Malaria is a vector borne, parasitic disease widely distributed in tropical and subtropical areas of the world that still claims more than 400,000 deaths annually, mostly African children and pregnant women (WHO 2015). Malaria is no longer a problem in temperate regions, nor in Europe. Presently, few people are aware that in Italy, at the beginning of the XX century, there were more than 10,000 deaths/year and approximately 2 million cases. Malaria represented the most severe sanitary problem faced by the recently unified Italian nation and, like nowadays, had a strong negative impact both on health and on the social /economic condition of the population. The fight against malaria became a national priority and in approximately 50 years from the first public antimalarial campaign (1900-1906), Italy was able to control, cure and finally eliminate malaria in the 1955-1960. The antimalarial elimination campaign in Italy is now recorded as one of the most intelligent, organized and successful ever. It is considered an example to follow, whose pillars have been reevaluated and implemented in the Roll Back Malaria Initiative and the Global Malaria Action Plan (2008, 2012) which aims to eradicate malaria in the world by 2050 (http://www.rollbackmalaria.org/microsites/gmap/). The bases for the Italian success were both scientific and political. On the one hand, from 1880 to 1898, a group of famous European malariologists, including several outstanding Italians, like Camillo Golgi (Nobel Laureate 1906), identified the aetiologic agents of malaria, named Plasmodium by E. Marchetti in 1880, and A. BIGONI in 1881, and demonstrated that Anopheles mosquitoes could transmit malaria. In 1898, in India, Ronald Ross (Nobel Laureate 1902) identified the mosquitoes as the insect vector and, in Rome, Giovanni Battista Grassi demonstrated that only Anopheles mosquitoes could transmit malaria. In 1899, Grassi was also the first to describe the full human cycle of P. falciparum, responsible for the deadly “terzana maligna” fevers, and of P. vivax and P. malariae, agents of the benign “terzana & quartana” fevers. These discoveries had an almost immediate impact on therapy (use of quinine) and on prevention of the disease (use of window nets against mosquitoes bites) and successful clinical and epidemiological data were collected. The scientific knowledge gained the legislators; the scientists present in the Italian Parliament, as Angelo Celli, were instrumental in promoting the approval of the first national antimalarial campaign. Financial support for the research, the clinical trials and the implementation of the sanitary measures came not only from the Government and new taxes, but also from the Transportation Companies, pharmaceutical Industries and philanthropic families interested in reducing the loss in manpower due to the disease. The pillars of the 1900-06 campaign were quite innovative for those times, and still valid: open access to treatment, health education and sanitary surveillance. A real breakthrough was the combination of free quinine and its capillary distribution through the tobacconists, which, at that time, were spread in the territory more than pharmacies. Health education and sanitary control were also crucial in helping the population to understand the disease, and make a correct use of preventing measures and of available drugs. Fixed and mobile sanitary stations were created and they represented the nuclei of the future National Health System. The political will, the financial support and the combination of different tools, contributed to the final elimination of Malaria in Italy. Not as feasible is at present the control and elimination of malaria in different world regions. Over the last 20 years, a significant decline of malaria morbidity and mortality occurred that relied on a combination of control measures similar to those used in Italy: mass distribution of insecticides impregnated bed nets (ITNs), indoor spraying, availability of effective artemisinin-based combination therapy (ACT) at a subsidized price in endemic poor countries and good diagnosis (WHO 2015). But again, the best results were obtained in those countries where the political situation was stable, and national malaria control policies were adopted. However, we are still far from the world eradication of the disease and new tools and additional efforts are required. In Italy, the interest and financial support for malaria research slowly vanished once the problem was solved, and only few groups of malariologists continued their studies. However, with the approval of the Millennium Goals and the strong International commitment against the three major killers “AIDS, Malaria and Tuberculosis”, a renovated network of Italian research groups was organized and was able to attract national and international funding in different malaria research areas: drug-discovery; basic biology and clinical aspects, vector control. In 2010, nine different Italian Universities and the Istituto Superiore di Sanità (ISS), joined together in a formal Inter Universities Center for Malaria Research (CIRM) to improve interdisciplinary collaborations, provide training for young researchers and reinforce the International cooperation with African countries. These efforts were initiated and strongly supported by the researchers of the School of Pharmacy of the University of Milan, from the two Departments DISFeB and DISFARM together. They have been able to join their expertise in medicinal chemistry, biochemistry and parasite cell biology to create a platform of antimalarial drug discovery unique in Italy and among the few in Europe, and with an excellent scientific production. I am proud of being part, and leader, of this group of researchers able to catalyze collaborative studies and fundings with several national and International research centers and agencies, and to provide Italian and EU Erasmus students, as well as African PhD candidates, with a training in malariology. Our contribution to the global malaria eradication campaign, is to provide new tools, training and hopefully new treatments against the disease.
Motoneuron diseases (MNDs), as Amyotrophic Lateral Sclerosis (ALS) and Spinal and Bulbar Muscular Atrophy (SBMA), are neurological disorders, which selectively affect motor neurons of voluntary muscles. At present, there is no cure for MNDs and patients are treated with palliative therapy to relieve symptoms. Proteotoxic stress due to deposition of misfolded proteins has been associated to MNDs as a consequence of their impaired clearance by the protein quality control (PQC) system from the cell. The PQC system is composed by molecular chaperones (mainly represented by heat shock proteins, HSPs) and degradative pathways, including ubiquitin-proteasome system, autophag-lysosome pathway and unfolded protein response (UPR).

