Let’s go global! With presence in 26 countries and 5 continents, the Institut Pasteur is a global player in the field of research, but also in the field of education. The recent symposium held by the Institut Pasteur International Network (story p.4) demonstrated the importance of education in the network, with a session dedicated to global health education and new training initiatives conceived during the symposium. The Institut Pasteur also develops new training initiatives, such as “Customized online and onsite training” (COLT), which improves the control and surveillance of infectious diseases in resource-limited countries. (story p.2).

The Institut Pasteur is global through its various partnerships with European and international partners: participation in the European Programme for Public Health Microbiology Training (EUPHEM), (story p.5) partnerships through Erasmus+ to welcome students from Semmelweis...
In low and middle-income countries, it can be difficult to deliver adequate training for people working in disease control. Many e-training programmes are based on participatory learning models in which participants share their understanding and monitor their theoretical knowledge through discussion, questioning and interaction with mentors via the internet. The current most popular e-learning systems for resource-poor settings are massive online open courses (MOOCs) which have been used by tens of thousands of students around the globe. However, this format is not well suited for specific practical training needs. This is the case for the management of neglected zoonotic disease and rabies in particular. According to estimation around 60,000 deaths from rabies occur each year due to the inaccessibility of post-exposure prophylaxis, inadequate or absent dog rabies control programmes, and lack of governmental financial support, demonstrating that there is much need for innovative methods to deliver appropriate education to these areas. 

To improve the knowledge of health professionals in rabies enzootic countries, we used an approach called customized online training (COLT) which focuses on small sets of trainees and is designed for situations where acquisition of skills and direct training by experts are needed. With this approach it is feasible to tailor training to each individual trainee in a way that would be impractical in a system designed for mass audiences. We used this approach in a course on the control and surveillance of rabies organized in Dakar, Senegal, in December 2013. 

We designed the workshop for physicians, veterinarians, public health officers and specialists in infectious diseases, virology and/or epidemiology. Most of the 106 applicants were from Francophone African countries. Thirty-two participants working in national and regional veterinary stations, hospitals or research institutes in 13 African countries were selected and encouraged to start online pre-workshop activities. These activities lasted for about two months and required about 70 hours of individual work, followed by a second online evaluation. Those who completed successfully these online pre-workshop activities, were admitted to the workshop activities held in the Ecole Inter-États des Sciences et Médecine Vétérinaire in Dakar over a period of nine days. Round tables, discussions and practical training activities were given at the Institut Pasteur of Dakar, at the Fann Hospital in Dakar and during 3 days in the municipality of M’bour, south of Dakar. A mix of foreign and local teachers was in charge of the training activities to ensure the support of the host country and meant that debates...
between participants were informed by a very good understanding of the local situation in the field.

During the year following the course, discussions on the online forum continued between the participants and the teachers. Pilot rabies investigation programmes were developed by the participants and sent to the experts for review and then submitted to national or international funding agencies. The participants organized other courses on rabies control and prevention at the local or provincial level and in 3 countries at the national level. Eight manuscripts on rabies-related topics were written and three have been accepted for publication in international peer-reviewed journals. These outcomes illustrate the intensity of the post-workshop activities, and the value of mentoring provided before, during and after the workshop.

"Introduction to the Relationship Between Science and Society"

A professor shares Insights about the new Institut Pasteur course

by Professor Francois Bontems

Relations between science and society have profoundly evolved during the last twenty-five years. Many issues researchers have to address have stayed the same, such as their responsibility regarding the objects and concepts they introduce to the world, or their struggles in the face of groups whose convictions or interests they put at risk. However, twenty-five years ago it was still accepted that science was an autonomous field financed by a political and economic power that was not interested in understanding how it worked. Today science appears to be a major societal and economical subject, its autonomy has been profoundly challenged and researchers have been forced to leave their ivory tower.

