



ON THE ORIGIN OF EUKARIOTES WHEN CELLS GOT COMPLEX

In a study published in *Nature*—and featured on the cover—CRG group leader and ICREA research professor Toni Gabaldón and predoctoral researcher Alexandros Pittis shed light on one of the most crucial milestones in the evolution of life: cells' acquisition of mitochondria.

The cells of the first living beings were quite simple. But, at some point over the course of evolution, they gave way to eukaryotes. Eukaryotic cells have given rise to the most complex life forms existing on earth and one of the keys of this complexity can be found in mitochondria. It is believed

that by acquiring mitochondria, cells were able to use more energy, facilitating qualitative leaps in their structure and organization. That is why the addition of mitochondria is considered a crucial milestone in the evolution of life.

Up until now, a number of theories have sought to explain how cells acquired mitochondria. Pittis and Gabaldón have now clarified the matter, proposing a theory that would define the time frame for the acquisition. <

Continue reading on page 8.

2015-2016 CRG AWARD-WINNING PROJECTS UP AND RUNNING

The funded CRG Award-winning projects from the 2015-2016 call have just got underway. In the Collaborative Projects for Junior Researchers category, Julia Albaigès – technician from the Dierssen lab – and Neus Martínez-Abadías – postdoc at the Sharpe lab – will perform the first longitudinal study based on noninvasive multimodal in vivo imaging that will serve as a proof-of-concept for

a larger project to better understand the integration between brain and face development. The BRAINFACE project will improve their understanding of the mechanisms that lead to brain and facial malformations associated with cognitive and speech disabilities in individuals with Down syndrome.

Two projects aimed at improving prognoses in osteosarcoma and breast cancer respectively were awarded in the Emergent Translational Research category: 'Unravelling the osteosarcoma genome through next-generation sequencing' led

by Stephan Ossowski and 'Generation of breast cancer proteomics biopsies for prognosis studies' led by Eduard Sabidó. Ossowski's project will analyse 40 cases of paediatric osteosarcomas by Whole Exome Sequencing to address key genetic and molecular questions on the control of osteosarcoma tumour progression and metastases. On the other hand, Sabidó will apply recent advances in protein extraction protocols for tissue samples together with next-generation proteomics methods to generate permanent digital proteomics maps from four different breast cancer patients. <

EDITORIAL



Melanía Tudor
Alumni Coordinator

CRG ALUMNI TAKES OFF

I was hired as Alumni coordinator just five months ago but I already find this (scientific) world fascinating. The impact that any of these discoveries could have on society is incredible. You easily realise that scientists can really change the lives of ordinary people.

However, going back to my role, I think that the Alumni programme can also add value to the CRG members' professional and personal lives. At the end of the day, what this is all about is creating a strong community formed by staff and alumni. Therefore, current staff is also part of this project, as we consider that engagement should start before one leaves the Centre and becomes an alumni member. They need to be part of the greater network already during their stay. We hope that we can form part of a fantastic experience while our members are still close by, at the CRG.

CRG alumni need to know that they can enhance their network with the CRG members and that this will open a world of opportunities for them. There are people to connect and share your plans with. They can build projects together. Start-ups are always an option.

I would like to encourage all our alumni to stay connected to the CRG, attend our future events, use our services and make the most of this new platform once we fully launch it.

The CRG Alumni programme seeks to establish a lifelong relationship with its alumni and staff, promote interaction with and among alumni and staff, highlight the achievements of its alumni, and provide them with rewarding opportunities to serve the CRG, its faculty, and its students.

We will do our best to enrich the lives and opportunities of our alumni and staff and to strengthen the ties of goodwill and communication between them and the Institute. So stay tuned... this is just the beginning! <

INSIDE

ADMINISTRATION STAFF SHOWS TRANSVERSAL, MULTIDISCIPLINARY SIDE

That scientists work in a transversal, multidisciplinary way is nothing new. What may come as a surprise is that the administration staff does so as well. With a view to sharing the transversal projects that have been completed or are now underway, and promoting collaborative working models, last February 19, the members of the administration and research support staff took part in a retreat.

The event featured elevator pitches and a poster session, in which the different working groups presented the transversal projects, sharing not only the project itself but also the challenges and opportunities that have arisen as a result. The experience made it possible to create new synergies and collaborations, in addition to strengthening relationships among



the administration staff, exchanging ideas and learning in a hands-on environment.