Crippa and colleagues identified an important component of the PQC system, the small HSPB8 as a chaperone in motor neurons which recognizes and promotes the removal of misfolded proteins specifically by facilitating the autophagic response by acting in conjunction with its co-chaperone BAG3 and the chaperone HSP70/HSC70 and CHIP. Based on these findings, the authors set up a high throughput screening (HTS) to identify commercially available FDA-approved small molecules able to enhance HSPB8 expression as therapeutic treatment of MNDs. Among these, colchicine and doxorubicin strongly up-regulated in a dose-dependent manner the expression of HSPB8 and the markers of autophagy p62 and LC3. Although both drugs are approved by the FDA for the treatment of human diseases, concerns regarding the safety of chronic treatment still remain. “It is fundamental to define the molecular mechanism of HSPB8 over-expression induced by these compounds” the authors stated, “and test the toxicity of chronic treatment in animal models. Next studies will be aimed at clarifying the therapeutic potential of these molecules and whether the induction of HSPB8 can improve clinical signs of disease and extend survival of affected animals. Drosophila models of ALS have shown that the silencing of HSPB8 worsen while its overexpression rescued the phenotype and K141E and K141N SNPs of HSPB8 have been associated to neuromuscular disorders in humans. Therefore, the use of mice models of ALS and SBMA crossed with mice over-expressing HSPB8 will definitely elucidate the role of this protein in the autophagy of misfolded proteins in MNDs and support the design of HSPB8 enhancers characterized by better safety and tolerability profiles”.

Adverse Effects of Plant Food Supplements Self-Reported by Consumers in the PlantLIBRA Survey Involving Six European Countries