The contract between science and society is based on the trust that science is willing and able to seek truth. Autonomy strongly depended on this trust. The challenge to this autonomy requires researchers to adopt new modes of operation and new training. For this reason we have created a new course to help researchers better understand their place in the complex game played around science and have a better grasp of the ethical aspects at the foundation of their profession (beyond completion with good practice).

...To help researchers better understand their place in the complex game played around science and have a better grasp of the ethical aspects at the foundation of their profession...

It is clear that at a time when the pressure on researchers is greater than ever, any time spent away from scientific research may seem like a waste, but we are convinced that this learning is more necessary today than ever. •

The same COLT approach was recently used with success for a second session of this training program on the control and surveillance of rabies successfully organized online and for the practical training part in Phnom Penh, Cambodia, in November 2015. •
The Scientific Symposium of the Institut Pasteur International Network (RIIP), held from October 14 to 16, 2015, on the Paris campus was attended by 710 participants from 50 countries. Its theme was "Global Health and One Health" and focused on the issues surrounding the development of a global approach to health research.

This event was designed to strengthen and boost international scientific cooperation within the International Network, particularly in the areas of infectious diseases, public health and education.

The symposium will lead to several new initiatives in the field of education, including: the exchange of PhD students from Monash University; partnership with IRD; and the creation of PhD exchanges between the institutes of the network.

The new Institut Pasteur-IRD entomology course “Insect vectors & Transmission of pathogens” focuses primarily on vector transmission. It will be organized every even year at the Institut Pasteur in Paris (to be held next on March 7-April 1, 2016). Every odd year, a two-week workshop will address a medical entomology thematic and will be organized in an institute from the Institut Pasteur International Network. The 2017 course will be organized at Institut Pasteur in French Guiana.

The development of a bilateral doctoral program between the Sapienza University of Rome and the Institut Pasteur in Paris will allow PhD students from the Sapienza University to complete a 6-month internship at the Institut Pasteur during their 3-year training.

It also led to a new partnership with the Open Medical Institute, in which three-month medical observerships in an institute of the network could be proposed to medical doctors participating in the Open Medical Institute, thus contributing to training through research.

Preliminary discussions and results of a first survey showed clear possibilities to expand education and training opportunities across the institutes from the Institut Pasteur International Network in Africa. The requirements for establishing a participatory framework to address local training and education needs based on the Network was discussed. Sustainable relationships between research institutes and universities were identified as key for enhancing scientific education, training capacities and employability in Africa. Facilitating inter-African mobility transcending language barriers was considered an essential means to provide African students with international standard education and training opportunities and qualifications. Professional reinsertion should be prioritized with the development of career tracks based education and training opportunities and qualifications. Professional reinsertion should be prioritized with the development of career tracks based
The Institut Pasteur Joins the ECDC Fellowship Training Program

Public Health Microbiology Path (EUPHEM)

by Monica Sala, Director, Executive Direction for Education; and Virginie Ponticelli

Since January 1st 2015, the Institut Pasteur (IP) of Paris is one out of the seventeen sites authorized by the European Center for Disease Prevention and Control (ECDC) to participate in the ECDC training fellowship programme (EPIET), with a public health microbiology programme called EUPHEM (European Programme for Public Health Microbiology Training: EUPHEM).

The primary objective of the fellowship training programme is to provide good practice and training in field of epidemiology and public health microbiology. Its fellows should be able to apply epidemiological and microbiological methods to a wide range of public health situations in Europe. The main emphasis of the programme is on learning-by-doing activities. The programme is aimed at Europe Union (EU) professionals with a background in medicine, public health, biology, veterinary or a similar subject. In the 2014 call, out of many applicants, 28 fellows were selected.

After a thorough selection process, Aimrish Baidjoe was assigned by EUPHEM to the Institut Pasteur and joined us on September 14, to start a two-year training. At IP Paris, a EUPHEM supervision team is in charge of regular follow-up of Baidjoe’s training program. This team is composed of two virologists, two epidemiologists and one programme manager. Training periods of 3 to 6 months accumulated time will follow in different public health research structures of IP Paris, or from the IP Network, which have answered to the project proposal call launched before summer.

