International Agency for Research on Cancer

World Health Organization

Governing Council **GC/61/3**
Sixty-first Session 04/02/2019

Lyon, 16–17 May 2019
Auditorium

REPORT OF THE SCIENTIFIC COUNCIL ON ITS FIFTY-FIFTH SESSION

INTRODUCTION

1. The Fifty-fifth Session of the Scientific Council (SC) of the International Agency for Research on Cancer (IARC) was opened by Dr Giske Ursin (Chairperson of the Scientific Council), at 09:00 on Wednesday 30 January 2019. She welcomed the participants, including the new members of the Scientific Council, Drs Hendriek Boshuizen (Netherlands), James Robert Cerhan (USA), Janne Mikael Pitkäniemi (Finland), Sabine Rohrmann (Switzerland), Anne Tjønneland (Denmark) and Kazem Zendehdel (Iran (Islamic Republic of)).

2. She also welcomed Drs Stephen Robbins (Vice-Chairperson of the Governing Council (GC), Canada), Dr Svetlana Akselrod (WHO Representative) and Professor Béatrice Fervers (Centre Léon Bérard – Observer).

3. Apologies for absence were received from Drs Boris Alekseev (Russian Federation), Atsushi Ochiai (Japan), Mads Melbye (Chairperson GC, Denmark), Dr Jacqueline Clavel (France) and the Union for International Cancer Control (UICC, Observer).

4. For ease of reference a list of acronyms of Sections and Groups can be found in Annex 1 at the end of this Report.

DECLARATION OF INTERESTS

5. Declarations were summarized by the Secretariat and made available for consultation by all Scientific Council members during the meeting. Please refer to Annex 2 at the end of this Report.

ELECTION OF RAPPORTEUR

6. Dr Adele Green was elected Rapporteur.

ADOPTION OF THE AGENDA (Document SC/55/1)

7. The agenda was adopted.

PRESENTATION OF THE DIRECTOR'S REPORT, INCLUDING:

- ***MAJOR SCIENTIFIC HIGHLIGHTS***

8. The Director mentioned that the list of publications of Agency staff is available from https://www.iarc.fr/cards_page/iarc-publications/ (click on card IARC STAFF PUBLICATIONS).

9. The Director presented the major scientific highlights. A summary of discussions held and questions raised by the SC and answers given by the Director and IARC staff is given below.

10. The SC recognized the central role of cancer screening in IARC's cancer control efforts but noted that screening uptake may not be optimal in some countries. It was acknowledged that some countries' screening programmes may not be population-based but, in these cases, IARC seeks high-visibility campaigns as an effective way to increase screening coverage.

11. The SC emphasized the importance of IARC fellowships and training for growing capacity especially in low- and middle-income countries (LMICs). Of over 150 Early Career Scientists in training at IARC in 2018 (through the IARC Research Training and Fellowship Programme), more than 1/3 were postdoctoral scientists. The SC enquired if costs for training could be defrayed, allowing more in-house training if IARC joined forces with universities, to increase opportunities for LMIC students and scholars and enhance knowledge regarding cancer prevention. The SC members were reassured that IARC is seeking to expand its PhD student intake; a small proportion with IARC scholarships are from LMICs but this needs to expand. Further progress is also being made with online resources which should extend the reach of educational training.

12. The SC observed that gall-bladder cancer is increasing in several LMICs and deserves to be the focus of future research. The Director agreed and cited a need for nutritional studies in particular to shed light on this cancer but would depend on new funds being available.

13. The SC pointed out that there was relatively little cancer research in the Middle East, for example, concerning the risks of tobacco exposure from water-pipe smoking, in contrast to the resources expended on research into cigarette smoking. The Director agreed that IARC can expand work in this area, and is already engaged in ongoing discussions for new initiatives with some countries in the Middle East regarding obesity and diabetes and their associations with cancer.

14. The SC noted that clinicians' awareness of relevant research at IARC should be higher as well as their translation of research results into clinical practice. The Director agreed that this is a key issue that IARC will seek to address through strenuous efforts to raise IARC's international profile by attendance at major clinical and oncological conferences.

15. The SC strongly supported the Director's wish to enhance communication and increase the visibility of IARC in general.

