



2012 Annual Report

Department of Allergology and Clinical Immunology

Lyon University Hospital

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1. Introduction

On behalf of our collaborators at the Department of Allergology and Clinical Immunology (DACI) of Lyon University Hospital, we are pleased to share with you our annual report for 2012. Writing this report has provided us with the opportunity to stop, take a deep breath, and to look back and review the accomplishments of our department, faculty and staff over the past year.

The DACI aims to improve patient care, to develop research and to reinforce education in the fields of allergology and clinical immunology, with emphasis on drug allergy, immuno-dermatology and immune-therapy.

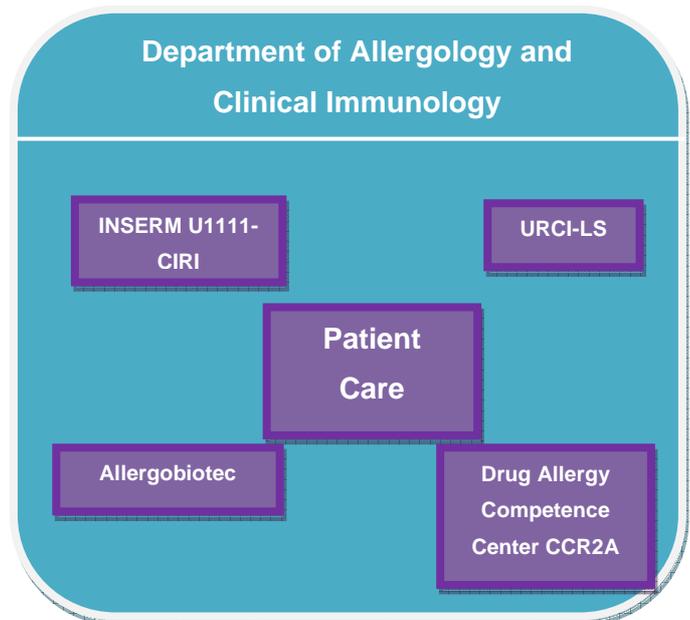
The Patient Care activity began in 1998 as a small unit of Lyon Hospital, which then became a Department in 2009, offering consultations, day-care, short-stay hospitalisations, and functional allergology explorations.

Several structures have been developed in parallel with our Patient Care activity:

- i) an *INSERM team* which focuses its research on the immunology of skin allergies and vaccination (cf. §5);
- ii) a *clinical research unit* (URCI-LS) that coordinates clinical trials for inflammatory diseases and vaccinology (cf. §6);
- iii) the *Allergobiotec* collects and stores patient samples to be used in academic or industrial studies (cf. §7);
- iv) the *Inter-Regional Competence Centre for Drug Allergies* (CCR2A) for severe drug reactions (cf. §8);
- v) the *Patient Education Program* provides patients with tools to help them in the daily management of their disease and to encourage their autonomy (cf. §11.5).

Our Department's research focuses on inflammatory skin diseases, particularly eczemas and drug allergies. Our aim is to understand the mechanisms underlying the induction of skin immune responses, and the expression of these responses in order to improve the diagnosis, prevention and treatment of these pathologies.

The immunology and allergology training is aimed at medical students during their specialist training (Master in Medical Immunology), residents (DESC Allergology and Clinical Immunology), and physicians (continuing medical development). A major effort is directed towards the dissemination of basic immunological knowledge to promote a better understanding of allergic diseases.



Pr NICOLAS Jean-François



Pr BERARD Frédéric

2. Mission Statement

Our mission is the improvement of patient care in the main chronic, inflammatory skin diseases and in drug allergies.

The top priorities of the DACI, in close collaboration with other Departments of the Lyon Hospital and Institutes of the region are:

- to offer high quality, individualised patient care;
- to undertake clinical and pathophysiological research to contribute to improving patient care;
- to provide a high level of teaching and training ;
- to broaden our knowledge of the cutaneous immune system;
- to increase our expertise in allergology and the clinical immunology of skin diseases.