EUPHEM joins training-by-research and ten weeks of regular participation in high-level courses designed to provide complementary professional skills to the programme’s field epidemiologists and public health microbiologists. Among others, main topics are preparation for outbreak investigations, rapid assessment in complex public health emergencies, Biorisk and quality management.

Since its beginning in 2008, EUPHEM training paths greatly participated in the efforts by ECDC to establish a European network of high-skilled public health microbiologists, associated with high-skilled epidemiologists, to face infectious disease outbreaks not only in Europe, but also in the world. EUPHEM fellows are indeed mobile human resources that are currently redistributed by public health institutes or laboratories with public health function and, when necessary, can be assigned to international duties like Médecins Sans Frontières (MSF) and the World Health Organisation (WHO) in areas where major outbreaks take place, the most recent example being the Ebola outbreak.

As a scientist I strongly believe that the best public health solutions arise from cross-scientific teams. Institut Pasteur serves as a good breeding ground, where fundamental and applied research can meet and unite scientists by connecting their respective islands of research. The strong focus on international collaborations, oversees investments in education and capacity-building match my personal vision of science. This type of cross-pollination will lead to public health solutions that benefit societies everywhere around the world.

Current EUPHEM fellow at Institut Pasteur, Amrish Baidjoe

Continued from page 4

on the local needs. The use of MOOCs, developed with local academic staff for teaching core curricula as well as the technical challenges involved, were discussed. The PACT initiative with the support of African and international partners aims to develop a pioneering global multipartner and multidisciplinary teaching program by Africans for Africans.

All conferences recordings and presentations are available online here. Live or relive this unique event!
A New Dean for the PPU International Doctoral Program

Susanna Celli, MD, PhD
by the Education Newsletter Staff

On November 1 Susanna Celli, MD, PhD, was appointed as Dean of the PPU International Doctoral Program.

After obtaining a medical degree and working for several years as a pediatric surgeon in Italy, her interest in organ transplantation and research led her to obtain a PhD from the University of Milan (Italy) and the University of Pittsburgh (USA), where she described the functionality of hepatic protein after liver transplantation between different species. The study of the immunological reactions underlying post-transplant rejection brought her to NIH (Bethesda, MD, USA).

Since 2001 Susanna Celli has worked at the Institut Pasteur where she is now a senior scientist in the Unit Dynamics of Immune Responses. Her research currently focuses on the visualization of cell dynamics and interactions during solid organ rejection by bi-photonic microscopy.

About her new role Celli says, "I feel honored to work for such a special program. It has been very successful so far. Our goal now is to maintain this positive trend in light of the increased number of students involved, as well as the competition with similar attractive programs in France and outside. We are planning to optimize our methods of candidate detection and selection by involving foreign institutions that can identify the students in their countries who are most likely to fully take advantage of their experience here. We also want our program to be more flexible and plan to do this by creating small parallel programs that would respond to the specific needs of groups of students or projects, such as mobility between collaborating institutions, or a pre-admission training for students from developing countries. However, in addition to future strategies, two important keys to the PPU development will remain: the technological and teaching resources offered by the institute, and the extremely valuable enthusiasm of the researchers of Institut Pasteur who dedicate their skills and time to the program."
The Importance of (Being) StaPa

Building the Scientific Community of Tomorrow by Connecting the Young Scientists of Today

by Laura Sinigaglia and Darragh O’Brien

StaPa which stands for “STAgaire PAsteur” is the young researchers association of the Institut Pasteur. It is a non-for-profit association open to all, and exists thanks to the volunteering work of people who share common purposes and values.

The association, founded in 2002, reflects perfectly the spirit and the principles on which the Institut Pasteur is based: the commitment to activities devoted to the community, the sharing of scientific knowledge worldwide thanks to a well established network (namely RIIP, Institut Pasteur International Network) and the diversity of nationalities, in a fruitful melting pot.

