International Agency for Research on Cancer

World Health Organization

Scientific Council **SC/50/10**
Fiftieth Session 31/01/2014

Lyon, 29–31 January 2014
Auditorium

REPORT OF THE SCIENTIFIC COUNCIL ON ITS FIFTIETH SESSION

INTRODUCTION

1. The Fiftieth Session of the Scientific Council (SC) of the International Agency for Research on Cancer (IARC) was opened by Professor Mads Melbye (Chairperson of the Scientific Council), at 09:00 on Wednesday 29 January 2014. He welcomed the participants, including the five new members of the Scientific Council: Drs Al-Hareth M. Al-Khater (Qatar), Françoise Clavel-Chapelon (France), Lukas A. Huber (Austria) *(unable to attend)*, Luis Felipe Ribeiro Pinto (Brazil) and John J. Spinelli (Canada).

2. He also welcomed Dr Andreas Ullrich (WHO Representative) and Dr Sylvie Négrier (Director General of the Centre Léon Bérard – Observer).

3. Apologies for absence were received from Dr Mark Palmer (Chairperson of the Governing Council, UK), Professor Agnès Buzyn (Vice-Chairperson, Governing Council, France), Dr Luca Gianni (Italy), Dr Lukas Huber (Austria), Dr In-Hoo Kim (Republic of Korea), Dr Martyn Smith (USA) and Dr Sergei Tjulandin (Russian Federation). UICC did not nominate an Observer.

4. For ease of reference a list of acronyms of Sections and Groups can be found in Annex 2 at the end of this Report.

DECLARATION OF INTERESTS

5. Declarations of interests were summarized by the Secretariat and made available for consultation by all Scientific Council members during the meeting. Please refer to Annex 1 at the end of this Report.

ELECTION OF RAPPORTEUR

6. Professor Paul Dickman was elected Rapporteur.

ADOPTION OF THE AGENDA (Document SC/50/1)

7. A discussion of the ongoing ASBEST study was added to the agenda for Wednesday 29 January. The agenda was adopted, as amended.

PRESENTATION OF STANDARD REPORTS: THE IARC BIENNIAL REPORT 2012–2013 (Document SC/50/2)

8. The Director presented the IARC Biennial Report 2012–2013 and its scientific highlights.

9. The Scientific Council discussed the Biennial Report, and the following observations were made:

- The Scientific Council congratulated the Director on the impressive achievements over the past two years.
- The Scientific Council noted that there is no specific programme, and not a large amount of research, on prostate cancer despite it being the most common cancer among males worldwide. The Scientific Council asked the Director what plans IARC has in this area. The Director noted that the Agency participates in a number of studies on prostate cancer but noted that the Agency would consider additional opportunities. The Head of QAS, Dr Von Karsa, noted that IARC has been active in evaluating screening.
- The Scientific Council suggested that research on prevention is underfunded relative to the potential gains of cancer prevention. The Director acknowledged that research on prevention is a priority.
- The Scientific Council suggested the Agency take a larger role in developing recommendations in the area of HPV vaccination in developing countries.
- The Scientific Council congratulated the Director on the successful implementation of metabolome analysis for new biomarker research and asked the Director about the metabolome research strategy following the proof-of-principle phase. The Scientific Council noted that EPIC may be a strong platform for nutritional epidemiology in the advanced countries, but metabolome research may also bring about new opportunities to address life-style, environmental and infectious exposures in low- and middle-income countries (LMICs), in which IARC plays a unique and leading role. The Scientific Council suggested that making the LMIC biobank 'omics'-ready should be prioritized and that metabolome experts should participate in the design of the LMIC biobank.

PRESENTATION OF STANDARD REPORTS: REPORT OF THE MEETING OF THE 55TH SESSION OF THE GOVERNING COUNCIL (Document SC/50/3)

10. The Director mentioned that the full Minutes of the Governing Council meeting (GC/55/Min.1–4) were available on the IARC Governance website (http://governance.iarc.fr/GC/GC55/index.php).

11. The Governing Council welcomed Brazil and Qatar as new Participating States.

12. The Governing Council approved the procedure of conducting Section Reviews immediately preceding Scientific Council sessions.

13. The Governing Council requested that the Scientific Council reports on its assessment of the utility of the new scoring system for Section Reviews (as developed in document SC/49/13 Add.1) in 2015.

14. The Governing Council requested that a biennial report on the Education and Training Group (ETR) activities be submitted to the Scientific Council starting in 2015.

