de Triathlon - Compagnie fruitière - Cord'Accord - Crédit de Nord - Crédit Mutuel - Danisco - Danone Research - De Fil en Aiguilles - Decathlon - Département du Nord - Domaine du Mont d'Arbois - DSO - Eaux du Nord Ekoi - Espace Naturel Lille Métropole - ETAP - Expertise Galtier - Faculté de Médecine de Lille - Fédération Française de Cyclisme, comité Nord-Pas-de-Calais Cyclisme - Ferring Pharmaceuticals - Fondation Anber - France Bleu - Giuliani G02 - Golf Plus - Grand Lille TV - Grosset Janin - HPM - Ibsium - Imprimerie Pierre Rémy - IMPRT - INSERM - Institut Zen Corinne - Jumping International de Megève Edmond de Rothschild - Just'en famille - KPMG - LBO (Bureau Ovale) Le Royal - Le Triporteur - Les amis de Lille-Hardelot - Les Amis du Paris Roubaix - Ligue Nord-Pas-de-Calais d'Athlétisme - Lions Club - Lyriknroll - Macopharma - Margaux Orange - Maria Goretti - Mercier & Cie - Merck - Métropolis - MICI VIDI VICI - Ministère de l'Enseignement Supérieur et de la Recherche - Mondo Vélo - MSD - Nestlé - Nord Sports - Norgine Office du tourisme de Roubaix - Office intercommunal de tourisme - de Noeux et Environs - Oligosante - Omega Pharma Phaculté de pharmacie de Lille - Pharmacie Chatelain Obert - Pharmacie du Bourg - Pharmacie Gossetin - PHI 62 Pharmacie Humanitaire - Pop Haus - Pro Impec - Question d'idées - Quick - Regine Lucas Optique - Région NPdC - Rex. Rotary - SCP Glorieux et Manchez - Shimano - Show Must Go Home - So Good - Specialized - Stab - Staminic - Steack and Coffee Team Roue d'Or de Guise - Triathlon Club de Liévin - Union Cycliste Internationale - Université Lille 2 - Vifor Pharma - Ville de Lambersart - Ville de Lille - Ville de Roubaix - Vinci Construction - Vinci Park - Wine not - Yves Delorme

Recognized for its public utility, DigestScience established a governance to ensure that medicine, research and the patient's interest are central to decision making. The foundation staff is structured so that a maximum share of donations is allocated to research.

BOARD OF DIRECTORS

The DigestScience foundation is supervised by a Board of Directors including 3 colleges and one government commissioner.

■ Founders

- Prof. Pierre Desreumaux, life member
- Lesaffre Group
- Roquette Frères

■ Qualified experts

- **Jacques Bernard:** Vice-President of the AFA, Representative of the Alliance for Rare Diseases and President of the Rare Disease Service Info.
- **Prof. Antoine Cortot:** Professor in hepato-gastroenterology at Lille University, former head of the Digestive and Nutrition Diseases department. Throughout his career, he has moved between providing care to patients, teaching digestive diseases and conducting research in intestine inflammation. Currently a research consultant for Lille CHRU.
- **Jean Réveillon¹:** A cycling enthusiast, he started his career as a sport journalist for a French newspaper (La Voix du Nord), then became director of France 3 Nord-Pas-de-Calais-Picardie, Sport Director for France 2 and France 3, Managing Director at France 3 and CEO of France 2. He has also been Director of the European Broadcasting Union.
- **Pascal Boulanger¹:** As a man of challenges, Pascal Boulanger is the head of about ten companies with nearly 5,000 employees. President of the Club Gagnants, that includes 90 companies of Northern France, until 2014. He is also the President of the FPI (Federation of real estate promoters) for region North.
- **Dr. Lionel Bueno:** Engineer and Doctor es Sciences, Research Director Emeritus at INRA, former Director of the Neurogastroenterology Unit of INRA, former president of the French National Society of Gastroenterology, ex-President of the Brain-Gut society, ex-President of the International Society of Neurogastroenterology.
- **Prof. Dominique Turck:** Professor of pediatrics at Lille 2 University. Head of the pediatrics, pediatric gastroenterology and medical genetics department at Jeanne de Flandre hospital (Lille CHU). Coordinator of the Nutrition Committee for the French Pediatrics Society. Member of the Dietetic Products, Nutrition and Allergies Panel of the European Food Safety Authority (EFSA), Parma (Italy).