The use of food supplements containing botanicals is increasing among European consumers. In this context, the present study, supported by the European Community’s Seventh Framework Programme data, was focused on the self-reported adverse effects to plant food supplements (PFS) collected during the PlantLIBRA consumer’s survey. Although intended to maintain a health status, cases of adverse effects to PFS have been described. The cases of adverse effects described in the paper of Restani and colleagues are in agreement with data published in other scientific papers and in particular with the survey performed by the PlantLIBRA project among Poison Centers. “This is the third paper on adverse effects from the European project PlantLIBRA, based mainly on the benefit and risk assessment of PFS, which has involved 25 partners in 4 continents. The first study was focused on collecting published data, the second study collected data registered in the last 5 years by European Poison centers and this last paper involves self-reported cases by consumers in 6 European countries”, said the author Prof. Pa-trizia Restani. The study reported that severe adverse effects related to PFS are quite rare, while mild or moderate adverse effects not requiring clinical support can be found. Approximately 60% of adverse events were related to gastrointestinal symptoms,
During adolescence, the brain hasn’t reached its final and mature structure and, therefore, the use of psychoactive drugs might alter its proper development, thus leading to impairments in brain physiological neuroplasticity. In this context, neurotrophic factors may play a crucial role in the psychostimulant-induced neuroplasticity. In particular, fibroblast growth factor 2 (FGF-2) appears to be finely modulated by dopamine and psychostimulants acting on dopaminergic system, such as cocaine or amphetamines. “Adolescence is recognized as a period of high vulnerability to drugs of abuse; therefore, unraveling the molecular signatures underlying such a vulnerability is a crucial step for the development of therapeutic strategies.” With this statement, the first author Giuseppe Giannotti, a former PhD student in the lab of Professor Fumagalli, now working at the Dept. of Neuroscience at the Medical University of South Carolina, underlined the relevance of this study in the research on cocaine addiction.

By using a fine micro-dissection technique, the group of Prof. Fumagalli has shown that repeated exposure to cocaine during adolescence causes a widespread and region-specific reduction of FGF-2 in different reward-related brain sub-regions. “These results” continued Dr. Giannotti, “support the notion that cocaine impacts brain homeostasis via modulation of neurotrophic factors system, suggesting that developmental cocaine-induced maladaptive changes may sustain drug-taking behavior.” These data also point to FGF-2 as a potential target for developing therapeutic strategies to modulate addictive behaviors, unraveling previous unappreciated region-specific cocaine-induced modulation of neurotrophin.
Nico Mitro is an Associate Professor of Biochemistry at the DiSFeB. Graduated in Pharmaceutical Biotechnology at the DiSFeB and Ph.D. in Experimental Medicine: Atherosclerosis at the University of Siena. His research is focused on the biochemical role of novel metabolic regulators to understand their function in metabolic disorders. He tries to fight the exponential growth of his adipocytes by skiing, playing soccer and tennis, however a pasta dish always favors his fat to win the challenge!


He still runs 8 km every morning, rain or shine, as he started to back in the days of his dissertation work. He loves skiing, but raising a 4-year-old in Tokyo provides the bulk of the fun.

### Which are the best and worst aspects of your job?

Prof. Nico Mitro: I enjoy the frenzy of waiting for an experimental data, the joy of getting a project granted and passing down the passion for research to students. I dislike colleagues cheering for the other minor Milan soccer team (Inter), bureaucracy and unfunded projects.

Dr. Michele Raviscioni: I enjoy the variety and fast pace of my job, the opportunity to be involved in important issues (no dull moments) and the chance to work with amazing people. I must admit I am quite happy with my job, but could do with less travel and a more predictable schedule.

### Why did you decide to leave academia and work for a company?

Prof. Nico Mitro: Actually, it was not my choice! I had a postdoctoral position offer at Harvard but my wife got a position in San Diego, a little bit too far from Boston. If I wanted to live several years as a priest, this would have been the optimal condition. However, my Mediterranean origin forced me to search for a job in San Diego and the Genomics Institute of Novartis Research Foundation hired me.

Dr. Michele Raviscioni: I believe I have sub-clinical Attention Deficit and Hyperactivity Disorder (ADHD), or maybe I am just too impatient so the pace of research and scientific discovery just did not work for me.

### Why have you decided to go back to academia?

Prof. Nico Mitro: “You never forget your first love”, this is actually true for me. In academia you feel like a “free spirit” meaning that you can follow everything that stimulates your curiosity. This is not possible in industry.

Dr. Michele Raviscioni: As I have grown in my role, I have had the chance to collaborate with amazing clients and colleagues who appreciate my work and trust my partnership. I am part of a wonderful team and a great client community. I am too grateful and committed to quit. And my ADHD has worsened!