The posters from the retreat will be on display at the Happy Hour hosted by the administration staff on April 14. <

INSIDE

NEW CELL CULTURE ROOMS

The CRG is evolving toward the European standards of maximum quality. In this case, the focus is on the cell culture rooms, with a comprehensive remodeling of room 590. The project is based on the recommendations of a joint committee of scientists and technicians, advised by one of the leading national biosafety experts.

The main refurbishments include improvements in the distribution of booths and incubators to improve access and generate more working space. On another note, the climate control system and lighting installations have been renewed, the storage space has been extended and biosafety aspects have been improved. Examples include a new overpressure system, or the continuous ceilings, walls and flooring.

These changes, the result of a concerted effort from the different groups, have made it possible to achieve more of an open-plan distribution of the room, greater workplace ergonomics and generally more comfortable and biosafe conditions. The



year 2016 will be marked by the remodeling of room 621, which has already begun, and that of 632, which will start this summer. The microbiology culture room is now in the project phase. The committee thanks users for their patience and cooperation. <



SPARTAN RACE “CRGEEKS” READY FOR NEW CHALLENGES

Romina Garrido, Mariana Morlans & Reyes Perza

Just what is the Spartan? A muddy race packed with fun and obstacles.

Some time ago, a group of colleagues from the CRG joined the Claror Maritim’s FIT90 high-intensity training activity. It not only offered us the possibili-

ty to do some intensive sport, but also to interact with people from other PRBB Institutes in a more casual setting.

After over a year of training, we felt the need to put all this effort towards something concrete. We joined forces with people from the FPM, UPF and Claror Maritim to create a team and enter the Spartan race being held near Barcelona.

Spartan is all about pushing your limits. It combines trail running (in different

categories and distances) with various physical and mental obstacles approximately every 400-500 meters.

Obstacles include wall-climbing, crawling under barbed wire, and carrying a bag of sand and rocks up a slope, among many others. Although it was very challenging and took us about two hours to finish, we had a solid, supportive, gender-balanced team (five women and four men). Everyone really enjoyed the experience.

The feeling you get when you cross the finish line is overwhelming: pride, self-worth, that the struggle to meet your goal was worth the effort... There is no greater feeling than realizing you just did something you once thought impossible. And it really is like they say: once you’ve used your drive and determination to push your body over the finish line, you feel capable of anything. So, we’re already training for the next challenge, a longer, harder Spartan Race, to be held in Madrid on May 28th. <



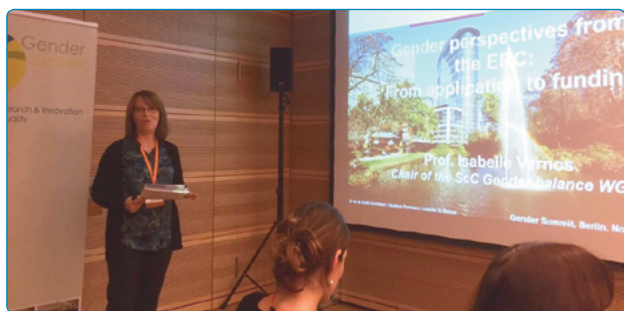
WOMEN IN SCIENCE

UNCONSCIOUS BIAS AND REAL ASSETS AT THE 1ST WOMEN IN SCIENCE SESSION

On January 13th, the CRG Gender Balance Committee organised the first Women in Science Session. CRG director, Luis Serrano, presented the Women Scientists Support Grant (WOSS) initiative, which aims to support female scientists who have the ambition and potential to reach leading positions in research while fulfilling maternity responsibilities. Montserrat Vendrell, director of the Barcelona Institute of Science and Technology (BIST), underscored the fact that both roles—being a woman and a scientist—represent truly valuable assets. Last, Gerlind Wallon, EMBO Deputy Director, gave a presentation on unconscious bias, which aroused the interest of the audience and triggered a number of questions.