■ Institutional Partners

- Lille University Hospital Center (CHRU)
- Law and Health University of Lille 2
- Inserm

■ The Government Commissioner

The prefect of region Nord-Pas-de-Calais,
Mr. Jean-François Cordet.

1. INTERNATIONAL SCIENTIFIC COMMITTEE

This committee consisting of 6 members assists the Board of Directors regarding the scientific orientations of DigestScience. It includes internationally recognized scientists and clinicians with various areas of expertise.

■ Prof. Jean-Frédéric Colombel

Professor in hepato-gastroenterology, former head of the Digestive and Nutrition Diseases department at Lille CHRU. Current director of the Center for Inflammatory Bowel Diseases, Gastroenterology Department of Icahn School of Medicine at Mount Sinai, New York. Member of the IOIBD (International Organization of Inflammatory Bowel Disease). Scientific advisor for the «Immunology, Microbiology and Inflammatory Bowel Disease» (IMIBD) section of the AGA (American Gastroenterological Association). He has been president of several learned societies, including ECCO (European Crohn's and Colitis Association).

■ Prof. Laurent Beaugerie

Professor of gastroenterology at Saint-Antoine hospital, Pierre et Marie Curie University, Paris 6, vice president of the AFA scientific council, member of the American Gastroenterological Association (AGA), and one of the two national representatives for France in the ECCO.

■ Prof. Julian Panes

Head of the gastroenterology department at Barcelona hospital and professor of medicine at Barcelona university. His research team works on the identification of new molecular targets for the treatment of inflammatory bowel diseases, the development of cell therapies and the implementation of new diagnostic tools, with a particular focus on imagery cross-section.

■ Prof. Giovanni Barbara

Gastroenterologist, leader of a Research Unit at Bologna University (Italy). Particularly active in biomolecular and therapeutic research and the social aspect of functional gastrointestinal disorders.

■ Dr. Simon Travis

Consultant gastroenterologist for the Translational Gastroenterology Unit at John Radcliffe hospital in Oxford and President of ECCO in 2014.

■ Prof. Séverine Vermeire

Professor at Louvain University in Belgium, Séverine Vermeire is an expert of functional genomics in IBD. She will be president of the ECCO in 2015.

¹The official nomination of Jean Réveillon and Pascal Boulanger is subject to approval of the modified articles of association of the foundation by the State Council. They will enter the BOD in 2015.

Raising funds, mobilizing the general public, advancing research, supporting patients, advocating for values of courage, creativity and inventiveness... DigestScience events give companies and general public the opportunity to support the foundation and research in an original, friendly way.

CYCLING NIGHT
APRIL 5, 2013 - APRIL 11, 2014

A new charity event based on health and sport.

3rd edition
 on April 10,
 2015

DigestScience, the Club Gagnants and Cédric Vasseur, sponsor of the foundation, created in 2013 this unique event bringing together, at the opening of the Paris-Roubaix, local authorities, corporate networks, athletes, artists and healthcare providers around public health challenges related to digestive diseases.

This very convivial event includes sporting activities, friendly competitions, intercompany challenges, VIP demos on the STAB speed track (Jean Stablinski cycle stadium, Roubaix, France) and an auction sale of exceptional cycling items in favour of research on digestive diseases and nutrition.

For the first two editions, the Cycling Night managed to raise 25,000 euros for research. Filled to capacity, the event attracted many cycling enthusiasts. With exceptional sponsors, Gilbert Duclos Lassalle and Bernard Hinault!