3. Team presentation

Department of Allergology and Clinical Immunology

INSERM

Scientists/Researchers
Study Engineers, Study
Engineer Assistants,
Technicians
Students

Allergobiotec

Scientist
Study Engineer Assisants

Patient Care

M.D.
Clinical Associate
Residents
Medical temps
Nurses
Health auxiliaries
Hospital auxiliaries
Assistants

URCI-LS

Clinical Investigators (M.D.)
Clinical Research Associates
Assistant

CCR2A

M.D.
Nurses



**Fundamental and
Allergobiotech teams
Inserm U1111-CIRI, Team 14**



**Clinical team
Patient care, clinical
research and drug
allergy teams**

4. Patient care activity

Allergology and Immunology Clinical Unit, Lyon Sud Hospital

The Patient Care Service, under the title of “Allergology and Clinical Immunology” is located in building 1K, Pavillon Giraud. It is a centre of expertise that offers both out-patient and in-patient medical care for complex drug or food allergies and inflammatory skin diseases. An important aspect of our activity consists of performing and improving desensitisation / tolerance induction protocols.

The clinical unit was structured on four main actions:

1. The creation in **1999** of a “**drug allergy**” unit in the pneumology department of Lyon University Hospital for consultations, day-care and short-stay care. This unit became, over the years, an important regional and national centre known for its expertise in drug allergy;
2. The creation in **2000** of the **National DESC** (Complementary Specialised Diploma) « **Allergology and Clinical Immunology** »;
3. The creation in **2004** of an Allergology Coordination activity in Lyon University Hospital, bringing together private and hospital physicians, to validate good medical practices in our area;
4. The creation in **2009** of the Department of Allergology and Clinical Immunology. This clinical unit collaborates closely with two other entities: URCl-LS for clinical research, and Inserm U1111-CIRI for fundamental and pathophysiological research. Our department has developed a special focus on drug allergies, food allergies, skin inflammation, and desensitisation protocols (for example, for life-threatening, drug-induced anaphylaxis).

The collaboration between the Patient Care unit, the clinical research unit and Inserm U1111-CIRI allows us to maintain high quality standards in the clinical management of our patients. Thus, patients followed in the Patient Care unit can be included in clinical trial protocols. In addition, patients presenting an adverse event during a clinical trial can be treated and cared for in the Patient Care unit.

Our department staff is composed of:

Medical staff:

- 2 MDs
- 1 clinical associate
- 2 residents
- 17 part-time MDs (17 x 0.5 day, each week) 8 of whom receive support from the hospital, the other 9 are paid through clinical projects.

Non-medical staff:

- 1 head nurse
- 10.25 nurses
- 5.5 health auxiliary
- 2 hospital auxiliary
- 2.5 assistants

Clinical Unit structure; patient distribution

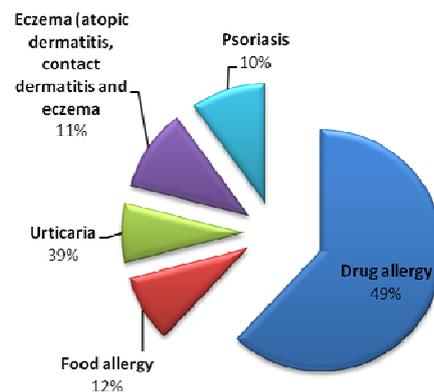
The unit includes a consultation unit, a technical allergology platform for functional tests, a short-stay unit and a day-unit section.

1- Out-patient unit and technical platform

3500 out-patient consultations (UF 36730) and 1500 specialised ambulatory patient care treatments (UF 36431) are carried out each year.

The following scheme shows some of the reasons for the consultations. Clearly, drug allergy is our main activity.

Out-patient Unit



2- Short-stay unit

The **short-stay unit** (10 beds; UF 36501) hosts patients from Monday to Friday. It is under the responsibility of the clinical associate, with the help of two residents (one being a student GP).

The short-stay unit performs immuno-allergological work-ups for patients with a planned hospitalisation. Seven hundred and fifty patients are investigated / treated every year, with a mean stay of 2.5 days as patients are seen from Monday to Wednesday or from Wednesday to Friday.

Work-ups performed on patients include skin tests with immediate or delayed readings, blood sampling, standard biological examinations (hospital laboratories) or specialized (Allergobiotec and Inserm U1111-CIRI), reintroduction and challenge tests, and finally tolerance induction protocols for drugs or food suspected of being involved in allergy reactions.