The CRG Gender Balance Committee works towards gender equality not only through actions such as the WOSS grant but also by encouraging discussion on the issues, initiatives and trends related to this topic. <



ISABELLE VERNOS AT THE GENDER SUMMIT

CRG senior group leader and ICREA research professor Isabelle Vernos chaired one of the Parallel Sessions at the Gender

Summit 7 Europe. The Summit programme advanced understanding of when, how and why gender issues in research can produce different outcomes for women and men, and, like its predecessors, it showcased the significant intellectual, societal and economic benefits of gender mainstreaming. The Summit took place in Berlin and preceded the Falling Walls celebration as a reminder that gender inequality is another ‘wall’ to be brought down.

Since Dr Vernos is a member of the ERC Scientific Council and currently chairs the Gender Balance Working Group, she was invited to lead the session “Gender perspectives from the ERC: From application to funding”. It featured presentations from ERC PIs and panel members discussing gender-funded research and provided insights into the work of the ERC working group on Gender Balance. <

BIST

‘FROM SCIENCE TO BUSINESS’ COURSE, THE 1ST BIST JOINT INITIATIVE

The Barcelona Institute of Science and Technology (BIST) and the ESADE Business School are launching the course “From Science to Business” with the goal of accelerating the transfer of technologies developed in BIST re-

search institutes to the marketplace. At the CRG, the course will be organised by the Technology and Business Development Office (TBDO), as an activity of its Entrepreneur’s Club, together with the Training Unit.

The course, taught by specialised ESADE faculty, is divided into three areas: innovation and strategy, entrepreneurship and entrepreneurial finance. It will

take place from May 31 to June 2. “This initiative is in line with the BIST’s strategic objectives, which include promoting opportunities to transfer the cutting-edge science being developed in the six centres, promoting collaboration among researchers in the different knowledge areas, and offering high-level training for PhD students, postdocs and group leaders,” highlighted Dr Montserrat Vendrell, Director General of BIST. <

FEATURING CRG



‘STICK OUT YOUR TONGUE’ JOINS THE BARCELONA CITIZEN SCIENCE OFFICE

On October 28-30 Barcelona hosted the general assembly of the European Citizen Science Association (ECSA). Throughout the three days of the event, over a hundred scientists and citizen sci-

ence experts from Europe, the United States and Australia attended the Association’s annual meeting, taking a first-hand look at the most innovative citizen science projects carried out in Barcelona.

‘Stick out your tongue’ the first citizen science project led by the CRG, was featured in the “Barcelona Citizen Science Safari”, in which participants

followed a route around Barcelona, and got to know ten local citizen science projects along the way.

“The opportunity to share our project with colleagues and experts in citizen science at the international level has been very enriching. Our proposal has aroused a great deal of interest, because involving citizens in genomic sequencing projects isn’t easy. ‘Stick out your tongue’ has overcome the barrier that biomedicine laboratories appear to face,” states Annick Labeeuw, project manager of Stick out Your Tongue (www.sacalalengua.org).

As another part of the ECSA General Assembly, admission of ‘Stick out your tongue’ into the Citizen Science Office of Barcelona – Barcelona Lab was announced and officialised. This office, created by the Directorate for Creativity and Innovation of the Barcelona Institute of Culture, groups together the city’s foremost citizen science projects. <

GENOMICS FOR CORONARY DISEASE

Rory Johnson, CRG staff scientist and Ramon y Cajal fellow at the Computational Biology of RNA Processing group, receives funding from the Catalan “La Marató” Foundation.

“La Marató” is an annual telethon broadcast on the Catalan-language network TV3 to raise funds for scientific research on medical or social conditions. It aims to encourage and promote excellent biomedical research and raise social awareness on the issue chosen for each running of the telethon. Last year the focus was on heart disease. It raised more than 11 million euros that will fund 43 research projects run by 70 researchers.

Rory Johnson will participate in the project “Whole genome diagnosis of coronary artery disease”, which is coordinated by Josep Comin at the IMIM. The purpose of the project, which has received 297,858.66 € in funding, is to develop much-needed diagnostic tools for highly prevalent coronary artery disease, using the latest genomic and informatic technologies. <



FEATURING CRG

OF FLIES, NETWORKS, TRAINING AND NEUROSCIENCES

Elie Fink

Through the **Fly Neuroscience Workshop – *Drosophila* as a Tool for Understanding Brain and Behaviour**, FLiACT graduate students collaborated with Ghanaian researchers to bring *Drosophila* neuroscience research to scientists in West Africa. The workshop was held at the Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi, Ghana in December 2015.