8

TESTATHLON
OCTOBER 19, 2013 - OCTOBER 18, 2014

In 2015, DigestScience will organize the 10th edition of this rural triathlon, a slightly quirky, "out of the ordinary" event combining running, MTBiking and water racing!

It has become a key sporting event in Northern France and an important funding source for research on digestive diseases.

In addition to the raising of funds, the Testathlon is also

a way to raise awareness and recognition of digestive diseases, to encourage patients to do or get back to sport, to renew social links, to symbolically gather all the actors of the patients' care and lives on the start line, to unite our partners and their teams during a solidarity competition.

Since its creation, the Testathlon managed to raise nearly 90,000€ for research.

The participation rate to this friendly event increases every year. 2,000 persons are expected for the 10th edition.



FUNDRAISING

DigestScience takes part in many events with a charity purpose, in France and Europe, in order to raise funds.



■ **Jumping International in Megeve 2011-2013, Edmond de Rothschild - Charity gala night**
Calogero private show and auction sale.

■ Lyriknroll

For 3 years, DigestScience has been the major cause of this festival. The subtle meeting of opera and pop rock music makes it a fascinating show with a both unexpected and virtuoso combination. It draws an average of 1,000 spectators. Next edition on December 7, 2014!

■ Bike challenges

As part of the "Semaine Santé, Agress'ativité" organized by the city of Lambersart on February 10 to 21, 2014, and in partnership with Maria Goretti High School, DigestScience has set up the 1st Digest Action. 4 home trainer bikes were made available to the public with one goal: raising funds for research. 1€ collected for each minute of pedaling! Other similar operations will be launched in schools in 2015.

■ La Longue route des p'tits ambassadeurs

1st edition in July 2014.

1,500 euros collected thanks to the 1,000 km cycled from July 8 to 23 by 3 youngsters aged 16, wearing the colors of the DigestScience foundation. 2 special sponsors: Thierry Adam (sportscaster of the Tour de France, France TV) and Jean Réveillon (former CEO of France 2) have supported this slightly crazy project to cycle from Cassel in the North of France to Embrun in Hautes Alpes (South of France)! Two weeks of cycling challenge for one commitment: healthy youngsters supporting sick youngsters.

The adventure continues in 2015. New youngsters will have the opportunity to participate in this amazing charity adventure. A selection panel will include the sponsors, the 3 *young ambassadors* of the 2014 edition, Cédric Vasseur, and the president and the director of the foundation.

■ Golf competitions

As part of a partnership with Golf Plus, 3 competitions have been organized in 2013 at Mérignies, Bondues and Le Sart golf courses. Through extra green fees, the proceeds from the exceptional products auction sale and a tombola, 9,000€ have been collected for research.

SCIENTIFIC WORKSHOPS AND CONFERENCES

Since 2012, DigestScience has been involved in 4 major events gathering over 300 international scientists around the most promising research topics in the area of digestive diseases.

■ February 17, 2014

Workshop: "Human exposure to aluminium and the consequences for human health" by Prof. Christopher Exley

Prof. Exley is one of the best specialists in the effects of aluminium exposure on health. His conference provided an opportunity to thoroughly discuss aluminium, designated by several experimental studies as a potential environmental risk factor promoting intestinal inflammation.

■ September 26, 2013

Workshop in Lille "IBDs and the Environment"

An event entirely dedicated to the progress in epidemiological knowledge about inflammatory bowel diseases (IBDs) and the use of EPIMAD, the world's largest prospective study on IBDs, with which the foundation is a partner.

■ February 16, 2013

Workshop "Intestinal Fibrosis: Mechanisms, imaging modalities and therapeutic perspectives"

A scientific workshop organized as part of the ECCO International Congress in Copenhagen, and dedicated to intestinal fibrosis, a common complication of Crohn's disease and ulcerative colitis, and a major challenge for the development of new treatments.

■ December 29, 2012

Workshop: "Lymphatic system and associated adipose tissue in the pathogenesis of inflammatory bowel disease"

This second edition led to the identification of new therapeutic strategies related to the role of the lymphatic system in Crohn's disease onset.