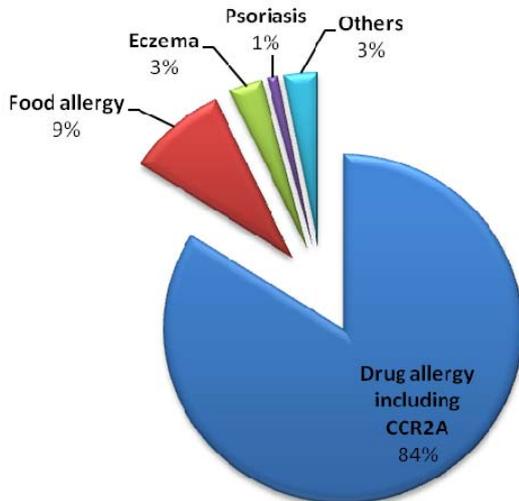
Patients investigated for severe drug allergy are managed by the CCR2A (cf. §8), and require a five-day hospitalisation, because of the potential risk of a severe reaction after cutaneous testing or drug reintroduction.

The following scheme shows some of the reasons why patients might be hospitalised in the short-stay unit. Clearly, drug allergy is our main activity.

5. Experimental research

Inserm U1111-CIRI (Team 14)

Week-day Unit

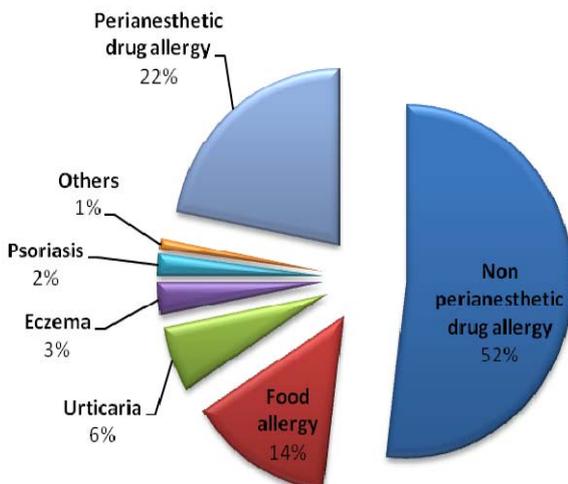


3- In-patient unit: day-care unit.

The **day-care unit** (UF 36408) is made up of 4 beds. Each year, 750 patients are registered. This unit is under the responsibility of the clinical associate with the help of one resident. It is here that patients with per-anesthetic allergy are cared for by allergo-anesthetic physicians. Moreover, it is in the day-care unit that certain treatments are administered in the form of immunobiologicals for the treatment of severe inflammatory dermatosis.

The following scheme shows some of the conditions necessitating day hospitalisation.

Day-care unit



Our fundamental research is performed in the INSERM U1111-CIRI unit, situated in Gerland which forms part of the Biosciences Lyon-Sud/Gerland campus.

Our research focuses on the pathophysiology of inflammatory skin diseases, particularly eczemas (contact and atopic dermatitis) and drug allergies. These pathologies are the consequence of the breakdown of immune tolerance to substances present in the environment that have become allergens to sensitised patients. The allergens of interest include: 1) organic chemicals inducing allergic and/or irritant eczemas upon skin contact; 2) pneumallergens (house dust for example), inducing atopic eczemas; 3) drugs responsible for toxidermia.

Our team analyses the mechanisms by which these allergens promote or circumvent tolerance, inducing allergy or maintaining immune tolerance. For this, we use both pre-clinical models and samples collected from our patients.

Our aim consists of developing new strategies for the re-establishment of skin tolerance to allergens.

Our main results from recent years are:

* CD8+ cytotoxic T cells (CTLs) are the principal effectors of all of these diseases. They are instrumental in the initiation of the immune allergen-specific response. Our current projects aim at understanding the mechanisms of activation of CTLs that might show that these same cells are responsible for pathologies that are different clinically, evolutionarily, and as regards level of severity.