The idea was born in the hustle and bustle of the Louis lab at the CRG, and developed into a full-fledged plan in the context of the FLiACT programme. FLiACT was a Marie Curie Initial Training Network (ITN), begun by Matthieu Louis. It connected European partners in complementary research fields of fly neuroscience and brought together 14 young neuroscience researchers from labs across Europe. Over a four-year period, regular workshops on all aspects of *Drosophila* neuroscience were organised for the FLiACT fellows, generating a long-lasting, highly collaborative network.

FLiACT fellows Valentina Ferlito, Sayanne Sospelisa, Sercan Sayin and myself were keen to organise something slightly off-beat as a final science outreach effort. We wanted to share our science with a target group of graduate-level and senior scientists working in places less exposed to international scientific exchanges, yet who were passionate and strongly committed to their own scientific endeavours, despite dishearteningly limited funding prospects. Our focus quickly geared towards Ghana, which boasts both an extensively developed higher education system and political stability.

Searching for similar initiatives in Africa, we soon stumbled upon the NGO **TReND in Africa**, whose mission is the improvement of university-level science education and research in sub-Saharan Africa. TReND seeks to develop scientific ex-



cellence and collaboration in the region by organising local neuroscience courses for young African scientists. While TReND's initiatives have so far been concentrated in East Africa, our fly neuroscience workshop would be the first to take place in West Africa. Promoting the use of the inexpensive invertebrate fly model for scientific research introduces an economically viable alternative to scientists using expensive vertebrate models in countries facing extreme funding shortages.

We were keen to collaborate with local Ghanaian scientists, thus we joined forces John Abraham, the only scientist in Ghana doing applied research involving the fly for pest control. His colleague Andreas Kudom, though not working with the fly model per se, also joined the team and widened the scope of our workshop by sharing his exciting science on the mosquito model. Matthieu Louis not only provided his unfaltering support but also accompanied the team to Ghana. As did Simon Sprecher, Professor for Biology at the Université de Fribourg, Switzerland. Sonja Reiland and Natalia Dave from International and Scientific Affairs, the CRG administrative staff, as well as Antonia Tetteh at KNUST, managed and co-organised this unique workshop, which involved overcoming several challenges.

We welcomed 22 participants from four African countries. They were selected from a pool of 70 applicants from nine Af-



FEATURING CRG

rican countries. The workshop covered theoretical and practical aspects of the fly as a model organism for neuroscience research and behavioural studies, also focusing on olfaction for applied neuroscience questions, and the relevance of the fly for human disease models. It ended with participants presenting their ideas on how to implement *Drosophila* in their own research. Many expressed strong interest in using the fly model organism to

address the imminent need for long-term solutions to health problems faced by their country's population. What provided the workshop's main deliverable was the general consensus to establish the Ghana Neuroscience Society. This will help provide a steady framework for follow-up exchange and training workshops, so that the Fly Neuroscience Workshop does not end up a one-hit wonder.



Patrick Kobina Arthur, Group leader and lecturer, University of Ghana

"The workshop was a well-organized event that had a major impact on me and, I believe, on all the other participants, too. To ask relevant and powerful scientific questions in resource-poor settings requires developing simple and creative resources. The need for an equally simple but powerful model system for neuroscience is therefore essential. This is what attracted me the most and I am very happy I attended. I was

able to determine how to use the fly model to study systemic infections and also test anti-infective agents. The same fly model will help me conduct safety trials using biochemical, developmental and behavioural tests. All these can be used in a very low-cost set-up, which is really great to learn. I am grateful for this opportunity and hope to partner up with the organizers to hold another one in 2016".



Ella A. Kasanga, master student, Kwame Nkrumah University of Science & Technology

"It was an amazing experience for all participants. I enjoyed the discussions, as it was an opportunity to get hands-on experience and efficient feedback from everyone present. On the whole, though it was short,

the workshop was very educational and eye-opening as it was a fantastic platform to interact with great local and international scientific minds."



Precious Cramer, master student, University of Ghana.

"Taking Cues from the Fly: The Fly Neuroscience workshop was useful to me as a platform to use *Drosophila* as a model organism for studying diseases and behaviour. The lectures and the practical sessions

were engaging and gave me hands-on experience in experimenting on flies. Altogether, I would say the experience was worthwhile and I look forward to another exciting workshop soon!"