Call for projects - Intestinal Fibrosis

The DigestScience foundation and the European organization ECCO joined forces to launch an exceptional call for proposal worth 100,000€ in order to promote an innovative, translational and clinical research project on "Intestinal Fibrosis".

Among the 16 applications submitted, a panel of experts has selected the project "Gut microbiome induced intestinal fibrosis" of Florian Rieder who works in Pr Claudio's laboratory in Cleveland (US). This award was officially presented to the candidate on February 22, 2014, during the 9th edition of the ECCO congress in Copenhagen, Denmark.

Founded by scientists and clinicians, DigestScience aims at guiding and financing clinical, fundamental or translational research. It prioritizes innovative projects that benefit from encouraging preliminary results and could lead to the improvement of diagnosis, treatments and prevention within 5 years. Acting as a starter, DigestScience favors projects that could raise bridging funds in addition to those initiated by the foundation. Its research program is among the most significant at the european level, as far as Crohn's disease, ulcerative colitis, gluten intolerance (celiac disease) and irritable bowel syndrome are concerned.

Overall budget
invested since the
foundation was
launched:
**2 millions
d'euros**



MICROBIOME AND INTESTINAL FIBROSIS

100,000€
investment
over 2 years

Intestinal fibrosis (fibrous bowel, formation of scar tissue) is a common complication of IBDs. This progression into fibrosis must be closely monitored as it may cause bowel obstructions and necessitate surgery, thus significantly affecting the patients' quality of life.

The formation of scar tissue specific to fibrosis is caused by an immune and inflammatory reaction to gut bacteria that are harmless in non-IBD patients.

So far, it is not known how bacteria can affect the onset of complications such as scar tissue development. The objective of this research program is to demonstrate that mesenchymal cells, the main cause of scar tissue formation in the intestine, not only carry receptors for bacteria detection, but also respond to part of or all bacteria by causing fibrosis.

With this first grant, the Cleveland winning team will also endeavor to understand precisely how mesenchymal cells detect bacteria, how they respond to their presence, and the mechanisms leading to the development of fibrosis in the intestine.

This program paves the way to new therapeutic options, which, through action on our gut bacteria, will be able to control or treat fibrosis development.

BACTERIOPHAGES AND INTESTINAL FLORA

500,000€
investment
over 2 years

Launched in October 2010 with a 500,000€ budget, this program brings together the skills of an international team whose original project has received much support from the scientific community.

scientific community.

Bacteriophages and their use in antibacterial treatment were discovered over a century ago. They were quickly “replaced” by antibiotics, but their interest resurfaces due to increasing antibiotic resistance, and to their very targeted mode of action that keeps the balance of intestinal flora.

With this initiative, DigestScience is supporting a major project for the understanding and the role of bacteriophages in the intestinal flora.

This work is conducted by 3 internationally recognized teams under the leadership of Laurent Debarbieux from the Institut Pasteur (Paris).

STEM CELLS: A MAJOR HOPE FOR THE CURE OF CROHN'S DISEASE

600,000€
investment
over 2 years

Resulting from the foundation's first call for projects, this European research program focuses on cell therapy in Crohn's disease.