Networking is an essential, if not critical, aspect of science and research. StaPa is well aware of the fact that “No man is an Island ” and enables young researchers to create useful and lasting networks. It is no longer the quality and the amount of publications alone that decide your future career. Having a wide network of contacts, and carrying out research in cooperative partnerships, greatly increases the chances of succeeding and obtaining a future position.

Nevertheless, networking is a challenge that young scientists face, and knowing how to move in this complex world it is not easy. StaPa provides a platform where researchers can develop their networking skills in a more relaxed environment such as that of the Forum Biotechno or the Petit-déjeuner professionnel.

Being” StaPa is much more than networking. It helps young researchers develop confidence in their "soft skills", which is equally desirable. For instance, team-building activities, from Friday social hours to StaPa Integration days, are just some of the ways in which the organization can help improve the communicative abilities of young researchers. Further, it also plays a major role in building scientific events such as YRLS (Young Researchers in Life Sciences), Inter-departmental Retreats and Inspirational Talks.

Last but not least, StaPa provides a practical platform to receive information about house vacancies and job opportunities, to request a reagent, or to use specific scientific equipment. StaPa members often use it to request advice and share useful information with young researchers on campus.
Amgen Scholars Program at the Institut Pasteur
by Sophie Goyard, Karin Eigelmeir, and Nienke Buddelmeijer

The Amgen Scholars of Institut Pasteur gathered on September 4, 2015 including Karine Renaud and Corinne Blachier from Amgen France and The Amgen Scholars Team, Sophie Goyard, Karin Eigelmeir and Nienke Buddelmeijer.

In 2015 the Institut Pasteur joined four European institutes—Cambridge University (UK), Karolinska Institute (Sweden), Ludwig-Maximillians Universität München (Germany) and Eidgenössische Technische Hochschule Zürich (Switzerland)—as host of the Amgen Scholars program. This program is financed by Amgen Foundation and gives twenty undergraduate students the opportunity to perform academic research during an 8-week internship in the summer. The goal of the program is to encourage and inspire students to pursue a scientific career through their integration and participation in the daily life of a research group.

The scholars of class 2015 at the Institut Pasteur represented thirteen nationalities and were selected based on academic record and motivation, respecting gender equality. They were matched with, and supervised by, staff scientists, senior PhD students and postdocs on the Pasteur campus. The students lived in the student housing at Cité Universitaire which allowed them to get to know each other and to start a scientific network of their own while exploring the cultural richness of Paris. The Amgen Scholars interacted with other international students who also spent their summer on the Institut Pasteur Paris campus as part of the iGEM and Pasteur Foundation programs. In addition to performing hands-on research, the students attended scientific seminars and lectures on science and career development during the Amgen Cafés on Friday afternoons. The program was concluded with an international symposium at Cambridge University where all European Amgen Scholars gathered to present their work during poster sessions and workshop discussions.

The Pasteur scholars who contributed to the success of this year’s Amgen Scholars program were very enthusiastic about the program and the students. Feedback from students has also been very positive.

The call for the Amgen Scholars Program 2016 is now open. We invite scientists who wish to host an Amgen Scholar in the summer of 2016 to contact the Institut Pasteur Amgen Scholars committee by sending a three-line project description to amgenscholars@pasteur.fr.

“This summer has been amazing, I think the best of my life, and I owe that to you for trusting me and selecting me. I will never forget this great opportunity you have given me, that made me grow as a person and love science and medical research even more. You have sown the seed of research in me that will hopefully grow a lot and I hope that one day you will feel proud of me.”

- Marta Daphné Cabañero Navalón from Spain about her Amgen Scholars internship at the Institut Pasteur

“I extremely respect the prominent work of the Institut Pasteur since its worldwide-known researchers contribute exceptionally to the evolution of science. My supervisor and all of the people in lab were always helpful and kind to me, and I am really grateful for the knowledge and the experience that they provided to me over the summer. I especially liked that I had opportunity to plan and execute my experiments independently.”