### Why have you decided to stay in industry?

Prof. Nico Mitro: Students and researchers grown at the DiSFeB have a higher level of training compared to others around the world that will bring them to be a step ahead once they become mature scientists.

Dr. Michele Raviscioni: At the DiSFeB, I have learned to be self-reliant, resourceful, problem-solving oriented and not to accept mediocrity. I have learned a great deal about pharmacology and biology that still comes in handy today.

### What added value has your career gained from your experience at the DiSFeB?

Prof. Nico Mitro: By growing at the DiSFeB, I have learned to be self-reliant, resourceful, problem-solving oriented and not to accept mediocrity. I have learned a great deal about pharmacology and biology that still comes in handy today.

Dr. Michele Raviscioni: Follow your passion and understand your personality. Technical skills can be learned or developed, but individual energy and motivation are harder to acquire. Don’t underestimate your value in the marketplace. Talent shortage is the most pressing problem in the healthcare industry anywhere, and finding the best people is what every CEO worries about all the time. Be distinctive and don’t be shy to show an all-round personality, be interesting, multi-faceted, articulate.

### Which is your advice to young people who are about to choose their career path?

Prof. Nico Mitro: Only a suggestion: follow your passion, don’t be afraid!

Dr. Michele Raviscioni: Follow your passion and understand your personality. Technical skills can be learned or developed, but individual energy and motivation are harder to acquire. Don’t underestimate your value in the marketplace. Talent shortage is the most pressing problem in the healthcare industry anywhere, and finding the best people is what every CEO worries about all the time. Be distinctive and don’t be shy to show an all-round personality, be interesting, multi-faceted, articulate.
The seventh edition of Next Step (NS) was once again the opportunity for young researchers of the DiSFeB to present their scientific contribution to the fields of neuroscience, immunology, cardiology, metabolism and nutraceutical with oral presentations.

“I’ve just got my master’s degree and NS was my first opportunity to present my results and to discuss them in an informal way with other scientists” told us a young research fellow of the DiSFeB. “The day schedule was perfect. Oral presentations in the morning and a workshop in the afternoon: a set up that worked very well. Moreover, we had the opportunity to learn how to disseminate our results in a proper way thanks to Prof. Martin Kater who provided us with precious info. I hope that also NS8 will organize other useful meetings”, a post-doc said with enthusiasm in reference to the workshop held by Prof. Kater on “How to write a scientific paper” (for detailed info, see article below).

Also the new session for researchers involved in the “Marie Curie” program had a positive impact, as highlighted by a group of PhD students from other Departments of the University of Milano - La Statale, one of them told us: “I was not aware of the quantity of foreign scientists working/collaborating within our department and I was impressed about the quality of their projects!”. One of the participants expressed a regret: “why wasn’t there an award for the best presentation this year? I wish there was one: an award is an encouragement especially for young people”. And while we are already thinking of the next step that could be to involve researchers from other institutions in Lombardia, we would like to point out that the last edition with its new insights was once again a success...so let’s keep up the good work, we all have great expectations for NS8!

### How to write a scientific paper

In the afternoon session of the Next Step, Martin Kater (DiSFeB) ran the workshop: “How to write a scientific paper” focused on a topic of wide interest among scientists. He accepted our invitation to talk about his contribution to Next Step and, welcomed us in the fascinating Brera Botanical Garden of our University in Milano, which Kater has been directing since 2013, in parallel with his activity as teacher and scientist.

Martin, publishing a paper on an international journal is becoming more and more difficult. The number of articles a journal editor faces every day is enormous and the high scientific value of works makes the acceptance process really competitive. What is your suggestion to young researchers who want their papers to be more effective?