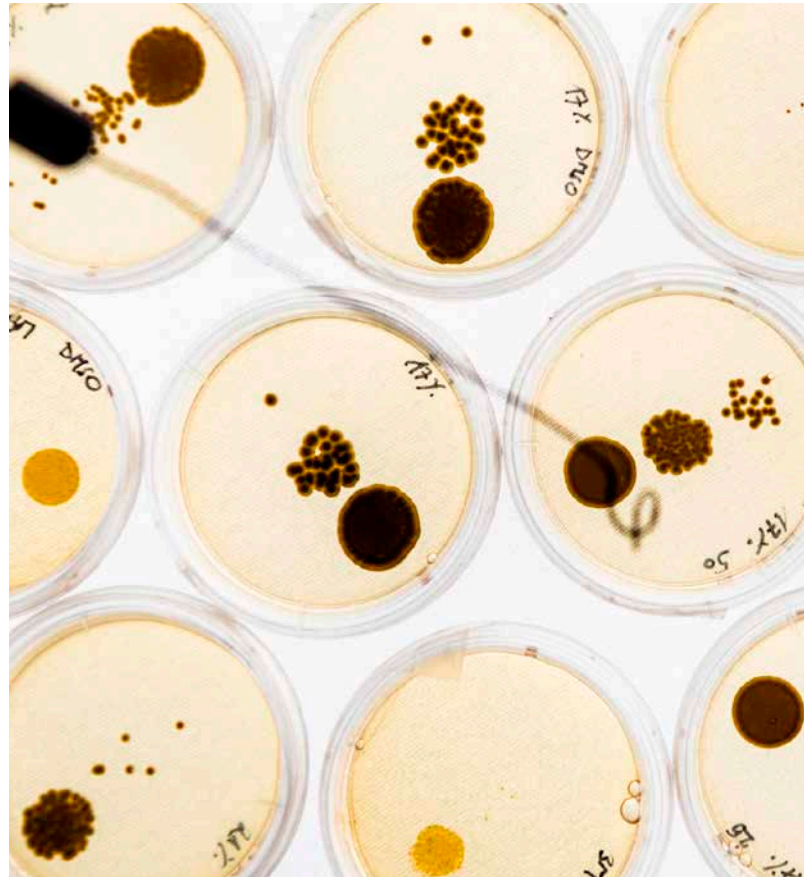
This program provides a brand new approach of Crohn's disease treatment, based on stem cells. It marks a break with current therapeutic approaches (monoclonal antibodies, molecules) and gives great hope for a cure.

The winner team of this call for projects is led by Professor D. W. Hommes and associate Professor Hein W. Verspaget, Center of medical research, Leiden University in Netherlands.

Their research works focus on the use of mesenchymal stem/stromal cells (MSCs) for the treatment of IBDs. They are known for their healing effect on human tissues and their ability to inhibit immune responses and inflammatory phenomena.

In humans, these cells could reduce, or even suppress, the inflammatory immune response observed in Crohn's disease and ulcerative colitis, allowing the affected mucosa to heal.

The main objective of this work is to prepare large-scale clinical trials and update the mechanisms of action of MSCs on intestinal inflammation, to pave the way for new treatments. These research works may also benefit to patients with other autoimmune diseases.



DigestScience led to the development of two new therapeutic strategies by highlighting the proof of concept of cell therapy use in Crohn's disease and of a natural treatment targeted towards gut bacteria.

EPIMAD - EPIDEMIOLOGY OF IBDs

World's largest registry in the general population.

Based on a comprehensive census of cases, this work, under the leadership of Dr. Corinne Gower Rousseaux, participates in the identification of aetiologic leads through better understanding of the epidemiology of cases.

Thanks to its partners, including DigestScience, EPI-MAD tracks IBD changes over time and space, studies their natural history, identifies and monitors cohorts (specific subsets of population: children, elderly people,...).

It revealed a burst in Crohn's disease frequency in young people over the last 20 years.

The study of family forms, twins and conjugal forms allows work on genetic profiles, metagenomic profiles of gut microbiota, serological profiles, etc.



12

MICROCELL

Microparticles (MPs) are small vesicles released during cell activation or apoptosis. They participate in coagulation, inflammation, and vascular anomalies in a number of diseases.

The Microcell program, co-funded by DigestScience, has successfully isolated and characterized the harmful role of circulating MPs in Crohn's disease patients. Their effects on the endothelial functions and vascular reactivity have been studied in mice. These MPs may participate in the pathophysiology of these diseases by promoting the growth of vascularization-dependent intestinal lesions.



ALUMINIUM AND INTESTINAL INFLAMMATION

Aluminium is the main metal accumulated in our environment. Works partially financed by DigestScience demonstrate that it could be a new risk factor promoting Crohn's disease and ulcerative colitis.