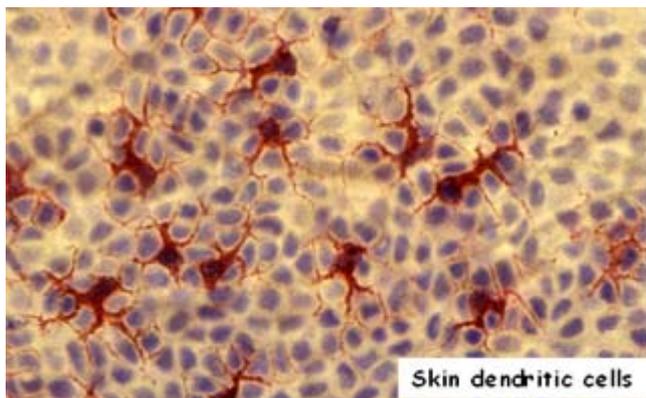
* The CD4+ regulatory T cells (Tregs) control CTLs. They are responsible for tolerance in non-allergic patient in permanent contact with allergens, and they limit the intensity of the disease in allergic patients. A highly suppressive Treg subset actively controls the expansion and activation of effector CTLs in allergic diseases. Our current projects aim at developing techniques for Treg activation *in vivo*, in order to re-establish a skin tolerance to allergens.

In addition, we have developed *in vivo* and *in vitro* methods for the diagnosis of drug allergy and for the prediction of the sensitising properties of chemicals.

Finally, our expertise in skin immunity led to our participation in R&D projects with Lyonbiopôle, the Rhône-Alpes competitiveness cluster, with the aim of developing new approaches for both vaccination and diagnosis using the ID route.

The methodologies we use include:

- pre-clinical models: our lab has a well-established expertise in the use and development of animal experimental models of skin allergic diseases;
- translational medicine: patient samples (blood, skin biopsies, blister fluid) are processed daily. To this end, we collaborate closely with 4four clinical teams in Lyon-Sud Hospital: a) the Allergology and Clinical Immunology Service, b) the Clinical Research Unit URCI-LS; c) the Allergobiotec and d) the Inter-Regional Competence Centre for Drug Allergies;
- cellular immunology; flow cytometry; qPCR-microarrays; immunohistochemistry to characterise skin and cell samples.



Dendritic cells (Langerhans cells) marked with red antibody anti-class II MHC in human epidermis (keratinocytes are coloured in blue).

For more information:

<http://www.ifr128.prd.fr/Nicolas/index.htm>

6. Clinical Research

Clinical Research Unit in Immunology (URCI-LS)

Our clinical research is performed at the [Clinical Immunology Research Unit](#) (URCI-LS, UF 36768) created in 2001, which is situated in the clinical unit in Lyon Sud Hospital. Authorisation to conduct clinical research (N° 22256 MHCS) was obtained on 16th October, 2001.

Our activities are primarily focused on conception, setting up, and coordination of clinical trials (phases I to IV), where we concentrate on: 1) skin pathophysiology projects; 2) study of immune responses induced by vaccination through the skin (intradermal and epicutaneous); 3) innovative treatments for chronic, skin inflammatory diseases (psoriasis, eczema, urticaria), in particular the immunobiologics.

With a team of seven permanent collaborators (investigators, project leaders, clinical research nurses, clinical research associates and quality engineer) and temporary

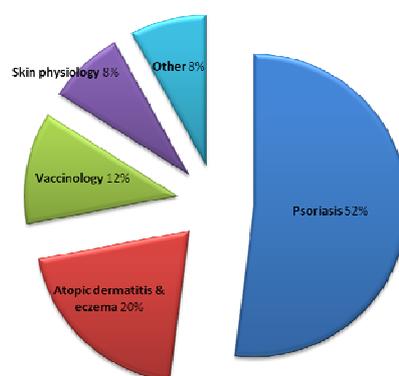
collaborators, URCI-LS offers a high level of reactivity, which has encouraged sponsors to approach us for made-to-measure activities or for global support for their own projects.

Activity statement

1- Project distribution by scientific areas

In 2012, 25 projects were designed, coordinated and/or realised on psoriasis, atopic dermatitis, vaccinology, skin physiology, fibromyalgia and actinic keratoses. Among these 25 projects, 5 were designed and coordinated by us, 17 had industrial sponsors and 8 had institutional sponsors.

The figure below shows the distribution of the types of project per year.

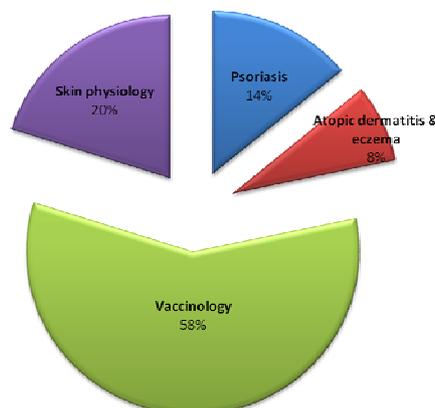


URCI-LS also worked on 9 projects (feasibility studies, synopsis writing...) involving skin inflammatory diseases, vaccinology and cosmetology.