- ***HIGHLIGHTS FROM THE 60th SESSION OF THE GOVERNING COUNCIL***

16. The Director mentioned that the full Minutes of the 60th Governing Council (GC/60/Min.1–5) were available on the IARC Governance website: http://governance.iarc.fr/GC/GC60/index.php

17. In summary, GC/60:

- admitted the Islamic Republic of Iran as 26th IARC Participating State;
- elected Dr Elisabete Weiderpass, as new IARC Director;
- conferred the title "Director Emeritus" to the Outgoing Director, Dr Christopher P. Wild;
- endorsed the "Interim Standard Operating Procedure (SOP)" (see Document GC/60/13 (Annex 1)), as a basis for implementing coordination between IARC and WHO on assessments of hazards and risks;
- noted the "IARC-specific guide on engagement with non-State Actors" (as provided in the appendix to Document GC/60/17);
- encouraged Participating States to make voluntary contributions towards the remaining unfunded balance (€5.04 million) for the "Nouveau Centre";
- in addition, GC/60 requested the Secretariat to prepare a document with a detailed procedure for preparation of the MTS for 2021–2025 (see Document SC/55/7 to be discussed during this SC session); and
- to organize Mission briefings in Geneva at least once a year to enhance their engagement with IARC.

18. The SC thanked the Director for these highlights from the 60th Governing Council.

- ***DIRECTOR'S UPDATE FROM THE 54th SESSION OF THE SCIENTIFIC COUNCIL***

19. The Director presented a brief update from the last SC and mentioned that all items requiring follow-up would be covered elsewhere on the agenda.

20. The SC noted the Director's update from the 54th session.

- ***BIENNIAL REPORT OF THE IARC ETHICS COMMITTEE (IEC), 2017–2018*** (Document SC/55/2)

21. The Director of Administration and Finance (DAF) made a short presentation on Data Protection and Data Security at IARC in relation to the EU General Data Protection Regulation (GDPR) that came into force in May 2018. IARC enjoys privileges and immunities and is not subject to the GDPR. However, IARC adheres to the UN personal data protection and privacy principles, has a long history of handling very large datasets, and has been active in improving data protection and security measures. IARC will be working very closely with WHO in 2019 through an ongoing joint consultancy and developing a joint WHO/IARC data protection policy. There is an ongoing dialogue between the EU and UN to obtain an overall agreement.

22. IARC can play a leadership role to assist Participating States who do not have adequate data security to improve their ethical handling and safeguards of their data through training and capacity building.

23. The SC appreciated the importance of this work and thanked the DAF for his presentation.

PRESENTATION OF THE DIRECTOR'S MAIN THOUGHTS ON SCIENTIFIC DIRECTIONS/OPPORTUNITIES AT IARC

24. To mark the first year of her tenure, the Director was invited to present, in an open session, her views on new directions/opportunities of relevance to the Agency's scientific programme.

25. The Director stressed that IARC will be able to invest fully in potential projects when it has raised more external funds.

26. The SC suggested that the number of contributing Participating States could be increased if membership were promoted by increasing awareness of direct benefits for reducing rising cancer burdens. These include the added value of collaborative research and new knowledge, assistance in transfer of research evidence to health policy, and training and education.

27. The SC drew attention to the importance of monitoring the impact of industrial exposures on occupational cancer in LMICs. The SC suggested the possibility of advocating, with WHO, for novel mechanisms of obtaining funds for research regarding health outcomes relevant to industry exposures.

28. The SC thanked the Director for her presentation and for her planned innovations to tackle the global burden of cancer.

UPDATE ON THE "NOUVEAU CENTRE" (Document SC/55/3)

29. Elisabeth Françon, Administrative Services Officer, presented the update on the "Nouveau Centre" project.

30. The SC stressed the importance of obtaining extra-mural funds, including philanthropic funds, for example through naming rights, for the new building. The DAF explained that IARC is seeking to benefit from WHO's efforts and experience in engaging with the private sector and IARC is also taking initiatives to raise awareness of the Agency among potential donors.

31. The Director reported that a Senior Professional staff member will be hired to strengthen the Resource Mobilization team that has been established to scale up efforts significantly.

32. The SC was supportive of the renewed energy focused on addressing the funding gap and was optimistic that the planned campaign would be successful in attracting more funds.