A first scientific study conducted in animals by Dr Guillaume Pineton de Chambrun at the laboratory "Inserm U995 Inflammatory digestive diseases: pathophysiology and development of therapeutic targets" shows that daily exposure to aluminium, at concentrations frequently found in the environment of industrialized countries, increases the intensity and the duration of intestinal inflammation in mice. It involves multiple mechanisms. Aluminium increases the inflammatory response, weakens the digestive tract, making it more susceptible to bacteria, and prevents healing.

New epidemiologic and environmental studies are currently being performed to determine the influence of aluminium exposure in IBD patients.

BACTERIA TRANSMISSION IN CROHN'S DISEASE

There is clear evidence that the microbiota (intestinal flora) play a critical part in the development of IBDs. Based on samples from families with several cases of Crohn's disease, this program aims at emphasizing and characterizing bacteria specifically associated with this condition, and identifying at-risk subjects (non-diseased) who carry this microbial species to consider providing them with a preventive treatment.

This study will also follow for the first time the mode of transmission of microbial species over time in a family.

DEVELOPMENT OF A PARASITIC ENZYME AS A NEW THERAPEUTIC TOOL FOR IBDS

Many studies conducted by the team of the project coordinator (Prof. Monique Capron) have identified a molecule certainly recognized as one of the best researched enzyme molecules in schistosomes, now referred to as P28GST. Preliminary studies have showed that this molecule, combining immuno-regulatory properties and a detoxifying power on free radicals, may be one of the major factors involved in the reduction of intestinal inflammation. Moreover, this molecule has been successfully produced in a recombinant form and its safety and immunogenicity have been tested in 5 phases of clinical trials, including in children. This new therapeutic tool is potentially very interesting for controlling inflammatory diseases such as IBDS.

DigestScience contributes to bringing this molecule from a fundamental research stage to clinical studies on IBDS, and most particularly on pediatric Crohn's disease.



DigestScience was one of the few players paying attention to our scientific approach, and the only one to provide the means to bring it to successful end in order to obtain significant results.

For over a year now, our team has been working on a new therapeutic approach thanks to the foundation's funding.

Florian Rieder

Gastroenterology and hepatology department,
Digestive Disease Institute,
The Cleveland Clinic,
Cleveland, OH, USA

Biopathology department,
Digestive Disease Institute,
The Cleveland Clinic,
Cleveland, OH, USA



The DigestScience foundation battles against a group of little known digestive diseases, for which medicine is so far powerless, in scientific, diagnostic and therapeutic terms. The foundation provides expertise programs and trainings for care providers (doctors, nurses, physiotherapists, dietitians,...) to improve the quality of patient care.

MULTIDISCIPLINARY CONSULTATIONS

Management of ulcerative colitis or Crohn's disease patients is very specific and requires a personalized approach for every patient depending on their age, the lesions they have, their lifestyle, their response to treatments, ...

Therapeutic strategies for these diseases have evolved significantly, regarding both the treatments available and their regimen. Multiple new treatments are currently being tested, including molecules targeting intestinal immunity.

DigestScience regularly gathers top international experts of digestive diseases, and invite all health professionals to share their questions, clinical cases and therapeutic choices. Our specialists provide them with the latest scientific findings and access, when relevant, to new therapeutic molecules: a real progress in patient management.

These consultations provide practical answers to the sometimes challenging situations experienced by health care professionals with their IBD or celiac disease patients.

Every year, DigestScience organizes 15 multidisciplinary consultations, providing solutions to nearly 250 patients!



NUTRITION AND AGEING SEMINAR

The founders of DigestScience are convinced that nutrition may open up new preventive therapeutic horizons and should be taken into account to a greater extent by health professionals.

The foundation is involved in the development of a new "Nutrition and Ageing" module allowing students from various fields (biology, medicine, pharmacy, etc) to approach the basics of nutrition for ageing population, homeostasis, food behaviour, nutrition: from inflammation to ageing, with a focus on bones, muscles, cognitive decline, retina, etc.