- Alexandra Imre from Hungary about her Amgen Scholars internship at the Institut Pasteur
iGem Updates

Bronze Medal Awarded, Registration Call for iGem 2016 Open
by Deshmukh Gopaul, Ph.D., HDR

The iGEM (International Genetically Engineered Machines) competition ended on September 26, 2015 in Boston, with the Pasteur iGEM team having attained the “Bronze Medal” level with the Plasticure project.

On November 13th 2015 a diploma ceremony was held to honor the team’s achievements. In the Monod Auditorium the students, as well as the coaches, received their iGEM diploma, as well as their Institut Pasteur course diploma, for those who qualified. Several members of the Pasteurian community were present including Suzanna Celli, Dean of the Pasteur Paris University (PPU), Pierre Legrain from the Development and Grants office, the AMGEN project organizers and Simon Legendre from the Institut Pasteur President’s office.

The ceremony marked the end of this year’s project, but also opened the registration call for next iGEM 2016 at Institut Pasteur here.

Education NewslEttEr

December 2015 9
Course Offerings

COURSES OPEN FOR ENROLLMENT

Review the many courses open for enrollment on the Education Website!

Go to all courses

WORKSHOPS OPEN FOR ENROLLMENT

Cryo-conservation Partnership - Japan (IP-CARD)
IN ENGLISH
This one-week course combines lectures and hands-on sessions to teach the most recent CARD methods in mouse cryopreservation. It is taught by Prof. Naomi Nakagata (CARD-Kumamoto University, Japan) and his team who instigated the latest developments in mouse line cryopreservation.

Read full description online

4th One Health Course (Antigone FP7 EU)
IN ENGLISH
The goal of this workshop is to equip the next generation of scientists with the holistic view required to deal with emerging infection.

Read full description online

Introduction to the relationship between Science and Society
IN FRENCH
Examine and reflect upon recent developments in science and society. Explore possible answers to the issues raised. Aimed primarily at doctoral and post-doctoral students and young researchers but is open to anyone with interest.

Read full description online

COURSES IN SESSION

Review the many courses now in session on the Education Website!

Go to all courses

Selected Courses in Session

Tuberculosis
IN ENGLISH
This two-week course is intended for medical doctors, veterinarians, pharmacists and research scientists wishing to acquire up-to-date knowledge on tuberculosis and the practice of molecular methods for diagnosis, drug susceptibility testing and epidemiology.

Read full description online

Infectious Disease Outbreak Investigation
IN ENGLISH
This intensive course is intended for medical and public health professionals involved in field investigations of infectious disease outbreaks. The course will provide professionals with a thorough approach to the methods of outbreak investigation of emerging and re-emerging pathogens including Ebola Virus Disease, Middle East Respiratory Syndrome Coronavirus, Plague, Avian Influenza subtype H5N1, pandemic influenza, enterovirus 71, and others.

Read full description online

Advances in stem cell biology
IN ENGLISH
This two-week course combines lectures and practical sessions about leading edge technologies and questions in stem cells biology in the context of organogenesis and regeneration in different organisms.

Read full description online

Frontiers in Biological Psychiatry
IN ENGLISH
This one-week course presents a combination of lectures and tutorial sessions to guide participants through methodological approaches and the most up-to-date developments in psychiatry.

Read full description online
Announcements

"Create your own company" breakfast meetings

Motivation for budding entrepreneurs

Starting this December, the Education Department, the MAASCC welcome and support structure for contract researchers and the Research Applications and Industrial Relations Department are running a new monthly event to encourage scientists interested in setting up their own companies. This event, entitled “Create your own company”, will take the form of a breakfast meeting on the first Tuesday of each month, from 8.30 to 10am.

The first edition took place on December 1 and attracted around 15 scientists, post-doctoral fellows and PhD students from the Institut Pasteur.

The speaker at this first session was José-Alain Sahel, who discussed his career as a clinician, scientist and entrepreneur (he has created 4 start-ups), his links with pharmaceutical companies and funding bodies, and his future plans.

