A MISSION-ORIENTED APPROACH TO CANCER IN EUROPE:

BOOSTING THE SOCIAL IMPACT
OF INNOVATIVE CANCER RESEARCH

Organized by the Pontifical Academy of Sciences &
the European Academy of Cancer Sciences

CASINA PIO IV, Vatican City, 16 - 17 NOVEMBER 2018
Cancer is one of the leading health problems worldwide. In the European Union (EU) alone, the number of new cancer patients will increase annually from 2.6 million in 2012 to 3.3 million in 2030. During the same period, the cancer deaths will increase from 1.28 million to 1.67 million. A major problem for the health care organisations is the increasing number of patients living with a cancer diagnosis, a rise of still higher magnitude. The epidemiological figures for the EU, however, are not unique, as the trends are somewhat similar all over the world. Altogether, this tendency implies that current strategies for research, care, and prevention need to be revisited to balance the increasing cancer burden.

During the last 15 years, the cancer community and policy makers have been trying to develop strategies to bridge the gap between basic/preclinical and clinical research. As a result of these continuous and coordinated efforts, a patient-centred European consortium for therapeutics - Cancer Core Europe - connecting six major European cancer centres, most of them Comprehensive Cancer Centres (CCCs), was established in 2014 using a bottom-up approach. The virtual cancer centre/infrastructure has recently become a legal structure & currently comprises seven centres having the critical mass of multidisciplinary expertise, resources, patients, and data that is necessary to innovate in cancer research. By relying on CCCs, institutions linking therapeutics and prevention with research and education and that link research with the healthcare system, the virtual centre can connect research with the health care systems in each Member State.

Cancer Core Europe has provided an exceptional example of how to build communities, stimulate collaboration, foster knowledge, and create societal and economic added value across Europe. Inspired by Cancer Core Europe, a similar consortium addressing cancer prevention - Cancer Prevention Europe - was established early in 2017. The alliance, which links nine European cancer research centres, aims at integrating the prevention research continuum to innovative within this area. Currently, Cancer Core Europe and Cancer Prevention Europe are in the process of integrating therapeutics and prevention strategies to address in partnership the increasing cancer problem. By offering innovative approaches for cancer research, links to the healthcare systems, development of quality-assured multidisciplinary cancer care, as well as the assessment of long-term outcomes, the infrastructure is expected to serve as a hub to connect with other centres across Europe as well as on other continents.
At present, innovation has become a political issue in Europe, and research, the engine that fuels innovation, is under scrutiny. Both politicians and decision makers would like to see research resulting in innovations, and the general opinion is that the research input is good, but the impact on society is disappointing. As a result, the Commissioner for Research, Science and Innovation Carlos Moedas following the recommendations of the Lamy report “Investing in the European future we want”, decided to move from a challenge-driven to a mission-oriented approach to tackle global challenges. This development prompted Julio E. Celis and Dainius Pavalkis - members of the RISE High-level Group that advice Commissioner Moedas - to propose a mission in cancer (A mission-oriented approach to cancer in Europe: a joint mission/vision 2030; http://onlinelibrary.wiley.com/doi/10.1002/1878-0261.12143/full) based on the activities and objectives of Cancer Core Europe and Cancer Prevention Europe. The mission stated that “by combining innovative prevention and treatment strategies in a sustainable state-of-the-art virtual European cancer centre/infrastructure, it will be possible by 2030 to achieve long-term survival of 3 out of 4 cancer patients in countries with well-developed healthcare systems. Furthermore, the concerted actions will pave the way to handling the economic and social inequalities in countries with less-developed systems”. The Cancer Mission was recently discussed at the first Gago Conference on European Science Policy that took place at the i3S in Porto, Portugal on February 14, 2018. Closing the Conference, Commissioner Carlos Moedas confirmed his strong support for a mission-oriented approach to cancer in Horizon Europe.