DIRECTOR'S RESPONSE TO THE REVIEWS OF THE SECTIONS OF EARLY DETECTION AND PREVENTION (EDP) AND NUTRITION AND METABOLISM (NME) HELD AT IARC IN JANUARY 2018

33. The details of action taken following the review of the Section of Early Detection and Prevention (EDP) were discussed.

34. The Director noted the high overall evaluation assigned to both Sections.

35. In relation to the Director's response to the EDP Review, the SC observed that the work of this Section is a flagship for cancer prevention research at IARC and transfer of evidence to policy. The planned expansion into behavioural science, and more economic assessments when resources allow, should be encouraged.

36. The details of action taken following the review of the Section of Nutrition and Metabolism (NME) were discussed. The SC noted the Director's response to the NME Review and agreed with the importance of developing its bioinformatics capacity especially in regard to metabolomics.

PRESENTATION OF POSTERS BY IARC SCIENTISTS AND SCIENTIFIC COUNCIL RECOMMENDATIONS FOLLOWING POSTER REVIEW

37. IARC scientists presented their posters to SC members.

38. SC members were unanimous about the high value and importance of the 45 projects presented across the spectrum of the Agency's activities.

REQUEST FOR SUPPORT FROM THE GOVERNING COUNCIL SPECIAL FUND (Document SC/55/4)

39. The Chair of the IARC Laboratory Steering Committee, Dr Augustin Scalbert, presented the request for support from the Governing Council Special Fund (GCSF).

40. The SC considered the Director's proposal to request an allocation of €500 000 from the Governing Council Special Fund (GCSF) to:

a) Purchase two pieces of equipment and software to support: 1) DNA extraction in the IARC Biobank, and 2) the analysis of metabolomics data in the Biomarkers Group, for a total of €300 000; and

b) Complement the support to a randomized clinical trial (entitled HELPER) to investigate the prevention of gastric cancer by *Helicobacter pylori* eradication, for a total of €200 000.

41. The SC noted from Document SC/55/4 that the annual maintenance costs of the requested equipment will be integrated into the regular budget as well as from extrabudgetary sources and invoicing for the Biobank services.

42. The SC strongly supported the necessity of the two requested pieces of equipment. They recognized that these newer systems are essential to replace obsolete equipment and to give high throughput on the one hand, and high quality, state-of-the art results from large volumes of

generated data on the other. Unit cost of DNA extraction with the proposed equipment is competitive, backed up by market research.

43. The SC endorsed the funding request to accelerate the HELPER study recruitment. To date all investment in this trial has been external, and without this extra funding from IARC the study could be jeopardized, because of limited statistical power and possible contamination of the control group. Funds are essential to ensure that the value and informativeness of this major trial are realized.

44. The SC therefore strongly recommended that the Governing Council approve the allocation of €500 000 from the GCSF in support of the Director's requests described above.

SCIENTIFIC COUNCIL MEMBERSHIP OF SECTION REVIEW PANELS IN 2020

45. The SC discussed the Sections to be reviewed in 2020: Section of Mechanisms of Carcinogenesis (MCA), Head: Dr Zdenko Herceg and Section of Infections (INF), Head: Dr Massimo Tommasino.

46. Drs Pilar Sanchez Gomez and Joao Viola will participate in the MCA Review Panel. It was agreed that Dr Sanchez Gomez would Chair the Review Panel.

47. It was proposed that Drs Jacqueline Clavel and Maria Sibilia will participate in the INF Review Panel. It was proposed that Dr Clavel would Chair the Review Panel.

48. The external members will be chosen by the Secretariat in consultation with the Chairs of the Review Panels and the Chair of the Scientific Council.

49. The Reviews will take place at IARC in the days immediately preceding the 56th Scientific Council session, i.e. will take place at IARC on 3–4 February 2020.

PARALLEL SESSIONS (Document SC/55/5) AND PLENARY FEEDBACK BY RAPPORTEURS

50. In order to engage as many SC members as possible in the discussions on cross-cutting research topics, three sessions were held in parallel, followed by a short plenary session capturing the significant points, presented below:

Topic #1: WHO global initiatives on cervical cancer and childhood cancer: defining IARC's contribution – Lead, Freddie Bray (CSU) and Rolando Herrero (EDP)

51. The Rapporteur for Topic #1, Dr Janne Pitkäniemi, presented a summary of the topic discussed.

52. In the last year, Dr Tedros Adhanom Ghebreyesus, WHO Director-General, has launched two major Global Initiatives on cancer: in May 2018, a global call to action towards the elimination of cervical cancer[1], and in September 2018, a new Initiative for childhood cancer[2] with an

[1] https://www.who.int/reproductivehealth/call-to-action-elimination-cervical-cancer/en/
[2] https://www.who.int/cancer/childhood-cancer/en/

overarching goal of reaching at least a 60% survival proportion for children with cancer by 2030, thereby saving an additional one million lives globally.