The crucial points to publish a paper can be summarized as follows:

- The title should be attractive, summarizing in few words the main aspect of the research.
- The keywords should be chosen carefully characterizing the content of your paper, avoiding the use of terms contained in the title.
- The abstract plays a crucial role in the review process. It is usually the first part of an article to be read by the editor, thus it needs to be interesting, accessible and simple, reporting the aims and the main findings of the study. These aspects should be kept in mind after the publication as well, since the article visibility and, consequently, its number of citations in other papers is of growing importance to quantify the impact of a study.
- The article has to be simple and understandable. The Introduction should not be too general, it should contain only the state of the art on an issue, addressing to the main purpose of the article. The section “Materials and Methods” should be described in details, avoiding to repeat the description of methods reported in other publications. The Results should be concise, coherent, described with a logical consequentiality, selected among the most significant ones, keeping always in mind the aims of the article. Do not include redundant or useless data that distract the reader without improving the quality of the paper. The Discussion should interpret the results in the light of what is already known about the object of the study, explaining the new understanding of the problem and the next steps of the research. Last but not least, don’t overlook the cover letter that should report the novelty of the work in addition to the main reasons why the journal has been chosen by authors.

The value of a paper in terms of quality of research is fundamental. In your experience as a co-editor for the journal The Plant Cell, have you ever found yourself in an unfortunate situation related to lack of integrity and professionalism by the authors of a paper?

The ethical issue is fundamental, not only for researchers, but also for the entire community. Cases of data plagiarism have been unmasked, also thanks to the help of online platforms dedicated to post-publication peer-review (e.g. PubPeer). Other debated, yet less problematic, is the habit to cite review papers instead of original articles that are the ones entitled to get credit for their work.
H2020: A European network for fighting bacterial resistance to multiple drugs

H2020-MSCA-ITN (Marie Skłodowska-Curie Innovative Training Networks) is a European initiative aimed at training a new generation of creative, entrepreneurial and innovative early-stage researchers, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit. The MSCA-ITN programme also promotes international, interdisciplinary and cross-sectoral programmes, fostering a strong partnership between Academia and Industry.

Alessandra Polissi, who recently joined the DiSFeB as associate professor of Microbiology, has recently obtained this prestigious grant. She is the coordinator of a large network that includes seven universities and seven companies that together form a strong multidisciplinary and inter-sectoral consortium focused on antimicrobial research, fourteen entities from eight different countries across Europe. The project, that has a great relevance both for the scientific community and the society, is focused on the generation of novel antibiotics targeting the envelope protein machinery.

Alessandra has expressed the urgency of discovering new antibiotics, since the rapid increase and spread of strains resistant to multiple drugs (MDR) clinicians is giving very limited options to treat certain infections. Defined “antibiotic resistance crisis”, this issue is to be considered a global threat to public health, with a huge impact on healthcare expenses. The concerns are even higher for Gram-negative bacteria, whose complex cell envelope architecture, together with the presence of the outer membrane, represent a low-permeability barrier able to prevent the entrance of many drugs and therefore making these bacteria intrinsically resistant to many clinically available antibiotics.

“The development of antibiotic resistance in bacteria is a natural phenomenon” said Alessandra. First, bacteria have a higher ability than eukaryotes to evolve and to adapt to changing environmental conditions. Secondly, a prominent factor in the spread of antibiotic resistance determinants is the so called “horizontal gene transfer”, in other words, the bacterial ability to transfer genetic information interspecies and inter-domain. Besides these natural events, MDR increase is also caused by the extensive and often inappropriate use of antibiotics, especially in some countries, as it happens in Italy. Last but not least, the ‘antibiotic resistance crisis’ has taken advantage of a lag in antibiotics discovery and development programs, mainly due to economic reasons. Indeed, many pharmaceutical companies have addressed their attention to the development of drugs for long-term rather than short-term therapies, such as the antibacterial ones, and this is the reason why the last twenty years have been characterized by a lack of new classes of antibiotics.

This scenario shows that now, more than ever, research and development of new antibiotics have become mandatory. Within this context, the project coordinated by Alessandra meets the need for a highly qualified European research activity in antimicrobial drug discovery, by conducting frontier base research in microbiology and contributing to developmental antibacterial discovery programmes.

The development of novel compounds, targeting the protein machineries that build the cell envelopes, might finally make drugs to treat patients with infections by Gram-negative multidrug resistant bacteria available.

