

The BBVA Foundation transforms its Frontiers of Knowledge Awards ceremony into a tribute to the whole scientific and creative community

- Francisco González, President of the BBVA Foundation, affirmed that these awards are necessary "so that younger generations model themselves on people whose activity not only brings them an inner richness and satisfaction but also favors our collective wellbeing, while fostering new opportunities and respect for the environment"
- All the laureates in the fifth edition refer to the stature of Spanish science. They also stress the role of knowledge at the service of society and the need for innovation that does not shy away from risk
- The three women among this year's awardees share the characteristic of having occupied posts of responsibility within the scientific community or in the government administration

Madrid, June 20 2013.- Science as a guide to decisions that will shape the future, as a source of life-altering ideas and technologies, as a route to discoveries that change attitudes and end up permeating culture. The presentation ceremony of the fifth edition of the BBVA Foundation Frontiers of Knowledge Awards, which took place this evening in the Marqués de Salamanca Palace, Madrid, became above all a tribute to the scientific and creative work and its transformative power in the person and achievements of the ten laureates.

Francisco González, President of the BBVA Foundation, and Emilio Lora Tamayo, President of the Spanish National Research Council (CSIC), handed over the awards at an event that welcomed eminent representatives of the international scientific community as well as leading figures in Spanish business and culture.

The BBVA Foundation President began his speech reaffirming BBVA's engagement with knowledge. In these times of crisis, he said, as well as offering personalized solutions to our clients, "we have kept up our support for science, culture, education and social programs in Spain, Latin America and the 32 countries where BBVA is present."

González also remarked that these awards were established prior to the onset of the economic crisis, adding that “if BBVA was convinced then that this was a worthwhile project, today, at a moment when the end of the tunnel is coming into sight, that conviction, and our commitment, are stronger than ever.”

A CALL TO ENCOURAGE AND REWARD RESEARCHERS AND CREATORS

The President of the BBVA Foundation insisted that more needs doing to encourage and reward the work being done by researchers and creative practitioners of excellence, whose degree of social recognition “ranks well below that accorded to professions and activities with far less bearing on society’s wellbeing.” The Frontiers Awards, he added, are in this respect “a tribute to specific individuals, groups and teams but also the entire community of scientists and artists.”

This recognition is also vital “so the young generations model themselves on people whose activity not only brings them an inner richness and satisfaction but also favors our collective wellbeing, while fostering new opportunities and respect for the environment.”

The transforming power of science as a guide to decisions that will shape the future, as a source of life-altering ideas and technologies, as a route to discoveries that change attitudes and permeate culture was present throughout the Frontiers of Knowledge Awards ceremony in the person and achievements of the ten honorees.

Susan Solomon discovered the cause of ozone-layer depletion, and led the thousands of scientists who reached the conclusion that human activity was altering the climate. Jane Lubchenco laid the scientific groundwork for the design of marine reserves. Ingrid Daubechies and David Mumford developed mathematical tools of transcendental value for efficient data compression and computer vision technology respectively. Douglas Coleman and Jeffrey Friedman discovered the appetite-regulating leptin hormone, thus showing that obesity was a genetic condition.

Lotfi Zadeh invented fuzzy logic, and, with it, a new way to issue instructions to machines. Paul Milgrom improved the design of global auctions. Drugs for Neglected Diseases (DNDi) is making treatments available for conditions that threaten billions of people, but which are not a priority for the pharmaceutical industry. And Pierre Boulez has uniquely combined composition, orchestral conducting and institutional leadership in his ceaseless pursuit of creative innovation.

In their acceptance speeches, the Frontiers awardees echoed the words of the BBVA Foundation President in calling for increased support for knowledge in all its variants, including those that might seem aloof from society's concerns. "Sometimes mathematics is seen as living in an ivory tower, speaking its own language and leaving the world behind in ever subtler abstractions. But actually, parts of pure math are always finding new and unexpected links through which they illuminate real world situations, and vice versa," declared David Mumford, honored alongside Ingrid Daubechies in the Basic Sciences category.

Jane Lubchenco, Ecology and Conservation Biology laureate, while convinced that scientific information can help guide our steps towards better ocean conservation, added that "public awareness and political will are also sorely needed. So I am asking you to please join with me in raising awareness and action for healthy oceans."