53. There has been recognition that these major initiatives from WHO on cancer have a high profile and include IARC scientists.

54. The SC was requested to advise the Secretariat on what could be IARC's role/potential contribution in these two Initiatives, through the following questions:

i. Where can IARC (as a research institution) make the most significant contribution?

Considering the WHO Cervical Cancer Initiative, IARC is contributing already to four Working Groups that are the most relevant given IARC's research focus. Supporting a successful reduction of cervical cancer burden, policy makers should be informed about the long-term consistent benefits of HPV vaccination. In the Childhood Cancer Initiative, the Agency's contribution should be towards surveillance and better understanding of etiology.

ii. What are the limits to the scope of IARC's role?

IARC is involved in Working Groups of most relevance to the role of the Agency. The fundamental limitation to its degree of involvement is lack of funds for large-scale participation in these WHO initiatives.

iii. Given the multitude of high-profile UN and WHO initiatives on NCDs and cancer control (SDG, GAP, Cancer Resolution) that are underway, how can IARC respond effectively to these in a strategic and coordinated manner?

It was thought advisable to continue doing as requested by WHO pending external resource mobilization. Efforts should be made to ensure information and knowledge exchange between WHO and IARC along the lines of new initiatives.

iv. Should the IARC Handbooks expand into the assessment of efficacy of treatment of pre-cancer and cancer?

The advice was to limit Handbooks to the etiology and prevention of cancer; treatment of pre-cancer on the other hand is fundamental to prevention. IARC's role in treatment evaluation in childhood cancer is as tertiary prevention, i.e. quality of life and long-term side effects of treatment.

v. Should IARC further expand research activities on Health economics?

The present activities in Health economics are clearly strengthening IARC in its mission. We encourage collaboration with universities in terms of Health economics research/modelling and focus Health economics applications most relevant to IARC projects.

vi. To what extent should IARC scientists be involved in advocacy and implementation activities given their research mandate?

Keeping in mind the Agency's research role and limited resources, scientists should remain primarily in their expert roles but support advocacy and implementation whenever possible.

Topic #2: Outstanding challenges and opportunities for preventive interventions: the example of weight control and metabolic health – Lead, Marc Gunter (NME)

55. The Rapporteur for Topic #2, Dr Anne Tjønneland, presented a summary:

56. An overview of the topic was given by Dr Marc Gunter, including the obesity prevalence around the world and the association with metabolic syndrome, type 2 diabetes and cancer risk. Obesity has been linked to at least 13 different cancers, and is the second most important risk factor for cancer. Dr Gunter presented the work already done at the IARC within the Nutrition and Metabolism (NME) Section mainly considering smaller studies investigating the metabolic markers, hormones and inflammatory markers associated to metabolic syndrome, type 2 diabetes and cancer risk.

57. The overall objective of this session was to critically discuss, through the two questions below, how to best translate etiologic findings into effective interventions for the prevention of cancer using weight control and metabolic health as an example:

i. Should IARC invest into developing large-scale interventions on cancer prevention with a focus on weight control, metabolic health and possibly other lifestyle factors? If so, who would be appropriate partners, which populations should be targeted and where might the resources be obtained for such a study?

It was clear from the discussion that IARC was advised not to engage in larger intervention studies. In the discussion, it was mentioned that it is difficult to obtain funding for larger scale studies and there is a need for larger capacity to interact with these kinds of studies. It was also noted that there still is a lack of understanding of the mechanisms of these associations, so the work already done in NME is very timely and important, and should be continued and expanded in the future.

ii. What is the value of smaller-scale intervention studies that focus on intermediate endpoints or molecular markers of risk?

The value of the smaller scale intervention studies was clear and should be continued. They are very valuable, since we still have many knowledge gaps. We need more knowledge like the risk difference between metabolic healthy obese compared to obese with metabolic syndrome, and the risk of type 2 diabetes and cancer risk.