NeuroNest workshops: novel insights into neuroscience, from empathy to neurobiology

An impressive series of meetings was organized by the strategic research team of NeuroNest (Neuroscience Network at Satale) last winter and spring. The group was born in 2014 and established an interdisciplinary network of scientists involved in basic and clinical research in the field of neuroscience with a mission to build up a discussion on several aspects of the multifaceted complexity of the nervous system, from the newest striking findings in neuroscience to a wider analysis of their social and cultural implications.

In April and June, NeuroNest organized two multidisciplinary workshops with the active help of scientists from the DiSFeB. The topics were always discussed with an innovating approach, debating medical, biomolecular, social and philosophical aspects.

The first workshop, focused on memory and empathy, took advantage of the contribution of neuroscientists, philosophers and jurists. Several aspects concerning empathy, the ability to understand or feel what another person is experiencing, were dissected, through an analysis of cognitive and emotional features. New highlights within neuroethics were debated by describing novel methods for research on empathy, with a provoking mention on artificial intelligence. Moreover, an interesting discussion on cellular reprogramming in autism spectrum disorders was held, highlighting the implication of genetics in the pathophysiology of these diseases, and an elegant talk underlined the role of perinatal adverse events in the development of neuropsychiatric disorders. On the other hand, in the afternoon, the neurobiological basis of learning and memory were analysed with particular attention to the mechanisms that induce alterations of the cognitive functions. Participants debated topics as the “living will”, the possibility to declare in advance what actions should be taken for personal healthcare in case the patient is no longer able to make decisions for himself because of illness or incapacity.

The second workshop offered a critical and polyhedral discussion on current therapeutic challenges concerning mood disorders and addiction, analysing their biological and social implications. During the first part of the day, scientists focused on the effects of environment and life experiences in the pathophysiology of neuropsychiatric diseases, introducing new clinical tools for the diagnosis of depression and bipolar disorders, and providing interesting exchanges on the link between mental disorders, crime and imput-
ability. During the afternoon, the discussion converged on the analysis of new aspects of addiction, with an extensive analysis of its biological basis and of the definition of new compulsive habits in our society, including internet dependence. Indeed, this new point of view on addiction disorders was an interesting take-home-message, as highlighted by one of the speaker from the DiSFeB Dr Lucia Caffino who pointed out how “beside the compulsive use of chemicals, also new behavioural dependencies alter the brain ability to feel pleasure and to perceive external stimuli increasing social and economic burdens of addictive disorders and the onset of drug-related psychopathologies”.

In the last part of the meeting, the analysis of social implications of addiction did not miss the economic approach, highlighting the importance of observing consumer behaviours and emotional reactions towards advertisements in developing new marketing strategies.

Of note, from February to June, NeuroNest arranged a cycle of stimulating seminars entitled “NeuroNest Mondays”. Monthly, a member of NeuroNest hosted a scientist from an outstanding European University, offering the possibility to debate several topics that covered neurodegenerative diseases, pain, stress and social behaviours. These initiatives brought to Milan scientists with international relevance, and were a great opportunity to exchange ideas and to better understand the state of the art in neuroscience.