For Climate Change awardee Susan Solomon, there are grounds to believe that we can win the fight against planetary warming: "It's people that make me an optimist, because just like in the case of ozone, many people are curious and inventive about this problem. They can be turned on both to understanding science and to the search for solutions."

POINTS OF ENCOUNTER WITH SPAIN

Many of the international protagonists of tonight's ceremony took time in their speeches to praise the achievements of Spanish science. Mumford, for instance, affirmed that "Spain is an exciting country for mathematics today. Going back to the farsighted efforts of Julio Rey Pastor (...), Spanish mathematicians have taken their place on the world stage." He also said that in studying models of the brain, he had been greatly influenced by the Spanish neuro-biologist Santiago Ramon y Cajal. A name also conjured by Jeffrey Friedman, joint winner with Douglas Coleman in the Biomedicine category, who placed the Spanish Nobel laureate at the birth of a revolutionary scientific wave culminating in achievements like his own work on leptin's role in regulating appetite.

And Lotfi Zadeh, honored in Information and Communication Technologies, expressed his thanks to the Spanish scientific community which was among the first to understand and embrace the controversial field of fuzzy logic.

For Paul Milgrom: "In economics, as in most sciences, important work is only rarely done by a lonely genius (...). I am here because I was lucky enough to have been an actor in a great play with many roles." And the Economics, Finance and Management laureate also devoted time in his acknowledgments to collaborators working in Spain.

Ingrid Daubechies, current President of the International Mathematical Union, remarked on the breadth and variety of categories in the BBVA Foundation

Frontiers of Knowledge Awards family: "It is good to bring together and to celebrate, in one ceremony, creativity expressed in many different directions of human endeavor." An affirmation taken up by Pierre Boulez, awardee in Contemporary Music, who dedicated the prize to "those forming part of this small adventurous community who are always ready to run the risk of being radical."

Douglas Coleman looked back at the chain of good decisions that led him to his chosen career, and Bernard Pécoul, head of DNDi – honored in the development Cooperation category – recalled how in its ten years of life, the initiative had grown from being the dream of a small determined group to an organization developing and delivering life-saving treatments to millions of people in need. Pécoul closed his speech with a quote from Spanish poet Antonio Machado: "*Si es bueno vivir, todavía es mejor soñar, y lo mejor de todo, despertar* [if living is good, dreaming is better, and awakening is the best of all]."

Francisco González, finally, proposed a route map for the coming years, namely "to go on accumulating knowledge-based resources, ensure that they are properly exploited, and put in place competitiveness levers consisting of the productive use of knowledge by the corporate sector, through the vehicle of ongoing innovation. This is a route that will demand strengthening our scientific and innovation environment not just to produce the best knowledge, but to ensure that a significant portion of the research being done is channeled, through partners in industry, to satisfy the needs and demands of society."

AWARDS CONGRUENT WITH THE KNOWLEDGE MAP OF THE 21ST CENTURY

The BBVA Foundation established its Frontiers of Knowledge Awards in 2008 to recognize the authors of outstanding contributions and radical advances in a broad range of scientific and technological areas characteristic of our times. It is supported in this enterprise by the Spanish National Research Council (CSIC), Spain's premiere public organization for multidisciplinary research.

The eight categories of the BBVA Foundation Frontiers of Knowledge Awards respond to the knowledge map of the early 21st century, including some of the key global challenges of our times : Ecology and Conservation Biology, Climate Change, Information and Communication Technologies and Development Cooperation. These stand alongside the classic categories of Basic Sciences, Biomedicine and Economics, Finance and Management. Finally, the award family is completed by Contemporary Music, an art at the leading edge of cultural innovation, where Spain is home to a wide and talented community of authors, conductors and performers.

FRONTIERS ARTWORK

All awardees were presented with an artwork by sculptor Blanca Muñoz (Madrid,

1963), based on a series of spirals that represent the progress and interrelation of scientific disciplines. The spiral, in the words of the author, "is the optimal solution for growth in a limited space as well as the best way to represent continuity."

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For more information, contact the BBVA Foundation Communication Department
(+34 91 374 5210 or +34 91 537 3769/comunicación@bbva.es) or visit the
Foundation webs www.fbbva.es