15. The Governing Council approved the extension of the current IARC Medium-Term Strategy (MTS – see document GC/52/6) by one year (therefore covering the period 2010–2015), in order to align the Programme and the Budget planning cycles with that of the MTS.

16. The Scientific Council noted the Report of the 55th Governing Council.

PRESENTATION OF STANDARD REPORTS: DIRECTOR'S UPDATE FROM THE 49th SESSION OF THE SCIENTIFIC COUNCIL (Document SC/50/4)

17. The Director presented a brief update from the last Scientific Council.

18. The 'Early Career Scientist Association' (ECSA) was created in July 2013. ECSA is open to all post-docs and students at IARC and works in collaboration with ETR to promote opportunities for training, career development, social activities, and regular dialogue between early career scientists, ETR, and IARC management.

19. A comprehensive review of the Biobank's current space and facilities is being undertaken, following the Scientific Council's recommendation to develop a plan in the short-term for the IARC Biobank. The IARC Biobank Access Policy has been completed after extensive internal consultation and is now posted on the IARC internet [http://ibb.iarc.fr/]. The cataloguing of bio-specimens and the entry of information into the sample management system is continuing.

20. The Scientific Council noted the Director's update from the 49th Scientific Council.

PRESENTATION OF STANDARD REPORTS: BIENNIAL REPORT OF THE OCCUPATIONAL HEALTH AND SAFETY COMMITTEE (OHSC), 2012–2013 (document SC/50/5)

21. The OHSC Biennial Report (2012–2013) was presented by the Chair of the Committee, Dr Florence Le Calvez-Kelm.

22. The Scientific Council thanked Dr Le Calvez-Kelm and noted the Report.

DIRECTOR'S RESPONSE TO THE REVIEWS OF THE SECTIONS OF NUTRITION AND METABOLISM (NME) AND EARLY DETECTION AND PREVENTION (EDP), HELD AT IARC IN JANUARY 2013 (Document SC/50/6)

23. The details of action taken following the reviews of the Sections of Nutrition and Metabolism (NME) and Early Detection and Prevention (EDP) were discussed.

24. The Director noted with satisfaction the high overall evaluation assigned to both Sections.

25. The Scientific Council noted the Director's response to the NME Review and made the following observations:

- The Scientific Council was pleased with the responsiveness of the Director and Section Head to the suggestions put forward in the Review.
- The Scientific Council noted opportunities for research linking parents to children, taking advantage of the transition in Latin America from nutritional deficiency in previous

generations to nutritional surplus in the offspring. The Section Head, Dr Romieu, noted that several such studies are ongoing but attempts to establish large consortia have not succeeded due to various difficulties.

- The Scientific Council noted that responsibility for studies of alcohol have been moved to NME and asked about the implications for future work in this area. The Section Head noted that this is an important research area and several studies are ongoing.
- The Scientific Council asked about the future of the EPIC study, noting the uncertainty about future funding and succession planning of research leadership. Dr Romieu noted that continued funding is being sought; there has been success in obtaining 'small' grants but a large infrastructure grant is required to ensure the long-term future of this important project.
- The Scientific Council noted the great opportunities for studies of health and nutritional habits in the EMRO region, and noted that the recent addition of a Participating State from the region should provide increased possibilities for research.

26. The Scientific Council noted the Director's response to the EDP Review and made the following observations:

- The Scientific Council congratulated the Director on the new initiatives resulting from the Section Review.
- The Scientific Council noted the importance, but also the potential difficulties in recruiting senior staff in implementation science and health economics.
- The Scientific Council underlined the importance of IARC's role in prevention and early detection activities, and encouraged IARC to continue their leading role in this area.
- While congratulating the Director on the new initiatives in implementation science, behavioural science, and health economics, the Scientific Council noted the differences between high-, middle-, and low-income countries in these research areas and asked the Director how he is planning to deal with issues unique to LMICs. The Head of EDP acknowledged the differences, and noted that existing projects in LMICs are influenced by national culture and politics. He noted that EDP has a long-standing track record of productive research in LMICs and is fully prepared to address the new agenda.

SCIENTIFIC COUNCIL MEMBERSHIP OF SECTION REVIEW PANEL IN 2015

27. The Scientific Council discussed the Sections to be reviewed in 2015: Section of Mechanisms of Carcinogenesis (MCA), Head: Dr Zdenko Herceg and Section of Infections (INF), Head: Dr Massimo Tommasino.

28. Drs N. Jones and P. Dickman will participate in the INF Review Panel. It was agreed that Dr Jones would Chair the Review Panel.