2- Inclusions distribution by clinical topic and patient numbers

In 2012, 313 subjects (patients and healthy volunteers) were included in our clinical unit. Three hundred additional subjects were included at other investigational sites for studies designed and coordinated by us.

The figure below shows the distribution of patients for clinical studies per year. 2012 was clearly mostly devoted to vaccinology studies in healthy volunteers.



The URCI-LS project development

Promotion of clinical research in the Lyon University Hospital is one of our top priorities.

- Research platform of Lyon Sud Hospital

The research committee of Lyon Sud Hospital plans to launch a clinical research platform (PRC) around URCI-LS. The aim of this platform will be to support the conception, realisation and promotion of clinical research projects in all clinical departments, allowing an increase in the numbers of projects and patient inclusions, and a higher level of quality. This platform will be an interface between researchers, clinicians and industry.

- Clinical Research Centre

At mid-term, we have developed a project to coordinate a Clinical Research Center recognised by the Work, Employment and Health Ministry. This centre will have strong links with the regional competitiveness pole referred to as Lyonbiopôle, and the whole scientific, medical and industrial network in our region.

In conclusion, 2012, while increasing the numbers of clinical studies and inclusions, is a watershed year for decisions on the development and the recognition of URCI-LS in Lyon Sud University Hospital.

For more information:

<http://allergo.lyon.inserm.fr/urci/index.htm>

7. Allergobiotec

The Allergobiotec is the functional unit (UF 36853) in charge of collecting skin and blood samples from healthy volunteers participating in vaccination clinical trials and from patients with inflammatory skin diseases (eczema, atopic dermatitis, psoriasis) and drug allergy. These samples are used for research projects, in accordance with the laws of July 29th, 1994, referring to respect for the human body, as well as to the donation and use of parts and products of the human body.

The Allergobiotec collaborates actively with the allergology service, the units involved in the network of the Inter-Regional Competence Centre for Drug Allergies, the Clinical Research Unit URCI-LS, and Inserm U1111-CIRI.

The Allergobiotec is on the site of the Lyon Sud University Hospital where the following activities are undertaken:

- reception and recording of samples on Tumorotek (a software for the management of biological collections);
- packaging of samples;
- storage of samples in liquid nitrogen or at -80°C.

Diseases

- psoriasis
- atopic dermatitis
- drug allergy

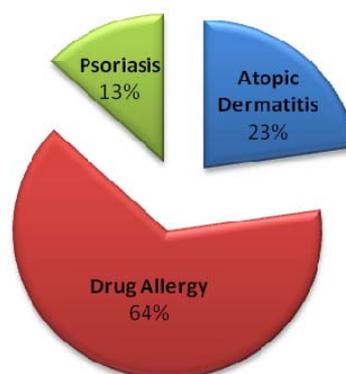
Activity statement

1- Subject inclusion

In 2012, 354 subjects were included in the Allergobiotec Biobank, comprising 1668 PBMCs samples, 786 serum samples and 142 skin biopsy samples.

2- Sample distribution by diseases

The figure below shows the distribution of the samples by pathology, without vaccinology projects.



The table below shows the distribution of healthy volunteer samples included in vaccinology trials.

COLLECTION	Number of patients	Number of sample	Cells	Serum	Saliva
Immunosenescence	720	2153	0	2153	0
*Flu vaccination (18 – 40 year)	80	1950	1150	478	322
*Flu vaccination (60 – 85 year)	80	2048	1232	482	334
Vaccination and immunosenescence	226	2431	1503	928	0
Total	1106	8582	3885	4041	656

3- Participation in clinical trials

In 2012, the Allergobiotec received samples to store from certain clinical trials: 1) psoriasis: 400 samples from 100 patients receiving biologics; 2) atopic dermatitis: samples from 19 patients receiving immunosuppressive treatment; 3) influenza vaccine: samples from 291 healthy volunteers receiving intramuscular or intradermal vaccination.