Patrick Amoateng, senior lecturer and neuropharmacologist, University of Ghana.

Participating in the 'Fly Neuroscience Workshop' in Kumasi, Ghana, gave me exposure to the use of *Drosophila* in neuroscience research. Consequently, I am drafting a proposal to use the fly for epilepsy research.

The "Ghana Neuroscience Society" was also conceived at the workshop and its maiden conference will be held in May 2016. Thank you, CRG!"



Thomas Tagoe, Neuroscientist and co-founder of GhScientific.

"I arrived at the week-long workshop with curiosity and a little scepticism that did not last long. The discussion-type lectures and practical lessons gave me resources and skills; I left full of knowledge, feeling

challenged to be innovative in research. Indeed, the fly is a great model for me to explore as an early career researcher and had it not been for the workshop, I would be none the wiser"



Wilhelmina A. Mensah, PhD student, University of Ghana

"Frankly, for me the workshop was 'Drosophila in Neuroscience 101' because I came in as a complete novice in the area. It was intriguing to know that the *Drosophila* is used in drug discovery, which is my in-

terest. I am sure that now I will start my animal model studies in flies. It was so fascinating to dissect and remove *Drosophila* brains for analysis. I am looking forward to a workshop on fly genomics/bioinformatics."

BUSINESS & INNOVATION

THREE NEW PARTICIPANTS JOIN CRG ENTREPRENEUR-IN-RESIDENCE PROGRAMME

Jordi Riulas, Nereida Rodríguez and Xavier Bosch are the three new entrepreneurs joining the CRG Entrepreneur-in-Residence Program. With these new collaborators, the program now boasts seven successful, experienced entrepreneurs.

Jordi Riulas will collaborate with the TBDO team at the CRG, analysing emerging business opportunities in the biotech market. In particular, his main objective is to found a new Barcelona-based start-up that will make use of the latest technological advancements in genetics. Xavier Bosch and Nereida Rodríguez will work to enhance their proprietary technology, developed together with Xavier Gallego, based on a video-tracking system that automatically detects complex animal behaviours under any environmental condition.

BIG PHARMA SECURES FOLDX COMMERCIAL LICENSE

One of the world's top twenty pharmaceutical companies, obtained a non-exclusive 5-year global commercial license for FoldX. FoldX is a software developed by the laboratory of Luis Serrano at EMBL and the CRG, in collaboration with VIB. It provides fast and quantitative estimation of the importance of the interactions contributing to the stability of proteins and protein complexes.

The FoldX Suite (foldxsuite.crg.eu) is available for researchers in academia and industry with different licensing options.

TBDO PRESENT IN TOP EU BIOTECH MEETINGS

Members of the TBDO have recently taken part in several top-tier European-level biotechnology meetings and partnering events. Participation in such gatherings is a unique opportunity for partnering, networking and promoting CRG technologies.

For instance, the CRG's TBDO was represented at **Bio-Europe** in Munich, Europe's largest partnering conference serving the global biotechnology industry; **BioFIT** in Strasbourg, the top partnering event for open innovation, technology transfer and collaborative research in the field of life sciences; and **Personalized Medicines & Biomarkers** in London.

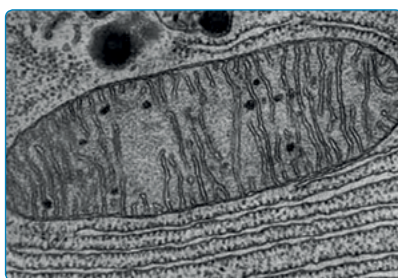
SCIENCE@CRG

ON THE ORIGIN OF EUKARYOTES

Continued from the front page.

A number of theories have sought to explain how cells acquired mitochondria. Some scientists advocated an early incorporation of mitochondria, and considered that step as the first necessary to begin advancing toward eukaryotic cells as they are known today.

Other theories proposed a later inclusion of mitochondria, as a more complex host cell could favour the entry of another cell and that cell's permanence within its interior. Now, Alexandros



Pittis and ICREA research professor and group leader at CRG Toni Gabaldón have clarified the matter, proposing a theory that would define the time frame for the acquisition.