In addition to addressing implementation issues, the Conference will address the social impact of cancer research, as well as the engagement of other continents (Open to the World/ Science Diplomacy).
# Programme

## Day 1 - Friday, November 16

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter/Details</th>
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<tbody>
<tr>
<td>14:00</td>
<td>Introduction and welcome by representatives of both Academies</td>
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<td></td>
<td>Marcelo Sánchez Sorondo, Chancellor, Pontifical Academy of Sciences</td>
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<td>Alexander Eggermont, President, European Academy of Cancer Sciences</td>
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<td>14:15</td>
<td>Opening presentations - Towards increasing the societal impact of cancer research</td>
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<td>Chair - Julio E. Celis</td>
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<tr>
<td>14:15</td>
<td>From the creation of the European Research Area to a potential Mission on Cancer in Horizon Europe</td>
<td>Julio E. Celis</td>
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<td>14:25</td>
<td>Commissioner for Research, Science and Innovation - Carlo Moedas (video message)</td>
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<td>14:35</td>
<td>Commissioner for Health and Food Safety - Vytenis Andriukaitis</td>
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<td>14:50</td>
<td>President of the European Parliament - Antonio Tajani (video message)</td>
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<td>15:00</td>
<td>Minister for Science, Technology and Higher Education, Portugal - Manuel Heitor</td>
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<td>15:15</td>
<td>Session 1: Scientific strategies towards a mission-oriented approach to cancer</td>
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<td>Introduction and chair - Anton Berns</td>
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<td>15:20</td>
<td>The cancer research continuum: Addressing the increasing burden of cancer - Ulrik Ringborg</td>
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<td>15:40</td>
<td>Cancer Core Europe: A hub and an engine to coordinate and optimize European efforts to innovate in cancer therapeutics - Alexander Eggermont</td>
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<td>16:00</td>
<td>Research environments for translational cancer research: The Comprehensive Cancer Centres (CCCs) of Excellence - Anton Berns</td>
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<td>16:20</td>
<td>Cancer Prevention Europe: Strategies to integrate cancer prevention research - Christopher Wild</td>
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<td>16:40</td>
<td>Coffee break</td>
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<td>17:00</td>
<td>Discussion: Implementing the mission - The how (Break 18:10-18:30)</td>
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<td>Invited discussants &amp; participation of the audience: Giovanni Apolone, Anton Berns, Thierry Boon-Falleur, Joachim von Braun, Carlos Caldas, Fabien Calvo, Fatima Carneiro, Julio E. Celis, Alexander Eggermont, Angelika Eggert, Stefan Fröhling, Bengt Jönsson, Denis Lacombe, Francesco de Lorenzo, Peter Nagy, Simon Oberst, Dainius Pavalkis, Thierry Philip, Ulrik Ringborg, Joachim Schüz, Erik Steinfelder, Josep Tabernero, Ethel de Villiers and Christopher Wild</td>
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<tr>
<td>19:30</td>
<td>Dinner at the Casina Pio IV</td>
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Day 2 - Saturday November 17

Session 2: Social impact of cancer research
09:00 Introduction - Ulrik Ringborg

09:10 Virus and cancer - Nobel Laureate Harald zur Hausen

09:30 Discussion: Social impact of cancer research
Invited discussants & participation by the audience: Fabien Calvo, Maria da Graça Carvalho, Alexander Eggermont, Ingemar Ernberg, Jesper Fisker, Harald zur Hausen, Bengt Jönsson, Pernilla Lagergren, Francesco de Lorenzo, Françoise Meunier, Simon Oberst, Karen Steindorf, Elisabete Weiderpass and Christopher Wild.

11:25 Lunch

Session 3: Open to the world: Engaging other continents (science diplomacy)
12:10 Introduction Chair - Cecilia Björner, Jan Tombinski

12:15 Discussion
Invited discussants & participation of the audience: Jozséf Bódis, Philippe Busquin, Maria da Graça Carvalho, Jesper Fisker, Marga Gual Soler, Manuel Heitor, Jan Lubiński, Teresa Riera Madurell, Edward De Robertis, Vikash Sewram, Huanming Yang, Otmar Wiestler, and Petras Zapolskas.