29. Drs T. Rajkumar and T. Yoshida will participate in the MCA Review Panel. It was agreed that Dr Rajkumar would Chair the Review Panel.

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

31. The Reviews will take place at IARC in the days immediately preceding the 51st Scientific Council session, i.e. will take place at IARC on 26–27 January 2015.

32. The Director suggested that in 2015, The Gambia Hepatitis Intervention Study (GHIS) be reviewed. He proposed that a document be prepared by the GHIS Group in advance of the 51st Session of the Scientific Council and, as was the case for the review of the activities and future directions of the Education and Training Group (ETR), that the Scientific Council Chair and Vice-Chair jointly select two Scientific Council members who will make a preliminary review of this document and report their conclusions and recommendations for discussion at SC/51.

33. The Scientific Council approved this suggestion for review of GHIS.

34. The following cycle of Section reviews was discussed and approved for 2016–2020:

2016	Genetics	
2017	Cancer Information	Environment
2018	Early Detection and Prevention	Nutrition and Metabolism
2019	Molecular Pathology	IARC Monographs
2020	Mechanisms of Carcinogenesis	Infections

DISCUSSION ON A SPECIAL SCIENTIFIC PROJECT OF IMPORTANCE TO IARC: TUMOUR SEMINARS – A POTENTIAL NEW IARC PUBLICATION SERIES (document SC/50/7)

35. Dr Paul Brennan (Head, Section of Genetics (GEN)) introduced the document. He explained the principle of this potential new IARC Publication Series – Tumour Seminars: each publication will have a focus on one cancer site. The aim would be to cover the most recent science for that particular site, including challenging questions or observations. In particular, it will:

a) bring together a group of experts that covers a broad spectrum of the science for a particular cancer site; the emphasis will be on identifying the leaders of the field and encouraging them to participate;

b) ask each scientist to summarize the recent insights/breakthroughs, as well as the most challenging aspect of their area, and/or what they consider to be the most important question(s) that need(s) to be answered or the most important impediment to moving forward; and

c) develop an e-publication format that will include the contributions from all colleagues.

36. The Scientific Council supported the initiative as a pilot, but suggested careful consideration be given to the scope of the topics discussed along with plans for updates and continued meetings.

37. The Scientific Council encouraged Dr Brennan to incorporate discussion of primary and secondary prevention, while retaining the overall focus on research opportunities and barriers.

38. The Scientific Council agreed with Dr Brennan that the focus of the seminars will be on discussing research priorities, and not formulating treatment guidelines.

39. The Scientific Council suggested that the meeting be broadcast as a webinar in order to allow immediate access to a wide audience and enhance the educational value.

40. The Scientific Council encouraged the organizers to prioritize cancers for which meetings of this type are currently lacking and research topics of interest for LMICs.

41. The Scientific Council requested that it be informed of progress at the next Scientific Council session.

PRESENTATION OF POSTERS BY YOUNG SCIENTISTS

42. Young scientists prepared posters to present to Scientific Council members.

43. The Scientific Council was impressed and congratulated the young scientists on the quality of their work and thanked them for the effort they put into preparing and presenting the posters. The Scientific Council members noted that this item is, for them, one of the highlights of the meeting.

44. The Scientific Council appreciated the reorganization of the schedule to provide greater opportunities for viewing posters and interacting with young scientists.

PURCHASE OF SCIENTIFIC EQUIPMENT (document SC/50/8)

45. The Chair of the IARC Laboratory Steering Committee, Dr Augustin Scalbert, presented the requests for purchase of equipment.

46. The Scientific Council was requested to advise the Director and the Governing Council on the proposed request to use funds from the Governing Council Special Fund to purchase the scientific equipment listed below, for a total amount of 353 000€:

a) Bench-top next-generation sequencer of medium capacity; and

b) Tandem mass spectrometer coupled to Ultra Performance Liquid Chromatography.

47. The Scientific Council considered these items and recommended that the Governing Council approves the above-mentioned purchase of scientific equipment. The Scientific Council made the following observations:

- The Scientific Council commended the plan for sharing equipment between many Sections and acknowledged the importance of obtaining the equipment in a timely manner.
- The Scientific Council expressed the importance of investing in new cutting-edge equipment to maintain IARC's leading scientific role.
- The Scientific Council noted that maintenance costs can be considerable, often exceeding the purchase costs over the lifetime of the equipment, and asked how maintenance costs would be financed. Dr Scalbert confirmed that maintenance costs are, indeed, considerable and noted that these are usually covered through research grants.