“We’ve tracked down proteins common to all complex organisms, and recon-

structed their evolution. We found that the proteins related with mitochondria acquisition arrived later than those related with other parts of the cell,” stated Gabaldón. “This work demonstrates that the acquisition of mitochondria occurred late in cell evolution, and that the host cell already had a certain degree of complexity,” added Pittis. “Our study makes it possible to break down the steps of what is considered the greatest evolutionary leap after the origin of life. Understanding how complexity originated and evolved is important to better understand the mechanisms that govern cells, and by extension, the functioning of all living organisms,” concluded the authors. <

CUTTING & PASTING, NOW FOR DNA DARK MATTER TOO

For some time, scientists have been seeking a more efficient and reliable way to edit the genome and modify it to suit any need. The CRISPR-Cas9 technique has been launched as the solution to this problem, and has since taken a position as one of the most revolutionary techniques in molecular biology. Although CRISPR-Cas9 is much more powerful than previous genome editing methods, it still has certain limitations. For example, it is very useful when dealing with genome fragments that code for proteins, but this only covers 1% of the genome. The remaining 99%, non-coding DNA, also known as “dark matter”, has remained outside the scope of advantages offered by this revolutionary technique.

In a BMC Genomics paper, CRG researchers led by Rory Johnson recently presented a new method that makes it possible to use the CRISPR-Cas9 technique on DNA dark matter. “Our method expands the use of CRISPR to long non-coding RNAs. Broadening the use to the whole genome takes this technique to a new level and allows us to simultaneously explore and edit certain genes that often have regulating functions, more effi-



ciently and economically,” say Rory Johnson and Estel Aparicio, the CRG researchers who authored the study. “This will be extremely useful in studies where the goal is to examine the functions of long non-coding RNA’s and not only will we be able to “activate” or “deactivate” one gene at a time, we will also be able to manipulate thousands of different genes at the same time,” state the authors. <



MAJOR CHAGAS DISEASE VECTOR GENOME DECODED

A new report in PNAS provides information about the evolution and molecular biology of *Rhodnius prolixus*, a major vector of Chagas disease, an illness that

affects approximately 7 million people worldwide and a major cause of morbidity and mortality on the American continents. The results from the report should boost our understanding of the transmission of a life-threatening parasite and may lead to the development of innovative insect control methods.

Researchers at the CRG, the McDonnell Genome Institute at Washington University, the Center for Disease Control and Prevention, the Universidade Federal do Rio de Janeiro, the Fundação Oswaldo Cruz, and other institutions have sequenced the genome of *R. prolixus*. They also generated assembled sequences covering 95% of the genome, and completed comprehensive genomic analyses. Authors report large and unique expansions of different gene families related to chemoreception, feeding, and digestion. This report describes the first genome sequence of a nondipteran insect vector of an important human parasitic disease.

Other unique features described by the authors include a peculiar immune network and a “silent” relationship between the insect host and the parasite. These insights into the insect and parasite relationship, specifically into how the insect retains or eliminates parasites, may lead to novel approaches to control or eradicate the disease. <

NEW TOOLS FOR THE DIAGNOSIS OF MULTIPLE SCLEROSIS IN ITS EARLY STAGES

Multiple sclerosis is a chronic, neurodegenerative disease. It is the second-leading cause of neurological disability for persons between 20 and 40 years of age, following traffic accidents. It affects around 2 million individuals worldwide; 47,000 in Spain, and 7,000 in Catalonia. Although there is still no cure for multiple sclerosis, an early diagnosis is crucial to modify its evolution by slowing its progression. Scientists from the CRG-UPF Proteomics Unit led by Dr Eduard Sabidó, along with Dr Manuel Comabella of Cemcat and the VHIR Neuroimmunology Unit, have just published a study in *Molecular and Cellular Proteomics* proposing a novel method for early multiple sclerosis diagnosis based on detecting and quantifying a combination of proteins in the cerebrospinal fluid.

Scientists used mass spectrometry to detect a set of relevant proteins in the



cerebrospinal fluid of a high number of patients. They identified the proteins that can predict the risk of developing multiple sclerosis. They also built a statistical model that makes it possible to assign the probability of suffering the disease to each patient.