---

**DiSFeB Grants & Awards**

**DiSFeB Grants - May 2016-September 2016**

- **Fondazione Telethon Call 2016**: “Contribution of lipids and their oxidized metabolites on arrhythmogenic cardiomyopathy pathogenesis”. Head of research unit: Alberto DiLuca.
- **Joint mobility program funded by MIUR-DAAD**: “Sero-tonin and BDNF”. Principal investigator: Francesca Calabrese.
- **Fondazione Nando ed Elsa Peretti**: “Role of Brain Derived Neurotrophic Factor (BDNF) in anorexia nervosa: pathogenic mechanism and therapeutic potential”. Principal investigator: Fabio Fumagalli.
- **Aspire Cardiovascular competitive research grants program 2016**: “Unveiling the role of PCSK9 in heart physiology: focus on fatty acid metabolism, mitochondrial function and lipotoxicity”. Principal investigator: Giuseppe Danilo Norata.
- **MIUR – Call PRIN 2015**: “From RNA to Protein toxicity in motorneuron diseases”. Coordinator: Angelo Poletti.
- **MIUR – Call PRIN 2015**: “Stress in adolescence: dalle alterazioni cognitive alla suscettibilità per le patologie psichiatriche”. Coordinator: Marco Andrea Riva.
- **MIUR – Call PRIN 2015**: “Neuromimoinflammazione nel dolore cronico e in un modello transgenico di Alzheimer: alterazioni sensoriali e cognitivo-comportamentali e nuove prospet-ive terapeutiche”. Head of research unit: Francesca Calabrese.
- **MIUR – Call PRIN 2015**: “From mother to child health flow: the impact of the endocrine disruptor chemical Bisphenol A (BPA)”. Head of research unit: Alessandra Colciago.
- **MIUR – Call PRIN 2015**: “Targeting early synaptic dysfunc-tions induced by alpha-synuclein as a novel therapeutic approach in Parkinson’s disease”. Head of research unit: Fabrizio Gardoni.
- **MIUR – Call PRIN 2015**: “Useful experimental models for dissecting the molecular links between cancer development/progression and the obesity epidemic”. Head of research unit: Patrizia Limonta.
- **MIUR – Call PRIN 2015**: “Risposte maladaptative dello stress: studio dei meccanismi che le regolano per identificare nuovi bersagli terapeutici nelle malattie neuropsichiatriche”. Head of research unit: Maurizio Popoli.
- **MIUR – Call PRIN 2015**: “Towards multi-stage drugs to fight poverty related and neglected parasitic diseases: synthetic and natural compounds directed against Leishmania, Plasmodium and Schistosoma life stages and assessment of their mechanisms of action”. Head of research unit: Donatella Taramelli.

..and awards - May 2016-September 2016

- **Veronica Bonalume** won a grant from the Scuola Superiore Studi Avanzati (SIS-SA) of Trieste to attend the Summer School of electrophysiology “6th Neuron Technology Summer School. From Electrophysiology to Imaging and BioNano-technology”, June, 20th - July 1st 2016.
- **Lucia Caffino** won a travel grant of the International Brain Research Organization (IBRO) within the context of the International Travel Grant Program to attend the 10th FENS Forum of Neuroscience, Copenhagen, July 2nd – 6th 2016.
- **Margherita Botta** won a grant to attend the Summer School “International Atherosclerosis Research School”, Hamburg, August 21st – 27th 2016.
- **Alessia Luoni** and **Alessandra Ferrari** won 2 grants from the “Ermenegildo Zegna Founder’s Scholarship”, a program aimed at helping young scientists to take up their research path or a specialization after their degree abroad.
- **Marina Montagnani Marelli** has been awarded by The Scientific Commitee of Nutrimi as “Professionista della Nutrizione” (Nutrition Specialist).
- **Marco Busnelli** won a SISA scholarship, in the name of Prof. Andrea Mezzetti, to work on his research projects in Italy or abroad.
- **Alessia Luoni** won a IBRO (International Brain Research Organization) scholarship to work on her research projects in Italy or abroad.
- **Lucia Caffino** won a grant SIF-Farmindustria per Ricerche Farmacologiche.
- **Federica Falchi** won a scholarship FEMS (Federation of European Microbiological Societies).
The DiSFeB promotes several post-graduate courses for the academic year 2016/17, whose calls are published or are about to be published:

For the second year, a new Master Course in English, “Safety Assessment of Xenobiotics and Biotechnological Products”, is proposed by DiSFeB with the aim of providing specific knowledge in the analysis and assessment of risk according to international standards. The peculiarity of this Master Course, which is unique in Italy and rare to be found in Europe, is a strong focus on the application of the international rules through an integrated study of different areas such as legislation, chemistry, toxicology, pharmacology, biotechnology and analysis of the risk. For further information, refer to: http://www.farmacia.unimi.it/Corsi-DiLaurea/2016/E52of1/index_ITA_HTML.html or write to: saxbi@unimi.it