UPDATE ON NEW BUILDING FOR IARC

48. Ms Elisabeth Françon, Administrative Services Officer, presented the update on the new building for IARC. She mentioned that more information could be found in documents GC/55/9A "Update on "Nouveau Centre" project" and GC/55/9B "Building for the future: the scientific vision behind the "Nouveau Centre"" prepared and discussed at the last Governing Council in May 2013.

49. The Scientific Council were pleased to learn that a decision on financing will soon be made, and thanked the Secretariat for the update.

50. The Director noted that the timeline for the upcoming year will focus on the process of choosing an architect; detailed input from the Scientific Council on design is premature at this point in time. The Director noted that he plans to obtain input from the Scientific Council at a later time.

DISCUSSION ON "STUDY OF CHRYSOTILE ASBESTOS IN RUSSIA" (document SC/50/12)

51. Dr Joachim Schüz (Head, ENV) presented this study.

52. The Scientific Council made the following observations:

- The Scientific Council was of the opinion that this study addresses important unresolved scientific questions. Several unique features were recognized: the large size of the cohort, high proportion of females, detailed worker and exposure information, availability of original employment records, and the asbestos being only chrysotile. The Scientific Council commended the quality of the study design and felt that, if it can be carried out as designed, the study will improve our understanding of the association between chrysotile exposure and a number of cancers.
- The Scientific Council acknowledged the potential threats to the scientific integrity of the study, but was reassured that the principal investigators had implemented measures to preserve the scientific integrity of the study.
- The Scientific Council strongly advised that IARC withdraw from the study in the event that the design, conduct, or analysis of the study is compromised.

PRESENTATION OF CROSS-CUTTING THEMES AND DISCUSSION (document SC/50/9)

53. Sections have been asked to present three cross-cutting themes where the input of the Scientific Council would be valuable.

Topic 1: Mutation spectra in experimental models and in humans

54. Dr Jiri Zavadil (Head, Molecular Mechanisms and Biomarkers Group (MMB)) presented Topic 1 in his capacity as Coordinator. Sections and Groups participating are: MCA/MMB, MCA/EGE; IMO; INF/ICB; GEN/GCS; GEN/BST.

55. He presented a novel cross-Section approach based on experimental modelling of in vitro mutagenesis by select chemicals. Genome-wide alterations and events that drive neoplastic disease can be assessed in this in vitro model system that recapitulates key features of tumourigenesis (i.e. *initiation*, *promotion* and *progression*).

56. The method involves the use of cultured primary mouse embryonic fibroblasts with humanized p53 knock-in, known as Hupki or HUF cells, in which exposures to cancer agents induce immortalization and transformation of cellular clones arising from senescing cultures, in a process that closely parallels the conversion of normal cells to tumour cells that occurs in vivo. Preliminary experiments with well characterized mutagens show impressive concordance with mutational signatures found in primary human tumours.

57. The purpose is to generate novel mechanistic insights into the effects of specific cancer agents and to identify genome-wide mutation patterns linked to the specific effects of genotoxic compounds, by comparison with data obtained on human biospecimens in population-based studies, that could be used to strengthen the evidence base on molecular mechanisms of carcinogenesis, and ultimately, to support reliable carcinogen identification and classification, and to verify exposure:disease associations in epidemiological studies.

58. The Scientific Council thanked Dr Zavadil for his presentation and made the following comments:

- The Scientific Council expressed significant enthusiasm for using next-generation sequencing technology to identify signatures that reflect specific environmental exposures, hence developing an interesting and important approach to epidemiological questions.
- The Scientific Council recognized limitations with using a single fibroblast cell line for such studies, but initial results nevertheless looked very promising and success in this line would be expected to generate wider research interest in applying such approaches in other model systems.
- The Scientific Council expressed caution on several potential aspects, especially potential use of the system in the identification and characterization of tumour drivers at a mechanistic level. The limitations of the system in this research area are greater and the Scientific Council cautioned that its value would be limited. The Scientific Council was reassured that priority will be on the molecular epidemiological potential.
- The Scientific Council suggested developing a catalogue of genetic signatures associated with specific exposures deriving from this initiative.

Topic 2: Research into the causes and mechanisms of childhood cancer

59. Dr Joachim Schüz (Head, Section of Environment and Radiation (ENV)) presented Topic 2 in his capacity as Coordinator. Participating Sections are CIN, ENV, GEN, MCA, and NME.

60. Cancer before the age of 15 years remains thankfully relatively rare. Although remarkable progress has been made in developed countries in the treatment and survival of some of the most common childhood cancers, there remain a significant number for which prognosis is poor. Apart from a few genetic factors and high dose ionizing radiation the etiology of childhood cancers remains largely unknown.