The use of intermediate markers as endpoints is very important (histological, molecular, etc.). Lack of knowledge in the understanding of associations to genetic and epigenetic changes is another important area.

Some suggestions to improve the studies and exploring new avenues in the work:

- Take advantage of screening studies in the different countries, in order to link studies within these activities.
- Participants with premalignant lesions have a specific ‘window of opportunity’ to participate in intervention studies.
- Consider collaboration internally at IARC with the Section of Early Detection and Prevention (EDP).
- Consider studies in LMICs for additional insights. For example, Qatar National Research Funds may be available for studies conducted in collaboration with researchers in Qatar.

- Explore the association of the gut microbiome with obesity markers, and the development of disease outcome.
- Risk of recurrence and prognosis among cancer patients could also be included in the studies of obesity associations.

Some additional comments:

- There was advice to have a focus on children, adolescents and younger adults, and the importance of early prevention of obesity.
- IARC's task is to provide the evidence that interventions should be based on, not necessarily to carry out the interventions.

Topic #3: Maximizing the impact of IARC: building on the Mutographs platform – Lead, Paul Brennan (GEP)

58. The Rapporteur for Topic #3, Dr James Cerhan, presented a summary:

59. Through the three questions below, and taking the experience of the last 10 years into account, how can we maximize the impact of IARC, in particular with respect to genomic studies related to cancer prevention and cancer survival:

i. Strategic investment in large scale recruitment of cancer cases, using common protocols for biosample collection, pathology evaluation and clinical outcome, has resulted in extensive use of these cases in subsequent studies. Should this activity be expanded, and if so, how?

The Mutographs project is already quite ambitious, has shown excellent progress in the first two years, and looks to be a long-term model that IARC can build from for future projects.

The group recommended that strategic or opportunistic expansion should be considered, but that any expansion should not undermine successful completion of the current deliverables. Such expansion could be around leveraging other IARC field projects, existing research and capacity building networks, and/or coordinated with expansion to new (or potential) IARC Participating States.

Finally, any expansion needs to account for bottlenecks in the current pipeline, particularly around pathology processing and review as well as bioinformatics. Over the long term, assembly of control series for the case collections, collection of normal tissue (from both cases and controls), and ability to take advantage of circulating biomarkers (e.g. ctDNA) should be considered.

ii. Are there priority cancers, with important international differences in incidence that are not explained, or important trends, that should be prioritized? Should large recruitment efforts be undertaken in order to stimulate future large genomics studies similar to Mutographs?

Suggestions from the group included also considering childhood, gastric, breast and prostate cancers, but would leave decisions to the IARC team, based on considerations outlined in the first response.

We also suggest consideration of targeting vulnerable populations and populations with contrasting exposure and very high exposures.

A final consideration would be for studies of precursor lesions, perhaps taking advantage of screening and early detection field studies.

It is also important to consider heterogeneity of variation in exposure and cancer risk within a country (and not just across countries) in design of studies.

Finally, linking field/scientific priorities with data needs for carcinogens requiring additional evidence synergizes well with IARC Monographs activities.

iii. Does the experience of the Mutographs project suggest ideas for other large scale projects on a similar scale? Should future studies give similar priority for other omics technologies, e.g. transcriptomics and epigenetics?

The Mutographs project looks to be an excellent model for other IARC initiatives, as it takes advantage of IARC's unique strengths, including global vision and expertise; ability to address LMIC scientific, training and infrastructure/capacity building needs; and focus on population level epidemiology and cancer prevention.

It also strengthens the internal IARC research programme and will help keep it competitive with external funders.

The current Mutographs project should consider strategic expansion of the current project to other omics approaches as robust and cost-feasible technology matures and scientific opportunity arises.

The group noted that the rationale of the mutation profiles is largely based on a chemical carcinogenesis model, and while a compelling starting point for the project, IARC investigators will ultimately need to consider other models (e.g. endogenous and lifestyle factors) and genomic alterations (e.g. copy number alterations, epigenetics). In the short term, the group recommended prioritization of epigenetics and leveraging in-house expertise as much as possible, but again without jeopardizing the core project.

One way forward would be pilot projects testing omics approaches to evaluate feasibility and provide preliminary data to inform design and seek support for expanded work.