13:45 Concluding remarks - Ulrik Ringborg, Marcelo Sánchez Sorondo

Conclusions from the conference will be printed & distributed. Information will also be disseminated by a press release in connection with the conference.
PARTICIPANTS

1. Andriukaitis, Vytenis - Commissioner for health & food safety, European Commission
2. Apolone, Giovanni - Scientific Director, Istituto Nazionale dei Turmoil, Milan
3. Berns, Anton - Prof., The Netherlands Cancer Institute, Amsterdam
4. Björner, Cecilia - Ambassador, Swedish Embassy to the Holy See
6. Boon Falleur, Thierry - Former Director, Ludwig Institute for Cancer Research, Université Catholique de Louvain
7. Busquin, Philippe - Former Commissioner of Research, European Commission
8. Caldas, Carlos - Prof., Cancer Research UK, Cambridge
9. Calvo, Fabien - Scientific Director, Cancer Core Europe
10. Carnerio, Fatima - Prof., University of Porto
11. Celis, Julio E. - Associated Scientific Director, Danish Cancer Society Research Centre
12. Eggermont, Alexander - Director, Gustave Roussy, Paris
13. Eggert, Angelika - Prof., Charité Universitätsmedizin, Berlin
14. Emberg, Ingemar - Prof., Karolinska Institutet, Stockholm
15. Fisker, Jesper - Administrative Director, Danish Cancer Society
16. Fröhling, Stefan - Prof., National Center for Tumour Diseases, Heidelberg
17. von Gertten, Christina - Coordinator, European Academy of Cancer Sciences
18. da Graça Carvalho, Maria - Member of Unit 01 Scientific Advice Mechanism, European Commission
19. Gual Soler, Marga - Project Director, American Association for the Advancement of Science
20. zur Hausen, Harald - Prof., German Cancer Research Center, Heidelberg
21. Heitor, Manuel - Minister of Science, Technology & Higher Education, Portugal
22. Jönsson, Bengt - Prof., Stockholm School of Economics
23. Lacombe, Denis - Director General, European Organisation for Research and Treatment of Cancer
24. Lagergren, Pernilla - Prof., Karolinska Institutet, Stockholm
25. Lubiński, Jan - Prof., Pomeranian Medical University in Szczecin
26. de Lorenzo, Francesco - President, European Cancer Patient Coalition
27. Marino, Gabriella - Event Manager, Translator, Webmaster, Pontifical Academy of Sciences
28. Meunier, Françoise - Former Director General, European Organisation of Research and Treatment of Cancer
29. Nagy, Peter - Director, Research National Institute of Oncology, Budapest
30. Nilsson, Kristina - Program Officer, Swedish Embassy to the Holy See
32. Pavalkis, Dainius - Former Minister of Research and Education, Lithuania
33. Philip, Thierry - Director, Institut Curie, Paris
34. Riera Madurell, Teresa - Former member of the European Parliament, University of the Balearic Islands
35. Ringborg Ulrik - Director, Cancer Center Karolinska, Stockholm
36. De Robertis, Edward - Prof., University of California, Los Angeles
37. Sánchez Sorondo, Marcelo - Chancellor, Pontifical Academy of Sciences
38. Schüz, Joachim - Prof., International Agency for Research on Cancer
39. Sewram, Vikash Director, African Cancer Institute, Stellenbosch University
40. Steindorf, Karen - Prof., National Center for Tumor Diseases, Heidelberg
41. Steinfelder, Erik - Director General, BBMRI - ERICh
42. Tabernero, Josep - Director, Vall d'Hebron Institute of Oncology, Barcelona
43. Tombsinski, Jan - Head of Delegation of the European Union to the Holy See
44. de Villiers, Ethel - Prof., German Cancer Research Center, Heidelberg
45. Weiderpass, Elisabet - Prof., Karolinska Institutet, Stockholm
46. Wiestler, Otmar - President, Helmholtz Association of German Research Centres, Berlin
47. Wild, Christopher - Director, International Agency for Research on Cancer, Lyon
48. Yang, Huanming - Chairman & co-founder, Beijing Genomics Institute
49. Zapolskas, Petras - Ambassador, Lithuanian Embassy to the Holy See
Acknowledgements
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