61. Epidemiological studies of childhood cancer are made possible through consortia and a number of these exist with different designs, objectives and governance structures. IARC scientists already play a role in a number of these and there may be further opportunities for cooperation across consortia.

62. A number of modifiable risk factors have been linked with childhood cancer. It is likely that their effects are mediated through metabolic and gene regulatory pathways, including epigenetic mechanisms. The development of new metabolomic and epigenomic assays makes it possible to perform comprehensive analyses of samples collected at birth to explore potential links between prenatal exposures, early effect markers and childhood cancer.

63. Metabolomic and epigenomic analyses of cord blood specimens from cancer and control subjects from birth cohorts such as I4C, should allow the mapping of metabolic and early response pathways that can be linked with both known environmental risk factors and childhood cancer outcomes. Although a range of variables related to maternal exposure are already documented in birth cohorts, metabolic profiling of cord blood samples should provide novel information on causal risk factors of childhood cancers.

64. The Scientific Council thanked Dr Schüz for his presentation and made the following comments:

- The Scientific Council noted that childhood cancer constitutes a relatively small (less than 3%) proportion of incident cancers and the area is relatively well funded. As such, it is not obvious that this area is a global research priority. Nevertheless, childhood cancer has a devastating impact on affected families, incidence is increasing in many countries, and much is unknown about the etiology. Furthering our understanding of the etiology of childhood cancer has the potential to improve our understanding of the etiology of adult cancers and the link between early life exposures and risk of cancer in adulthood.
- The Scientific Council supported the intention to incorporate cutting-edge genetic and -omic approaches.
- The Scientific Council noted that furthering our understanding of childhood cancer will require international consortia and IARC is well-placed to assume a central role in coordinating such activities.
- The Scientific Council noted the underrepresentation of LMICs in this area and the potential for IARC to include new partners in the proposed programme.
- The Scientific Council recognized the difficulties in securing adequate funding for research consortia, and suggested that contact be made with foundations to explore possibilities for shared consortia funding.

Topic 3: HPV vaccination studies in advancing cervical cancer prevention in low- and middle-income countries (LMICs): opportunities and challenges

65. Dr Iacopo Baussano (Infections and Cancer Epidemiology Group (ICE)) presented Topic 3 in his capacity as Coordinator.

66. Cervical cancer remains the most common female cancer in several developing countries, particularly in those with the lowest levels of socioeconomic and human development. Despite the fact that it is highly preventable and curable when diagnosed at an early stage, incidence and mortality rates continue to increase in some countries in Sub-Saharan Africa, Eastern Europe and Central Asia, with poor survival in these regions.

67. Infection transmission models coupled with models of cervical cancer natural history play a crucial role in predicting the long-term impact of interventions such as the introduction of HPV vaccination or of cervical cancer screening. The Agency is involved in a number of trials and observational studies of HPV vaccination and has opportunities to gather a unique bulk of empirical data from IARC and other groups to complement and add to modelling of the impact of vaccination on disease incidence. A few modelling initiatives were proposed.

68. The first group of projects builds on the recent development at IARC of a population-based model of HPV infection, based on data from large population-based trials on HPV testing and cross-checked for reproducibility in Italy and Sweden. These models were used to assess the benefits of the catch-up of older girls in vaccination against HPV in LMICs and of adding boys' vaccination. They also allow the understanding of the best cervical cancer screening options according to the success of HPV vaccination. The development of analogous individual-based models is essential, in order to account better for heterogeneity in sexual behaviours, individual responsiveness to preventive measures, and natural history of HPV infection, notably the role of herd immunity.

69. The second models stem from a collaborative project with the Lowy Cancer Research Centre (Professor Karen Canfell), in which a mixed-methods approach would be employed to develop national and regional scenarios of HPV-related burden, involving detailed dynamic modelling of sexual behaviour, HPV transmission, persistence, progression to HPV-related cancers and the impact of cervical screening, in selected high- and medium-income countries for which extensive data for parameterization, calibration and validation are available.

70. The Scientific Council thanked Dr Baussano for his presentation and made the following comments:

- The Scientific Council considers this to be a very important research programme that exemplifies IARC's central role in producing science for global cancer control policies.
- The Scientific Council suggested the Agency take a larger role in developing evidence-based recommendations in the area of HPV vaccination in LMICs.
- The Scientific Council strongly encouraged IARC's work to further explore the utility of less than three HPV vaccine doses, including studies of single doses.