For more information:

<http://allergo.lyon.inserm.fr/allergobiotec.htm>

8. Competence Centre for Drug Allergies

CCR2A

The [Inter-Regional Competence Centre for Drug Allergies \(CCR2A\)](#) was created in 2009 for the national project "rare diseases". It is co-led by the allergology service of Lyon Sud Hospital and the dermatology service of Clermont-Ferrand Hospital. It is under the responsibility of the National Reference Centre (Henri Mondor Hospital, Créteil).

The CCR2A is a network of clinicians, biologists, scientists and health workers caring for drug allergy patients in the four university hospitals and the seven regional hospital of the south-east of France.

Diseases included

Severe cutaneous adverse reactions to drugs (SCARs)

- 1 - Toxic epidermal necrolysis (Lyell and Stevens-Johnson syndromes)
- 2 - Hypersensitivity syndrome (DRESS)
- 3 - Acute generalized exanthematous pustulosis (AGEP)
- 4 - Fixed drug eruption (FPE)
- 5 - Erythema multiforme major (EM)
- 6 - Linear IgA bullous dermatosis (LAD)
- 7 - Other severe, drug reactions affecting the skin.



Clinical presentation of the seven diseases in the CCR2A competence area

Aims of the CCR2A

The major goals of the network are: 1) to improve diagnosis and care of patients with the most severe forms of drug allergies, such as toxic epidermal necrolysis (TEN) and hypersensitivity syndrome DRESS; 2) to diagnose, follow and treat sequelae; 3) to improve knowledge of these diseases by development of clinical and scientific programmes.

CCR2A team

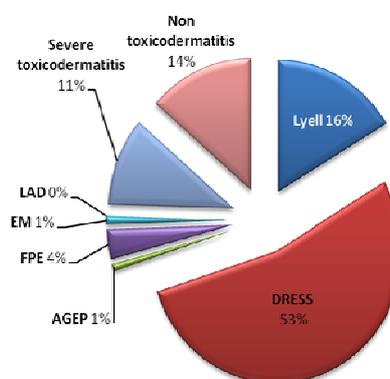
The CCR2A includes all the actors involved in patient care in the CHU and CHR of Saint-Etienne, Grenoble, Clermont-Ferrand and Lyon. The list of services, physicians and medical staff involved in the CCR2A is available on the web site ([see link below](#)).

Activity statement

In 2012, the CCR2A network cared for 149 patients, saw 102 patients in the acute phase of the disease, and performed 66 immuno-allergological work-ups plus follow-ups.

Patient distribution by disease

The figure below shows the patient distribution seen in the acute phase according to disease type. DRESS and toxic epidermal necrolysis (Lyell and Stevens-Johnson syndromes) are the pathologies most often observed by the CCR2A. The severity of these pathologies is highlighted by the fatal outcome for nine of our patients.



For more information:

<http://allergo.lyon.inserm.fr/ccr2a.htm>

9. Teaching

Teaching represents a huge investment by university professors, researchers and physicians of the **DACI**, and is available to medical students, residents and doctors.

<http://allergo.lyon.inserm.fr/enseignement.htm>

Teaching during medical studies.

The **DACI** teachers are responsible for certain courses, and are involved in several others.

Responsibility for teaching:

- immunology to 3rd and 4th year medical students;
- immune mechanisms of diseases in the 4th year of medicine;
- Master's 1 « Immunology and immune mechanisms »;
- DESC « Allergology and clinical immunology ». This two-year course is for residents, allowing them to specialise in allergology and/or organ immunopathology.

Post-graduate teaching

- The DIUFRAL is a inter-university, French-language diploma in allergology, and is aimed at clinicians from Indian Ocean countries, and sub-Saharan Africa who wish to acquire expertise in allergy. It is organised by Lyon 1 and Paul Sabatier (Toulouse) University.
<http://allergo.lyon.inserm.fr/DIUFRAL.htm>
- The staff of the **DACI** are involved in many post-graduate courses organised by HCL, the University or INSERM.

10. Continuing Medical Education

The teaching courses are numerous and are aimed at both clinicians and health workers from public and private

sectors, as well as scientists, patient groups, patients and the general public.

- Annual seminars AllergoLyon

Every year, a two- or three-day seminar is organised with different themes: day 1: immunodermatology; day 2: drug allergy; day 3: focus on an inflammatory skin disease, eg. urticaria, atopic eczema, psoriasis.

- Thematic one-day symposium

Every year, one or a few thematic symposia are organised according to current events. For example, we have chaired an urticaria and atopic dermatitis symposium in 2012.

