

Cancer researcher Joan Massagué wins the BBVA Foundation Frontiers of Knowledge Award in Biomedicine

- Massagué is Spain's most internationally cited working scientist
- His research has opened up fundamental new avenues in our understanding of cancer and metastasis
- This international award comes with prize money of 400,000 euros

January 27, 2009.- The BBVA Foundation Frontiers of Knowledge Award in the Biomedicine category has gone in this inaugural edition to cancer researcher Joan Massagué i Solé (Barcelona, 1953), Spain's most internationally cited working scientist. Massagué's research has elucidated fundamental processes that control cell division and identified genes playing a key role in tumor generation and metastasis. This is work "with great potential for clinical application", in the words of the jury chaired by Nobel laureate in Physiology and Medicine, Torsten Wiesel.

The BBVA Foundation Frontiers of Knowledge Awards seek to recognize and encourage world-class research at international level, and can be considered second only to the Nobel Prize in their monetary amount, an annual 3.2 million euros, and the breadth of the scientific and artistic areas covered.

The awards, organized in partnership with Spain's National Research Council (CSIC), take in eight categories carrying a cash prize of 400,000 euros each. The Biomedicine award, the third to be decided, is to honor contributions which significantly advance the stock of knowledge in this area for reasons of their importance and originality.

"We are striving to move forward the frontiers of oncology"

Massagué's first remarks on receiving the news were: "I am even more delighted given the ambitiousness of these awards, as evidenced by the stature of the winners in the two categories previously decided. And I am proud that an international initiative to recognize knowledge as future capital comes from an institution, the BBVA Foundation, of Spanish nationality".

On the merits that earned him this award, he explains: "In a field as wide as Biomedicine, the fact that the jury has singled out my work is an encouragement to my group and to other researchers in oncology. We are striving to move forward the frontiers of oncology, starting from the study of very basic aspects like cell biology and behavior, that are perhaps abstruse for most people, in order to

address others as concrete as metastasis, so that what yesterday seemed impossible is today a tentative promise and may in a few years' time become a solution”.

Joan Massagué is Chairman of the Cancer Biology and Genetics Program at the Memorial Sloan-Kettering Cancer Center, where he has pursued most of his scientific career. He is also a Howard Hughes Medical Institute investigator, and Adjunct Director of the Institute for Biomedical Research (IRB Barcelona). He has more than 340 publications to his name in leading scientific journals, which have been cited more than 62,000 times.

Joan Massagué's research stands out for the identification and characterization of the TGF-beta protein (transforming growth factor beta). This protein belongs to a large family of factors that regulate the cell division process. It is essential for the organism's normal development but is also implicated in disease processes such as malformations and cancer.

Great potential for clinical application

The jury's citation reads as follows: “The BBVA Foundation Frontiers of Knowledge Award in Biomedicine corresponding to the year 2008 has been conferred upon Dr. Joan Massagué for elucidating one of the fundamental processes that control cell division, namely, the machinery that conveys the growth inhibitory signal of TGF-beta from the cell membrane to the nucleus. Many of the components of this signaling transduction pathway have been identified and functionally characterized by Dr. Massagué. The TGF-beta pathway is crucial for the development of all animals, and when disrupted, contributes to diseases such as cancer. Massagué and colleagues have also developed novel approaches to identify genes involved in organ-specific metastasis. These studies have considerably increased the understanding of metastasis and have great potential for clinical application, given that 90 percent of cancer-related deaths are due to this invasive process”.

The jury in this inaugural edition of the Frontiers of Knowledge Awards, Biomedicine category, was chaired by Torsten Wiesel, Nobel Prize in Physiology and Medicine, and formed by Angelika Schnieke, Technical University of Munich (Germany), an expert on cloning and second author of the ‘Dolly’ paper; Bruce Whitelaw, a leading expert in transgenic animals, Roslin Institute (United Kingdom); Dario Alessi of the Scottish Institute for Cell Signalling (United Kingdom); Robin Lovell-Badge, of the National Institute for Medical Research (United Kingdom); Josep Baselga, oncologist in the Research Institute of Vall d’Hebron Hospital, Barcelona; and Juan Modolell, Severo Ochoa Molecular Biology Center, Madrid, holder of the ‘Santiago Ramón y Cajal’ National Research Prize in Biology.

Biomedicine is the third award to be decided in this first edition of the BBVA Foundation Frontiers of Knowledge Awards. The Climate Change award was granted to U.S. scientist Wallace S. Broecker, who predicted climate warming due to human activity three decades ago. The award in the Development Cooperation went to the Abdul Latif Jameel Poverty Action Lab (J-PAL) at the Massachusetts Institute of Technology (MIT).

The BBVA Foundation supports knowledge generation, scientific research and the promotion of culture, relaying the results of its work to society at large. This effort materializes in research projects, human capital investment, specialization courses, grants and awards. Among the Foundation's preferred areas of activity are basic sciences, biomedicine, ecology and conservation biology, the social sciences and literary and musical creation.

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For further information, contact the BBVA Foundation Press Office
(+34 91 537 6615/+34 94 487 4627)