SCIENTIFIC REPORT OF THE SECTION OF IARC MONOGRAPHS (IMO) REVIEW AND DISCUSSION (document SC/50/WP3)

71. The Scientific Report of the IMO Review was presented by Dr Ahti Anttila, Chair of the Review Panel.

72. The Review Panel noted the following concerning the IMO Section:

- The scientific quality of the past performance of IMO was rated as **outstanding**.
- The scientific quality of the future plans was rated as **outstanding**.
- The relevance of past performance of IMO was rated as **perfect fit** to the mission of IARC.
- The relevance of the future plans of IMO was rated as **perfect fit** to the mission of IARC.

73. The overall recommendations for the IMO Section were discussed and approved.

- The global burden of cancer is expected to almost double between 2008 and 2030, with most of the increase occurring in low- and middle-income countries. The key mission of IMO is to produce the *IARC Monographs*, a series of scientific reviews that identify environmental factors that can increase the risk of human cancer. This work maintains IARC globally as the definitive reference source for carcinogen identification, needed for implementing prevention strategies.
- The strongest component of the programme is the production of the Monographs themselves, which have worldwide recognition and are used in planning for regulation and control of environmental and occupational hazards and for cancer prevention in individual countries.
- There are two additional major challenges: planning for the inclusion of estimates on the burden of cancer in the monographs work and re-launching the Handbook series evaluating cancer prevention strategies and agents. The IARC strategy on LMIC countries, as well as the adoption of the UN political declaration on NCDs (2011), both support these new activities for IMO. The planning for these new activities was not yet fully developed, however, to cover the whole five-yearly activity period. We embrace many of the plans identified by IMO for the next five years as these will enhance the scientific rigor and public health relevance of the monographs, but have some concerns about whether there are adequate resources and staff to carry these new activities and still maintain a strong monograph programme. These new activities need specific resources and requirements for the staff not yet available for IMO. We strongly recommend that introducing these new activities should not reduce the resources available for the Monographs programme, but that the activities will be done by appropriate additional resources and staff for the IMO.

74. The IMO Review Panel recommendations are as follows:

a) The Review Panel recommends that IMO maintain its main focus on the Monographs on carcinogens and its current method of expert critical appraisal with strict management of conflict of interest allowing the production of three Monographs per year. IARC has made considerable progress over the last five years in increasing efficiency and quality of the Monographs. The Panel recommends that IMO continue to incorporate methods to increase transparency and efficiency of the cancer evaluations.

b) The Review Panel strongly encourages IMO to re-launch the IARC Handbooks recognizing its strategic importance and opportunities it provides. We are confident that building upon the sound process developed within IMO for the Monographs will allow similar rigorous scientific approach for the preparation of the Handbooks. However, to ensure the quality of the product and mitigate risks, this new programme requires adequate establishment with staffing and funding that avoids the diversion of the resources from Monographs.

c) The Review Panel suggests that the Monographs and Handbooks may need to articulate or identify the relevance of the work to LMICs to fit with the IARC mission going forward.

d) The Review Panel believes that quantitative risk characterization is an important step towards improving risk communication and prioritization in cancer control while recognizing the need for appropriate resources and staffing.

e) The Review Panel recommends that IMO develop a robust and up-to-date framework for the evaluation and incorporation of mechanistic data, which will strengthen the evaluation process and be useful for the scientific community.

f) The Review Panel considers the optimal communication of the content of the Monographs and Handbooks essential for the dissemination of new information and to prevent misinterpretation of expert findings. The Review Panel encourages IMO make more of its work available online, to develop fact sheets or brief summaries and investigate the feasibility of the Monograph Series as a searchable database. The Review Panel recognizes the importance of communicating appropriately to the public, often through press releases, the findings of the cancer evaluations. IMO is encouraged to re-examine the terminology of “possibly carcinogenic to humans” in the classification and consider better terminology.

g) The Review Panel recognizes that the success of the programme depends in part on the special skills of IMO staff. In order to develop and retain high quality staff, the Panel encourages the Agency to provide adequate time and resources for professional development and/or research activities of IMO staff. The professional development of the staff is important for staying abreast of current technologies and information. Some of the research activities, such as meta-analyses, conducted by the staff have facilitated the public health impact of the Monographs.

h) The Review Panel agrees with the recommendations of the previous Panel that a greater proportion of the staff should be supported from the regular budget to ensure stability of the high-quality staff in this important programme.

i) The Review Panel encourages the Director to explore opportunities for special funding from Participating States to develop the future plans and sustainability for this important programme.