- World Disease Day

The **DACI** is involved every year in a one-day symposium organised by patients groups on psoriasis, atopic dermatosis, allergies.

- External seminars

We invite key scientists and clinicians to explain their work. These seminars provide a good opportunity to organise collaborations with the speakers. In 2012, we welcomed: Olivier Adotevi (UMR 1098 INSERM/EFS/UFC, Cancer Immunotherapy, Besançon), Ralph Rühl Debrecen, Allemagne), Osami Kanagawa (Tokyo University), Janet Maryanski (Université de Nice), Anne-Sophie Korganow (Université de Strasbourg), Keiji Iwatsuki (Okayama University, Japon), Bertrand Arnulf (Hôpital Saint Louis, Paris).

- Clinical unit symposia

These take place every month and broach a variety of points of interest of the **DACI**

- Inserm team's laboratory meetings

These happen weekly, where students and researchers explain their work and report on their progress.

- Web site AllergoLyon

The **DACI** has developed a web site where a good deal of useful information is available to patients, students and health professionals.

<http://allergo.lyon.inserm.fr>

11. Research themes

11.1. Drug allergy



BEN SAID Benoît, M.D.



ROZIERES Aurore, PhD

The patients are managed by the competence centre CCR2A and the clinical unit. Research is performed by URCI-LS, the INSERM and allergobiotec teams. Our projects cover clinical, epidemiological, immunological and translational topics. They are described in the CCR2A (cf. § 8) and Inserm team (cf. § 5) chapters.

11.2. Eczemas



NOSBAUM Audrey, M.D.



VOCANSON Marc, PhD

The eczemas are common diseases caused by repeated contact with molecules found in our daily environment. These molecules can be organic chemicals or proteins. The chemicals may induce allergic contact dermatitis, which is the most common occupational disease (hairdressers handling hair dyes, masons allergic to chromium cement, ...). Proteins in contact with the skin such as those found in house dust mites, animal dander or pollen may lead to atopic eczema (also called atopic dermatitis) and is particularly common in children.

We use pre-clinical models in our clinical and pathophysiological work on eczema patients.

We recently showed that methotrexate (MTX), a drug used in the treatment of psoriasis, is very effective in the treatment of atopic dermatitis. This observation is important for the management of patients who currently have only local treatment or cyclosporine, with its many side effects. We can now confirm these results in the clinical research protocol (PHRC) "Method A", comparing the efficacy and safety of methotrexate and cyclosporine in AD in adults.

Experimentally, we use animal models to understand eczema and to develop new local and systemic treatments.

Finally, we have established a therapeutic education programme targeting both adults and children. The impression we have is that patients who adopt this program are able to better manage their disease and have a better quality of life than those patients who do not. This impression is now being confirmed by a clinical study which is part of an MD thesis.

11.3. Psoriasis



GOUJON Catherine, M.D.

Our clinical immunology activity, and the expertise of our 10 dermatologists, means that our colleagues refer their psoriasis patients, who have been shown to be resistant to conventional treatment, to us. They are sent to URCI-LS in particular, in order to receive immunobiologicals.

Some clinical trials are currently underway:

1. Observational studies: an evaluation of the comparative perception of the severity of psoriasis blotches, as regards patient and doctor, and the validation of a common evaluation questionnaire

2. When can we stop treatment ?

The question of stopping treatment for a patient whose skin lesions have cleared following a few weeks or less of treatment is often asked. A study is currently underway to compare two strategies of treatment tapering, once the condition has either completely or almost completely cleared following anti-TNFa: this consists of either stopping the treatment at once, or employing a 50% dose reduction for four weeks before completely stopping.

3. New treatments.

Immunobiologics are very numerous in the treatment of psoriasis, and they are very effective. New molecules or new presentatons are currently in the clinical trial phase: Anti-IL-12/IL-23 mAbs, anti-IL-23 mAbs, anti-IL-17 mAbs, p38 kinase protein inhibitor.

4. Patient education.

A therapeutic education program involving psoriasis patients receiving systematic treatment, is being delivered within the framework of a national PHRC, whose main criterion of evaluation is a dermatological score of quality of life, the Skindex. This programme began in October 2011 with the inclusion of six patients, two of whom benefited from the therapeutic educational programme. The programme continues until October 2013.