“Being able to know if there is a high risk of developing the disease will allow us to follow these patients from early on, and thus, delay progression of

the disease and its disabling effects on them,” states Dr Comabella. “The use of advanced proteomics technology is becoming more relevant in clinical research, and specifically, in diagnostics. This is a clear example of the importance of cooperation between clinical and basic researchers to advance in knowledge and improve people’s lives,” states Dr Eva Borràs of the CRG and UPF Proteomics Unit, and one of the main authors of the study. <



MESOAMERICAN BEAN GENOME DECODED

An Ibero-American team of scientists decoded the genome of the Mesoamerican common bean (*Phaseolus vulgaris*) coinciding with the celebration of the International Year of Pulses designated by the United Nations. The project has been co-led by Alfredo Herrera-Estrella from the LANGEBIO in Mexico, Roderic Guigó, and Toni Gabaldón at the CRG. The finding was published on February 25 in *Genome Biology*.

Sequencing such a common source of plant-based proteins for people around the globe will be key not only to improving bean production but also for a better conservation of Ibero-American genetic varieties. The PhasibeAm team selected a specific Meso-American bean line for genomic sequencing (BAT93), given its relevance for the generation of varieties that are currently used commercially. The team established a robust technological platform that culminated with the sequencing and assembly of the 620 million base pairs. A total of 30,491 genes were identified in the genome and scientists also analysed their expression patterns. <

TRAINING

2ND RUNNING OF THE PHD4MD ENHANCES DIFFERENT FACETS OF RESEARCH

Following the success of the first running of PhD4MD, the PhD programme for medical doctors, the participating centres have now launched a new edition.

This second programme will accept applications until March 30 for five fellowships to be awarded to medical doctors who have completed their residency/speciality. Participants may

choose between 11 collaborative projects to be undertaken on one hand at the CRG, CNAG-CRG or IRB Barcelona, internationally renowned life science research institutes, and on the other hand at IDIBAPS or VHIR, leading centres in translational research, associated with the Hospital Clínic and the Vall d'Hebron University Hospital, respectively.

The proposed research projects cover diverse research areas and focus on various diseases, ranging from different types of cancer, chronic obstructive pulmonary disease, idiopathic inflammatory myopathies, or fertility, to new im-

munotherapy approaches, personalised medicine in AIDS, and more.

Programme organisers are very satisfied with how the collaboration between groups and centres is evolving, as well as with the projects and the participants selected in the first running. For this reason, the projects on offer in this new edition are much more ambitious, and the programme has been opened to medical professionals in Europe.

More information about the programme and testimonials from participants in the first edition are available at www.phd4md.eu <

ALUMNI



MARC GONZÁLEZ
Head of Human Resources
Barcelona
Supercomputing Center (BSC-CNS)

I was travelling around the world during the last semester of 2007, and in my way back to Barcelona I saw the HR officer advertisement and I heard really good references about the place and Centre's project.

So, after a lot of thinking about my future and next step in my career I decided to apply, and looking back I can tell that it was a really good choice. Since the first moment, interviews, and first days I realized that was the place to be at my career stage, and not just for the amazing views.

I worked in the HR Department from February 2008 until September 2012, during that time I developed myself in a real international and challenging environment, helping to create a solid HR structure, with the vision that I was there in order to help the researchers to just do research, and liberate them of operations tasks, operational but important, making their life easy, at least I was trying to.

CRG let me develop myself, which is a lot nowadays, and their people (Scientists and not Scientists) challenge me enough with interesting projects, enthusiasm, and perfectionism, so I could grow as a professional and as a person. Thanks to this experience I was able to come back to research environment, after a couple of years in the private sector.

I am sure that without CRG, my career would be really different, but maybe not better, because working for Science without doing research is something intangible which compensates in a way that just some people can get.

I would like to recommend to anybody joining CRG, to get involved in the community, get involved in the aim of doing the best always, and if you do that, maybe one day you will see yourself repeating "Is any better reason for living than devote yourself to life?" ☺ <



WELCOMES

We warmly welcome:

Andrea Tassinari (Cytoskeleton Dependent RNA Distribution Mechanisms); Raúl Burgos (Design of Biological Systems); Manuel Muñoz (Computational Biology of RNA Processing); Andra Cristina Enescu (HR); Vasiliki Michaki and Malgorzata Rogalska (Regulation of Alternative pre-mRNA Splicing); Rianne Cort (Gene Function); Yamile Marquez (Transcriptomics of Vertebrate Development and Evolution); Amanda Solé (Proteomics); Aliaksei Holik and Michael Maher (Genomic and Epigenomic Variation in Disease); Miriam Sanso (Epigenetic Events in Cancer); Daniela Sanges (Reprogramming and Regeneration); Carlos Di Donato (Administration); Ilario de Toma and Ricardo Gómez (Cellular and Systems Neurobiology); Shafqat Khan (Epigenetic Reprogramming in Embryogenesis and the Germline); Alfredo Gil (EGA); Ruben Ventura (International and Scientific Affairs); Ximena García and Daniel Malagarriga (Sensory Systems and Behaviour); Marioara Chiritoiu (Intracellular Compartmentation); Ruggero Cortini (Chromatin and Gene Expression); Ana López (Organelle Biogenesis and Homeostasis); Eloi Casals, Inés Martínez and Anastasios Papakonstantinou (Bioinformatics Analysis - CNAG); and Regina Antoni Alandes and Nuria Aventín (Sequencing - CNAG).

FAREWELLS

Our best wishes to:

Andrea Ravenna (Evolutionary Genomics); Daniel Soronellas (Chromatin and Gene Expression); Amaya Alzu and Enric Serra (CNAG); Nicole Voges (Sensory Systems and Behaviour); Sylvain Méunier (Microtubule Function and Cell Division); Olaf Kostbahn (International and Scientific Affairs); Kai Dierkes and Olivera Vujatovic (Biomechanics of Morphogenesis); Maria Plyushcheva (Evolutionary Genomics); Joana Domingues (Gene Function and Evolution); Tommaso Andreani (Computational Biology of RNA Processing); Salvador Capella (Evolutionary Genomics); Karl Wotton, Eva Jimenez and Anton Crombach (Comparative Analysis of Developmental Systems); Marina Garcia-Beyaert (Regulation of Protein Synthesis in Eukaryotes); Bruno Di Stefano (Hematopoietic Stem Cells, Transdifferentiation and Reprogramming); Nuno Ferreira Amaral (Coordination of Cytokinesis with Chromosome Segregation); Maria Guirola (Epigenetic Reprogramming in Embryogenesis and the Germline); Lorena Espinar (Genome Architecture); and Jennifer Garcia (Proteomics).

AWARDS & HONOURS

Pia Cosma, ICREA research professor and group leader of the Reprogramming and Regeneration laboratory has been awarded the 2015 “Ciutat de Barcelona” Prize in the Life Sciences category.

Isabelle Vernos, ICREA research professor and group leader of the Microtubule Function and Cell Division laboratory was awarded the Narcís Monturiol Medal for scientific and technological merit.

DIARY

04-06/04/2016 – NGS'2016

NGS'16 Barcelona: Genome Annotation
CRG, Dr. Aiguader 88, 08003 Barcelona (Spain)
<http://www.iscb.org/ngs2016>

02-05/05/2016 – Courses@CRG

Biological Super-Resolution Microscopy
CRG, Dr. Aiguader 88, 08003 Barcelona (Spain)
www.crg.eu/event/coursescrg-biological-super-resolution-microscopy-0

25-27/05/2016

ICREA International Symposium
BioNanoVision of cellular architecture: from the nucleus to the cell membrane
ICFO, Av. Karl Friedrich Gauss 3,
08860 Castelldefels, Barcelona (Spain)
icrea-bionanovision2016.com/

31/05-02/06

BIST/ESADE Business School
From Science to Business
ESADE, Av. Espugues 92-96, 08034 Barcelona
<http://www.crg.eu/en/event/science-business-bistesade-business-school>

27/06-01/07/2016 – Courses@CRG

Advanced Proteomics Course
CRG, Dr. Aiguader 88, 08003 Barcelona (Spain)
www.crg.eu/event/coursescrg-advanced-proteomics-course

27/06-01/07/2016 – Courses@CRG

CRISPR-Cas9 tool: From Gene to Function
CRG, Dr. Aiguader 88, 08003 Barcelona (Spain)
www.crg.eu/event/coursescrg-crispr-cas9-tool-gene-function



Life@CRG, Newsletter of the Centre for Genomic Regulation. Published by the Centre for Genomic Regulation, Communications and Public Relations Department. Carrer Doctor Aiguader, 88, 08003 Barcelona. www.crg.eu

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