75. The Scientific Council thanked the Review Panel for their report and made the following comments:

- The Scientific Council commended the Section on their response to the recommendations put forward in the previous review and their high productivity.
- The Scientific Council re-emphasized the unique nature and high international profile of this Section and fully endorses the Agency in performing activities that are not, and quite possibly cannot, be performed elsewhere. The key to its success is the process, which includes: systematic review of the evidence, critical appraisal by independent external experts, strict management of conflict of interest, and transparency in relation to the findings.
- The Scientific Council emphasized the importance of independent additional funding for the IARC Handbooks. Assembling a large number of external experts from around the world is key to the success of this programme and adequate funding is crucial.
- The Scientific Council looks forward to being updated on ongoing plans for choice of topics and implementation of the IARC Handbooks.

76. In an initial response, the Director:

- Noted that he views IMO as a flagship Section for the Agency.
- Was pleased with the recommendation to re-launch the IARC Handbooks.

77. The Section and Deputy Heads thanked the Review Panel for their input.

78. The Section of IARC Monographs (IMO) Review Panel Report was formally accepted by the Scientific Council.

SCIENTIFIC REPORT OF THE SECTION OF MOLECULAR PATHOLOGY (MPA) REVIEW AND DISCUSSION (document SC/50/WP4)

79. The Scientific Report of the MPA Review was presented by Dr Bettina Borisch, Chair of the Review Panel.

80. The Review Panel noted the following concerning the MPA Section:

Because of the importance of the WHO Classification of Tumours (Blue Books) and its impact on cancer classification worldwide, this work and the MPA research activities have been reviewed separately.

Regarding the Blue Book series:

Past performance was rated as follows:

Quality: C (competitive) for efficiency vs O (outstanding) for scientific quality and worldwide impact.

Future plans were rated as follows:

Quality: C (competitive) to F (forefront) for efficiency if already planned changes prove effective vs O (outstanding) for scientific quality and worldwide impact.

Past performance: Perfect fit (outstanding) – essential for the reputation of the Organization.

Future plans: Perfect fit

81. The overall recommendations for the MPA Section were discussed and approved.

Regarding the WHO Blue Book series:

- The WHO Classification of Tumours is a very important activity for MPA and for the worldwide reputation of IARC and WHO, and should be continued, with increased resources and staffing.
- The Series need to be updated in a timely fashion in order to remain clinically relevant.
- Both an eBook and digital online database format are desirable in order for the books to be readily accessible to the broadest readership and useful to the scientific community. The option of commercial print on demand versions should also be considered. Careful consideration needs to be given to development of a viable business plan, particularly with regards to access to the online database.

Specific suggestions:

1. Provide a stable budget that is independent of fluctuations in book sales revenue.
2. Add a senior pathologist to assist the Section Head with the Blue Book efforts and provide continuity during transition to the 5th edition series.
3. Efforts should be made to ensure that a higher proportion of Blue Book revenues go to IARC, and within IARC to the Blue Book effort.
4. Encourage volume editors to consider how to most effectively incorporate the input of clinicians and molecular biologists into future editions.
5. Emphasize to the WHO leadership the importance of these classifications for all aspects of global cancer care, research and epidemiology, as well as the negative consequences should the Series fail.
6. Evaluate whether retention of the name “PubCan” is appropriate in association with online WHO Blue Book efforts.

Regarding MPA research activities:

Past performance

Quality – Outstanding
Relevance – Perfect fit

Future plans

Quality – Forefront
Relevance – Perfect fit

The prior work and planned studies involve extensive collaborations with investigators and research centres around the globe. It therefore benefits from IARC’s unique position as an international agency and fits well with the overall mission. Direct impact on public health in the area of neuro-oncology is likely to be significant.

Overall recommendations for MPA research activities:

1. Continue cohort-based approach, focusing on issues which build on their historical expertise in molecular markers and intratumoural heterogeneity.
2. Increase computing and bioinformatics capacity to allow for cutting edge molecular research, possibly through greater interaction with local groups.
3. Consider expanding international outreach and examination of molecular alterations in geographically distinct populations, particularly in countries without such expertise.
4. Fully staff the research effort, including an additional full time scientist, to facilitate increased speed and scope of the planned technically challenging studies.