This innovative seminar is organized as part of the Master of Ageing Biology taught in Paris 5, Paris 7, Versailles, Toulouse and Lille 2 Universities.

November 18-21, 2013 and November 3-6, 2014.



DigestScience consultations are precious opportunities to discuss with leading experts to solve the complex problems caused by Crohn's disease, to stay up to date with research developments and to help my patients better manage on a daily basis.

TRAININGS

DigestScience develops an annual training cycle intended for health professionals. This course explores many specific topics, selected to improve patient care.

2012/2014 program:

- Review of biotherapies
- Announcing the BID diagnosis
- New clinical results in mild to moderate UC
- Imaging of IBDs
- Gut microbiota
- New developments and outlooks regarding the 5 aminosalicylates
- New treatments for the irritable bowel syndrome
- Nutritional deficiencies in IBDs
- IBD News
- Budesonide: Focus on its use
- Dermatological side effects of TNF antagonists
- Full Proctocolectomy: Surgical techniques
- Management of Terminal Ileitis
- Infections complications in immunosuppressive treatments and how to manage them
- IBD treatment in pregnant women
- IRM and IBD
- Living with IBD



Management of these chronic digestive conditions is the role of both patients and care providers. Together with François Aupetit Association (AFA) for IBDs and the French Association of Gluten Intolerance (AFDIAG) for celiac disease, DigestScience is active in numerous areas such as therapeutic education, patient information and patient support.



THERAPEUTIC EDUCATION

Through private partnerships, DigestScience has set up a completely innovative therapeutic program for IBD patients (ETP), started in late 2008 at Lille CHRU. This genuine human adventure has quickly become a resounding success. Over 800 patients have been followed-up in order to acquire adequate know-how to find a balance between their life and optimal control of their disease.

The objective is to help every patient understand their disease (how the digestive tract works, how their disease progresses, etc.), organize their everyday life, improve their quality of life (work, sport, fatigue, stress, sexuality, etc.), and benefit from the different types of care and treatments (therapeutic compliance, adverse effects, surgery, etc.).

Collective workshops for therapeutic education are organized. They are conducted by an ETP certified nurses and a psychologist, in the presence of a volunteer expert patient representing François Aupetit Association Depending on the topics covered, a dietician, stoma therapist, social assistant, gastroenterologist... may join in.

The themes of the workshop are selected according to the most frequent problems experienced by the patients:

- My disease, how do I talk about it?
- My treatment, how do I get my bearings?
- My nutrition, how to manage it?

PATIENT INFORMATION

Through workshops and conferences, with topics ranging from dietetics in real life for gluten intolerant people to managing the growth of children with IBD, DigestScience is involved in providing the patients and their families with many opportunities to be informed, share and testify.

DigestScience also participates in the development of information tools for the general public and the patients: disease and treatments information sheets, IBD patient diary...

SPORT, A VEHICLE FOR OPENNESS, EXCHANGE AND SOLIDARITY



The DigestScience Team and the public sporting events organized by the foundation create opportunities to encourage the patients to resume, start or develop sports activities, whatever their level. Our goal: creating bonds, promoting exchanges between researchers, care providers and patients and sharing values of hope and courage, very helpful to successful therapy outcomes.



Now, I take part in all events organized by the foundation: I meet with a genuine community sharing positive values. I feel less isolated and discussing with researchers helps me keep hope.

Caroline Kossarov

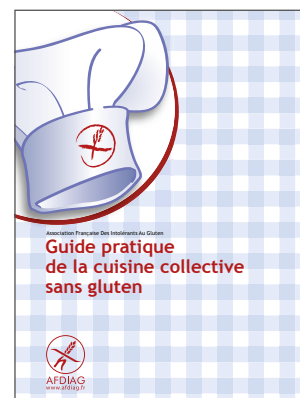
17

EATING “GLUTEN-FREE” MEALS IN CATERING SERVICES

DigestScience takes part in an information and awareness campaign conducted by the French Association of Gluten Intolerance (AFDIAG) aimed at caterers.