SCIENTIFIC REPORT OF THE SECTION OF EVIDENCE SYNTHESIS AND CLASSIFICATION (ESC) REVIEW AND DISCUSSION (Document SC/55/WP5)

60. The Scientific Report of the ESC Review was presented by Dr Christine Friedenreich, Chair of the Review Panel.

61. The external advisors and SC members of the Review Panel were thanked for their valuable contributions.

62. The Review Panel noted the following concerning the ESC Section:

Assessment of ESC's scientific quality

ESC's past performance: Outstanding

ESC's future plans: Outstanding

Assessment of the relevance of ESC's work to the mission of IARC

ESC's past performance: Perfect fit

ESC's future plans: Perfect fit

Assessment of ESC's scientific quality

63. The products of the ESC section (the Handbooks, Monographs, Blue Books) are unique worldwide and of outstanding quality that have a major impact in their respective areas of cancer prevention, cancer etiology and cancer classification. The strategic plans for two Groups, IARC Monographs (IMO), WHO Classification of Tumours (WCT) are outstanding. For the IARC Handbooks (IHB) Group, the strategic plans are emerging and with further development have the potential of being excellent provided that their strategic niche is clearly delineated. The WCT Group has developed an outstanding international collaborative network that has benefited from the quality of their products. Similarly, IMO also has a substantial international network and the IHB's network is not yet fully developed. The resources invested in the ESC Section are leveraged multiple times over with the expertise from external scientists and advisors who participate in the creation of the Handbooks, Monographs and Blue Books.

- **Overall recommendations for ESC (NB: Section as a whole)**

64. The ESC section was recently created as a merger of the separate IARC Monographs and Handbooks programmes as well as the WHO Classification of Tumours Group. The Review Panel strongly supports the continuation of the ESC and recognizes the value that it brings to IARC and the world. The ESC has made considerable progress in the past five years and the Review Panel has some recommendations to accelerate the progress and enhance the impact of the work of this Section.

65. The Review Panel recognized the need for a Section Head within IARC for representation of the Section within IARC which would facilitate integration of the three Groups within the Section. It is recognized that this post need not be a full-time position. A consideration for the future is further integration of the IMO and IHB Groups to facilitate their work. In addition, further integration of the general support staff across the three groups would be advantageous to improve cross-disciplinary collaborations, cost efficiency, workflow and would mitigate risks to operations.

Another opportunity to integrate within the Section and between ESC and other IARC Sections is to consider the possibilities of co-location of Sections within the Nouveau Centre.

66. Funding and staffing constraints were recognized to affect all Groups but are particularly concerning for IHB. The Review Panel also noted a risk to the sustainability of specific Groups (e.g. IHB) and to certain activities because of a lack of suitable staffing numbers and levels for key functions. The Review Panel noted a lack of a formal and transparent professional development programme for staff with clearly defined milestones for career progression. Employee satisfaction surveys and plans to address the issues identified in these surveys should be implemented.

67. The Groups have each improved their working procedures and rate of productions and are encouraged to continually seek improvements in these procedures to ensure timely completion of their products and dissemination of them.

68. Opportunities for training of postdoctoral fellows and collaborations with Scientists should be pursued particularly from LMICs to increase the capacity and impact of this Section.

69. The impact of the three Groups is significant and could be enhanced with improved external communications. Specifically, modern social media techniques should be used to communicate the findings from the ESC Section products to ensure that these are accessible to lay audiences, the media, scientists and to potential funding bodies. Knowledge dissemination activities could be enhanced to ensure broad awareness of the outputs of this Section. An integral component is to ensure that impact metrics are established and regularly monitored.

70. The overall recommendations for the ESC Section were discussed and approved.

71. The Section and Group Heads thanked the Review Panel members for their valuable advice and guidance.

72. The Section of Evidence Synthesis and Classification (ESC) Review Panel Report was formally endorsed by the Scientific Council.