82. The Scientific Council thanked the Review Panel for their report and made the following comments:

- The Scientific Council emphasized that the Blue Books are much more than pathology handbooks; they are a central resource for cancer registries and central resources in the research and training of people working in a broad range of disciplines.
- The Scientific Council recognized the high quality and importance of the Blue Books, and emphasized the priority of producing them in a timely and scheduled manner.
- The Scientific Council noted that IARC should receive additional well-deserved recognition through incorporating the Agency name in the title of the 'WHO Blue Books'.
- The Scientific Council emphasized the importance of providing stable and sustainable funding for the Blue Books. One way to increase the budget for this programme could be to renegotiate the contract with WHO.
- The Scientific Council shared the concerns of the Review Panel regarding the long-term research competitiveness of the Section. In particular, the Scientific Council noted opportunities for improved integration and communication between MPA and the other Sections essential to the success of the research programme. The Scientific Council recommends the group better links with existing in-house -omics facilities and expertise.
- The Scientific Council noted the pressure faced by the Section in performing diverse activities and expressed concern for the long-term viability of the Section as presently structured.

83. In response, the Director:

- Acknowledged that timely production of Blue Books is critical, and noted that efforts are being taken to expedite the production process.

84. The Director and Section Head thanked the Review Panel for their input.

85. The Section of Molecular Pathology (MPA) Review Panel Report was formally accepted by the Scientific Council.

ELECTION OF CHAIRPERSON AND VICE-CHAIRPERSON FOR THE 51st SESSION OF THE SCIENTIFIC COUNCIL IN 2015

86. Dr Cornelia (Neli) Ulrich was elected Chairperson.

87. Dr James (Jim) Bishop was elected Vice-Chairperson.

DATE OF NEXT SESSION

88. Wednesday 28, Thursday 29 and Friday 30 January 2015. The MCA and INF Review Panels will take place on Monday 26 and Tuesday 27 January 2015.

ADOPTION OF THE SCIENTIFIC COUNCIL REPORT (Document SC/50/10)

89. **The report of the Fiftieth Session of the Scientific Council was adopted.**

CLOSURE OF THE SESSION

90. The chair of the Scientific Council thanked the Director and staff for the tremendous work they put into the preparation and planning of the meeting. The Scientific Council reiterated their admiration for the exceptionally high quality of the research being conducted at the Agency.

91. Dr Wild thanked the outgoing members of the Scientific Council, Drs Ahti Anttila (Finland), Bettina Borisch (Switzerland), Mads Melbye (Denmark), Martyn Smith (USA) and Piet A. van den Brandt (Netherlands).

ANNEX 1

STATEMENT FOR THE DECLARATION OF INTERESTS

Declarations of interest were provided by all Scientific Council members attending the Session.

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 clear conflict of interest with respect to the content of the meeting.

The contents of the table below was checked and approved by the person(s) declaring interest(s):

Scientific Council member	Declared interest(s)
Cornelia Ulrich	Receipt of consulting and speaker's fees for various commercial firms

ANNEX 2

Sections and Groups

Acronym	Full name of Section/Group	Responsible Officers
CIN	**Section of CANCER INFORMATION**	**Dr D. Forman** Deputy: Dr F. Bray
EDP	**Section of EARLY DETECTION AND PREVENTION**	**Dr R. Sankaranarayanan**
PRI	Prevention and Implementation Group	Dr R. Herrero
QAS	Quality Assurance Group	Dr L. Von Karsa
SCR	Screening Group	Dr Sankaranarayanan
ENV	**Section of ENVIRONMENT AND RADIATION**	**Dr J. Schüz** Deputy: Dr A. Kesminiene
GEN	**Section of GENETICS**	**Dr P. Brennan**
BST	Biostatistics Group	Dr G. Byrnes
GCS	Genetic Cancer Susceptibility Group	Dr J. McKay
GEP	Genetic Epidemiology Group	Dr P. Brennan
IMO	**Section of IARC MONOGRAPHS**	**Dr K. Straif** Deputy: Dr D. Loomis
INF	**Section of INFECTIONS**	**Dr M. Tommasino**
ICB	Infections and Cancer Biology Group	Dr M. Tommasino
ICE	Infections and Cancer Epidemiology Group	Dr S. Franceschi
MCA	**Section of MECHANISMS OF CARCINOGENESIS**	**Dr Z. Herceg**
EGE	Epigenetics Group	Dr Z. Herceg
MMB	Molecular Mechanisms and Biomarkers Group	Dr J. Zavadil
MPA	**Section of MOLECULAR PATHOLOGY**	**Dr H. Ohgaki**
NME	**Section of NUTRITION AND METABOLISM**	**Dr I. Romieu**
BMA	Biomarkers Group	Dr A. Scalbert
DEX	Dietary Exposure Assessment Group	Dr N. Slimani
NEP	Nutritional Epidemiology Group	Dr I. Romieu