11.4. Urticaria



AUGÉY Frédéric, M.D.

Urticaria is one of the most frequent reasons patients seek a consultation, as it is mistakenly considered to be an allergic disease.

1. Urticaria: a simple disease that can be a mystery to both patients and clinicians.

To provide a better understanding of the disease, simple and easily understandable information can be given to the patient at the first consultation. The doctor can download this information from the **DACI** website: (http://allerqo.lyon.inserm.fr/fiches_patientes/URTICAIRE_2010.pdf). A

small number of patients require a more thorough work-up, including investigations for signs of atopy, auto-immunity, and allergological tests.

2. Therapeutic education program.

The unit has developed an education program for urticaria (53 patients in 9 sessions in 2012), which is open to all patients, including those who have not been seen in the

unit, and particularly those patients with a poor quality of life.

3. New treatments.

When conventional treatments do not bring sufficient relief, and quality of life is reduced, patients can benefit from exceptional and/or innovative treatments (such as omalizumab), providing they agree to a more intensive medical supervision.

4. Networking.

The service contributes actively to the Urticaria Group of the French Dermatology Society created in 2010. As such, we are involved in the writing of a consensual information document on chronic urticaria, we participate in prospective, multi-centre clinical studies, and coordinate a national hospital project for clinical research (PHRC) intended to evaluate the possible benefit of increasing the dosage of 2nd generation anti-histaminics.

We participated to medical training activities in the French-speaking Dermatology Annual Congress, 2011 and in the French-speaking Congress of Allergy, 2012.

11.5. Patient education



BERION Céline,
Head nurse



VERDU Virginie,
Education Nurse



FABRE Laure,
Education Assistant

Our patient education program is called the “Therapeutic Educational Programme for Chronic Diseases and Skin Allergies (TPA CAP)”, and targets patients with atopic dermatitis, eczema, urticaria and psoriasis. It was approved by the Regional Health Agency (ARS) in 2011.

- Objective. Organised by a multidisciplinary team (dermatologists, allergologists, pulmonologists, psychologists, health executive, assistants, nurses, nursing auxiliaries), its objective is to provide patients with the tools needed to improve their autonomy, and to increase their responsibility in the daily management of their disease and treatment.

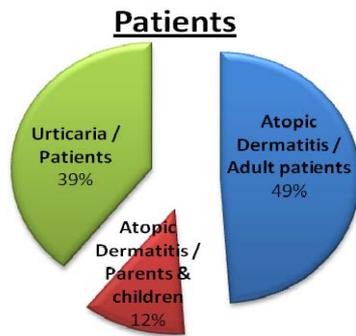
- How does it work ? The patient's doctor (GP, dermatologist or hospital practitioner) refers the patient to the TPA CAP coordination nurse. The doctor stays in touch with the team to follow the progress of the patient as they follow the programme. A contract of support, negotiated and signed by both the nurse and the patient, includes a personalised plan, mixing individual and/or collective sessions until a final evaluation session.

- How did patients participate ?

The figure below shows the distribution of patients included in TPA CAP program in 2012.

- atopic dermatitis: 66 adults were trained in 19 session ; 16 parents/children were trained in 4 sessions.

- urticaria: 53 patients were trained in 9 sessions.



- **Promotion – Conferences – Posters**

Our expertise in patient education is reflected in the invited speakers and conferences involving health workers: AFEDI Congress in 2011 entitled "When, Where and How starts patient education?"; French-speaking Allergology Congress in 2012. The TPA CAP team also participated in the Atopic Dermatitis and Psoriasis Day organised by non-profit organisations and patient associations.

12. Partners / Collaborations

- HCL/University/INSERM. All our activities are rendered possible thanks to the Hospices Civils de Lyon, University Lyon 1 and INSERM.
- Academic collaborations: Inserm-CIRI, IBCP, Ecole Centrale de Lyon, Université de Grenoble, INSERM U996, Univ Paris-Sud (Marc Pallardy, Saadia Kerdine-Römer), Fukushima University (Hitoshi Akiba, Masataka Sato), Ricken Institute Okoyama (Osami Kanagawa), Freiburg University (Stefan Martin), CIML (Eric Vivier, Elena Tomasello), Yale University (Ulrich von Adrian, Philip Askenase), Liverpool University (Dean Naisbitt)
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13. Publications

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