These highly instructive documents, a guide and a poster, address many key issues of how to adapt catering food to patients' restrictions:

- Foods allowed/to check/to avoid
- Substitute ingredients
- How to read the labels
- Best practice to avoid contamination in the kitchen...



Besides its medical and scientific mission, DigestScience organizes several sporting and cultural events to raise funds, but also to improve awareness and recognition of these diseases that are insufficiently talked about. DigestScience chose sport and art as vectors of their action and image to the general public: a way of transposing the courage, audacity and taste for effort characterizing our teams. Each event is self-financed with the support from sponsors and participants: profits are donated in full to research.

DIGESTSCIENCE TEAM: FLYING THE COLORS OF THE FOUNDATION



18

DigestScience is the only research foundation to have set up a cycling team. It now gathers over 300 athletes committed to fly the colors of the foundation. Based on values such as courage, effort, self-surpassing, eagerness to win, the DigestScience Team is a very positive way to communicate with the general public, using sport as a common language: a nice way to get involved, rise to challenges, bring renewed hope...

The DigestScience Team action results in good media coverage of the foundation and raised awareness of digestive diseases by the general public.

Open to everyone, the DigestScience Team gathers experienced athletes, but also amateurs of any age and many persons suffering from digestive diseases.

■ Major Events 2012/2014

Paris Roubaix Challenge - Marathon des Sables
Étapes du Tour - Time Megève - Tour du Leman
La Laurent Desbiens Chti Bike Tour - Lille-Hardelot - L'Ardéchoise - 24 h du Mans Vélo
La Voga Longa - Levallois-Honfleur - Testathlon Roc d'Azur...

The DigestScience Team

Mentioned in over 70 press articles

Represented in a hundred cycling events

Over 330 members

Awareness and recognition of the disease

OTHER EVENTS

The events developed by DigestScience are primarily designed to raise funds for research. But they also showcase digestive diseases that are still little known by the general public.

■ Testathlon



The Testathlon, a rural family triathlon that went from 250 to 1,700 participants in 2013, gets extensive press coverage every year. We hope it will soon become a real franchise, that it will expand beyond Lille Métropole and that other editions will flourish across the country.

Particularly popular and federative among the team members of our founders and partners, it is a nice way to bring the focus on our action.

■ Cycling night



In less than two years, this event emerged as a highlight of the Paris-Roubaix. A big charity gala to beat digestive diseases! With much acclaim from the general public and cycling enthusiasts, this media event develops the image and visibility of the foundation, but also those of research programs and digestive diseases.

■ Lyriknroll



Liriknroll, an annual festival combining rock and opera in support of digestive disease research, is an audacious bet bringing together creativity and inventiveness. Led by Philippe Lefranc and sponsored by Nobuko Takahashi, this show provides very good promotion of the foundation. It gives artists the opportunity to commit themselves in support of digestive disease research.



I have been supporting the foundation for a few years now. I find in this team the same passion for challenge and courage that I have experienced throughout my athletic career. I like to think that my commitment with DigestScience will contribute to the discovery of new therapeutic options.

Cédric Vasseur

SAVE THE DATE

■ February 28 - March 4, 2015

The Eleventh Keele Meeting on Aluminium - Lille

An exceptional scientific meeting, co-organized by DigestScience, Lille University and the Birchall Centre (Keele University-UK).

■ April 10, 2015

La nuit du vélo (Cycling night) 3rd edition Roubaix, France

■ October 2015

Testathlon 10th edition Armentières, France

Why a research foundation for digestive diseases and nutrition?

Incapacitating, chronic, painful, taboo - digestive diseases currently affect almost one in five French people. These impossible to prevent, incurable diseases are a real scientific challenge for the medical community.

Initiated by doctors and scientists, the DigestScience foundation was created in order to improve the quality of patients' lives on a daily basis, to finance a new form of research and to strengthen the training of health care professionals.

Our goal: contributing to discovering new treatments.

DigestScience is the first public purpose foundation in France entirely dedicated to research on digestive diseases and nutrition.