DISCUSSION OF THE EVALUATION REPORT ON THE IMPLEMENTATION OF THE IARC MEDIUM-TERM STRATEGY (MTS) (2016–2020) (Document SC/55/6)

73. The SC made the following observations/recommendations:

- Documentation of the MTS 2.5 year evaluation shows impressive global reach and high impact of work of IARC;
- How best to measure impact of GICR to fully appreciate the global benefit?
- Focus on most informative indicators in future evaluations rather than aiming for blanket coverage of multiple markers;
- Education and training of new scientists is the backbone of IARC activities especially in LMICs, and budget cuts forcing cessation of post-doctoral fellowships is regrettable;
- Seek to measure trends based on quantitative indicators in ongoing/future evaluation;
- Sustainability of maximum productivity and output and policy influence will be extremely challenging with a flat budget;

- Communication strategy through media is essential to dissemination of IARC's research;
- Highlight the very high return on investment and potential lives saved by cancer prevention;
- Presentation of packaged MTS indicators (for example as a short power-point presentation) could be very useful for the SC's communication and advocacy of IARC's achievements.

74. The SC noted that the final evaluation report, incorporating its above recommendations, will be discussed at the next regular GC session in May 2019.

DISCUSSION ON THE PROCEDURE FOR THE PREPARATION OF THE MTS (2021–2025) (Document SC/55/7)

75. The SC made the following observations regarding the proposed process and timetable for developing the MTS 2021–2025:

76. There was some concern about the large size of the Advisory Group, but the SC recognized that the Advisory Group needs adequate SC representation (at least as strong as proposed), and sufficient numbers of scientists to cover the breadth of areas of IARC research.

77. The SC wishes to be actively involved and to review the Advisory Group's report before presentation to the GC. The SC thus endorsed the approach suggested, noting its support for:

- The revised timeline for development of MTS 2021–2025; and
- The proposed extension of current MTS by five months.

78. The SC made the following observations regarding the scope, composition and process for the evaluation of IARC:

- Evaluators should represent all areas of IARC's research; and
- Equal numbers of GC and SC members should be included in Joint GC-SC Working Group.

79. With regard to external consultation with stakeholders, the SC suggests that the Secretariat consider including governments of Participating States, funding agencies and patient support groups, as well as other interested groups among those consulted.

PROPOSED PROGRAMME AND BUDGET (2020–2021) (Document SC/55/8 & SC/55/8 Corr.2)

80. Ms Angkana Santhiprechachit (Administration and Finance Officer) presented this item. A corrigendum (Document SC/55/8 Corr.2) was posted to correct three errors on pages 15, 16 and 29 of Document SC/55/8.

81. The SC observed that there has been a *de facto* decrease (zero nominal growth) in assessed contributions from Participating States for a decade.

82. The SC believes that without this requested increase in resources in the next two years, the ability of IARC to deliver on its mandate will be compromised. This poses significant risk to the future output of the Agency and the well-being of its staff.

83. The SC endorsed the proposed Programme and Budget for 2020–2021 as consistent with IARC's MTS 2016–2020.

84. The SC recommends that the Governing Council adopts the Proposed Budget (2020–2021) as essential to the continuing success of IARC.

ELECTION OF CHAIRPERSON AND VICE-CHAIRPERSON FOR THE 56th SESSION OF THE SCIENTIFIC COUNCIL IN 2020

85. Dr Christine Friedenreich was elected Chairperson.

86. Dr Joao Viola was elected Vice-Chairperson.

DATE OF NEXT SESSION

87. The 56th SC will take place on Wednesday 5, Thursday 6 and Friday 7 February 2020.

88. The MCA and INF Review Panels will take place on Monday 3 and Tuesday 4 February 2020.

ADOPTION OF THE SCIENTIFIC COUNCIL REPORT (Document SC/55/9)

89. The report of the Fifty-fifth Session of the Scientific Council was adopted.

CLOSURE OF SESSION

90. The customary expressions of thanks were exchanged.

91. Dr Weiderpass thanked the outgoing members of the Scientific Council, Drs Boris Alekseev (Russian Federation); Jonas Bergh (Sweden); Jenny Chang-Claude (Germany); Jerome Coffey (Ireland); Eugenia Dogliotti (Italy); Karima El Rhazi (Morocco); Kadir Mutlu Hayran (Turkey); Lalit Kumar (India); Dukhyoung Lee (Republic of Korea) and Giske Ursin (Norway).