The next edition of "Creating your own company" will be held on Tuesday, January 5, from 8.30 to 10am in room 28-01-01A of the François Jacob building. The speaker will be Cécile Réal, CEO and founder of Endodiag. Before creating Endodiag in 2011, Cécile Réal founded Bioprofile, an innovative company developing biomaterials for orthopedic surgery, and managed the company from 1999 to 2007. She then joined Ariana Pharma as Chief Operating Officer from 2008 to 2010. She has also been President of Medicalps (a biocluster for the healthcare industry in the French Alps) since June 2008.

To sign up please send an email to Lisa Riffaud. Note that there are just 20 spaces available and the deadline for registration is January 4.

The schedule of future speakers can been seen on the Education Calendar on page 14.

IP on the MOOve: Massive Online Open Course Updates

by Professor Dominique Franco, Director of the MD-PhD and Entrepreneurship Programs and Director of Massive Open Online Courses (MOOC) Development

MOOC Updates

The MOOC Vaccinology course was available on the FUN platform in September and October. More than 3,200 learners registered for the MOOC, ¾ from abroad (including 13% from the United States and 5% from Australia). This proportion of foreign learners is unprecedented for a MOOC hosted on the FUN platform, thanks to the involvement of the directors, Fred Tangy and Armelle Phalipon, and also to the community manager, Phanramphoei Frantz who did a very good job with promoting the MOOC.

The MOOC, “From neuron to behavior,” directed by Pierre-Marie Lledo, has been recorded and will be available on the FUN platform from May 16 to June 19, 2016. On this occasion, we would like to thank the CNAM team and especially Isabelle Gonon (MOOCs Project Leader) and David Jehl (B2B eLearning Project Leader), who have greatly contributed to the recording of the MOOCs.

More MOOCs coming

We would like to open our doors even wider to digital education and significantly expand our offering of MOOCs, in close partnership with the Institut Pasteur international network (IPIN). In this spirit, at least two more MOOCs are expected in 2016, in areas of expertise of the Institut Pasteur. A MOOC on “Insects vectors & transmission of pathogen agents,” in partnership with IRD (Institut de recherche pour le développement), is slated to be recorded during the course organized in March-April by Anna-Bella Failloux. A MOOC on “Advances in Stem cells biology” is also in being planned and should be recorded in June during the course organized by Shahragim Tajbakhsh and Vania Rosas Magallanes.

We continue to believe that teaching at the Institut Pasteur has room to grow internationally and we are taking the necessary steps to do so.
Each year, a group of students from the Ecole Pasteur-Cnam Specialized Master in Public Health defend their thesis in front of a jury of professors from the Institut Pasteur and the Conservatoire National des Arts et Métiers (Cnam). This year, this event will take place on Wednesday 9 December within the Institut Pasteur campus: Room JP Aubert, Fernbach building.

The thesis defence concludes two

Calendar: Education Events

DEC 18 Pasteur Education Advisory Board 1st Meeting ●
JAN 05 Create Your Own Company with Cécile Réal ●
FEB 02 Create Your Own Company with André Choulika ●
MAR 01 Create Your Own Company with Mathias Fink ●
APR 12 Create Your Own Company with Ray Schinazi ●
MAY 03 Create Your Own Company with Philippe Pouletty ●
JUL 07-09 1st Summer School on research valorization
(in partnership with Medicen)

Key to Listings
● Breakfast Meeting ● Symposium or Workshop ● Annual Event ● Leadership Event (by invitation only)

Art Credits
Photo page 9 and last page © iGEM.
All other images © Institut Pasteur

This newsletter is formatted for screen viewing.
Printing from this file is not recommended. It will result in very low quality, particularly noticeable with the photographs. If you would like a hard copy (paper version) please contact Eliza Jones at eliza.jones@pasteur.fr

Information and feedback
For information about The Institut Pasteur Education Newsletter, to give feedback, or to submit letters to the editor, contact Eliza Jones at eliza.jones@pasteur.fr