On the 13th of June a meeting to spread the Opening Universi- ties for Virtual Mobility (OUVM) initiative was held at the DiS- FeB. OUVM is a network formed by five European Universities in Italy, Spain, Portugal, Belgium and Lithuania, offering mas- ter students, enrolled in one of the member institutions, the possibility to attend online courses. Students are required to follow virtual classes with pre-defined time schedules and to accomplish tasks by cooperating online with their foreign fellows. Thanks to this innovative project, students have the unique opportunity to attend international classes, interacting with people from different countries around Europe without leaving home. The students involved confirmed that studying within an international environment helped them to improve collaboration strategies with people with different backgrounds, practice communication and ICT skills. Although virtual mobility cannot and should not replace physical mobility, the project is indeed a great opportunity for those students who would like to live an intercultural experience and provide their CV with an international impact but cannot afford to study and live abroad. More info at http://openstudies.eu/

DiSFeB Seminars

<table>
<thead>
<tr>
<th>NEXT SEMINARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>19th December 2016, Riccardo Cristofanti (lab Prof. A.Poletti): Protein quality control in Spinal Bulbar Muscular Atrophy and Amyotrophic Lateral Sclerosis: the role of dynein motor protein</td>
</tr>
<tr>
<td>23rd February 2017, Silvia Marchianò (lab Prof. A.Corsini-N.Ferri): Direct effect of PCSK9 on arterial vascular wall: in vitro, in vivo and clinical evidences</td>
</tr>
<tr>
<td>26th January 2017, Cecilia Vitali (lab Prof. L.Calabresi): New insights into Endothelial Lipase function</td>
</tr>
<tr>
<td>23rd March 2017, Marzia Pesaresi (lab Prof. R.Melcangi): Diabetes induces early transient changes in the content of motor protein in sciatic nerve</td>
</tr>
</tbody>
</table>

DiSFeB educational

MASTERS:
- Master di secondo livello in Farmacia e Farmacologia Oncologica - Coordinator: Alberto Corsini
  For info, write to: alberto.corsini@unimi.it
- Master di secondo livello in Farmacovigilanza - Coordinator: Alberico Catapano
  For info, write to: segreteria@sefap.it
  Website: www.sefap.it, http://masterfv.ariel.ctu.unimi.it

SPECIALIZED COURSES:
- Farmacia oncologica – Coordinator: Alberto Corsini
  For info, write to: alberto.corsini@unimi.it
- Farmacovigilanza – Coordinator: Alberico Catapano
  For info, write to: segreteria@sefap.it, segreteria.sefap@unimi.it
  Website: http://www.sefap.it, http://ariel.unimi.it
- Media e salute: tecniche e strategie per una comunicazione efficace – Coordinator: Alberto Corsini
  For info, write to: centrostudifarmaco@unimi.it
- Nutrizione e benessere – Coordinator: Paolo Magni
  For info, write to: stefano.bernardinelli@unimi.it
  Website: http://nb.ariel.ctu.unimi.it

Masters:
- Master di secondo livello in Farmacia e Farmacologia Oncologica - Coordinator: Alberto Corsini
  For info, write to: alberto.corsini@unimi.it
- Master di secondo livello in Farmacovigilanza - Coordinator: Alberico Catapano
  For info, write to: segreteria@sefap.it
  Website: www.sefap.it, http://masterfv.ariel.ctu.unimi.it

On the 13th of June a meeting to spread the Opening Universities for Virtual Mobility (OUVM) initiative was held at the DiS-FeB. OUVM is a network formed by five European Universities in Italy, Spain, Portugal, Belgium and Lithuania, offering master students, enrolled in one of the member institutions, the possibility to attend online courses. Students are required to follow virtual classes with pre-defined time schedules and to accomplish tasks by cooperating online with their foreign fellows. Thanks to this innovative project, students have the unique opportunity to attend international classes, interacting