ANNEX 1 – ACRONYMS (Sections and Groups)

Acronym	Full name of Section/Group	Responsible Officers
CSU	**Section of CANCER SURVEILLANCE**	**Dr F. Bray** Deputy: Dr I. Soerjomataram
EDP	**Section of EARLY DETECTION AND PREVENTION**	**Dr R. Herrero**
PRI	Prevention and Implementation Group	Dr M. Almonte
SCR	Screening Group	Dr P. Basu
ESC	**Section of EVIDENCE SYNTHESIS AND CLASSIFICATION**	**Dr I. Cree**
IHB	IARC Handbooks	Dr B. Lauby-Secretan
IMO	IARC Monographs	Dr K. Guyton
WCT	WHO/IARC Classification of Tumours	Dr I. Cree
ENV	**Section of ENVIRONMENT AND RADIATION**	**Dr J. Schüz** Deputy: Dr V. McCormak
GEN	**Section of GENETICS**	**Dr P. Brennan**
GCS	Genetic Cancer Susceptibility Group	Dr J. McKay
GEP	Genetic Epidemiology Group	Dr P. Brennan
INF	**Section of INFECTIONS**	**Dr M. Tommasino**
ICB	Infections and Cancer Biology Group	Dr M. Tommasino
ICE	Infections and Cancer Epidemiology Group	Dr M. Tommasino (Acting)
MCA	**Section of MECHANISMS OF CARCINOGENESIS**	**Dr Z. Herceg**
EGE	Epigenetics Group	Dr Z. Herceg
MMB	Molecular Mechanisms and Biomarkers Group	Dr J. Zavadil
NME	**Section of NUTRITION AND METABOLISM**	**Dr M. Gunter**
BMA	Biomarkers Group	Dr A. Scalbert
NEP	Nutritional Epidemiology Group	Dr M. Gunter
NMB	Nutritional Methodology and Biostatistics Group	Dr P. Ferrari

ANNEX 2 – STATEMENT FOR THE DECLARATION OF INTERESTS

Declarations of interest were provided by all Scientific Council members.

Interests were declared by a minority of Scientific Council members and include:

- ✓ Research support from pharmaceutical industry; and
- ✓ Consulting for a commercial entity.

The list of declared interests was made available upon request, from the Chair and the Vice-Chair, for consultation during the meeting.

Upon review by the Secretariat none of the declared interests were considered to represent a potential or significant conflict of interest with respect to the content of the meeting.

The individuals reporting interests were asked to check the contents of the table below, which they all subsequently approved.

Council member	Disclosure statement
Boris Ya. Alekseev *(unable to attend)*	N/A
Jonas Bergh	Reports that his unit at Karolinska Institute or Karolinska University Hospital, benefits from research funding from Amgen, Astra-Zeneca, Bayer, Merck, Pfizer, Roche, and Sanofi-Aventis, and reports receiving honoraria from UptoDate ® Asklepios Medical.
Hendriek Boshuizen	No relevant interest declared
Salha M. Bujassoum Al-Bader	No relevant interest declared
James Robert Cerhan	Reports receiving personal consultancy fees in his capacity of member of Janssen Pharmaceutical's Scientific Advisory and Steering Committees, and reports that his unit at Mayo Clinic benefits from research funding from NanoString Technologies and Celgene
Jenny Chang-Claude	No relevant interest declared
Jacqueline Clavel *(unable to attend)*	N/A
Jerome Coffey	No relevant interest declared
Eugenia Dogliotti	No relevant interest declared
Karima El Rhazi	No relevant interest declared
Christine Friedenreich	No relevant interest declared
Adele Green	No relevant interest declared
Kadir Mutlu Hayran	No relevant interest declared
Lalit Kumar	No relevant interest declared
Dukhyoung Lee	No relevant interest declared
Atsushi Ochiai *(unable to attend)*	N/A
Janne Mikael Pitkäniemi	No relevant interest declared
Sabine Rohrmann	No relevant interest declared
Roberto Salgado	No relevant interest declared
Pilar Sánchez Gómez	Reports that her Unit at Instituto de Salud Carlos III benefits from research funding from Catalysis, IDP Pharma, Pfizer and Servier-Vernalis.

Council member	Disclosure statement
Maria Sibilia	No relevant interest declared
Simon Tavaré	Reports receiving personal consultancy fees from IPSEN in his capacity of SAB member and from Kallyope Inc.
Anne Tjønneland	No relevant interest declared
Giske Ursin	Reports that her Institution, Cancer Registry of Norway, benefits from research funding from Merck/MSD.
João P.B. Viola	No relevant interest declared
Kazem Zendehdel	No relevant interest declared