



REPORT OF THE SCIENTIFIC COUNCIL ON ITS FORTY-NINTH SESSION

INTRODUCTION

1. The Forty-ninth Session of the Scientific Council (SC) of the International Agency for Research on Cancer (IARC) was opened by Dr Mads Melbye (Chairperson of the Scientific Council), at 09:00 on Wednesday 30 January 2013. He welcomed the participants, including the new members of the Scientific Council, Professor James F. Bishop (Australia), Professor Christos Sotiriou (Belgium), Dr Teruhiko Yoshida (Japan), Dr Nuria Aragonés (Spain) and Professor Nicholas C. Jones (UK).
2. He welcomed Professor Pekka Puska (Chairperson, Governing Council), Dr Mark Palmer (Vice-Chairperson, Governing Council), Dr Heather Bryant (UICC Representative – Observer), Dr Andreas Ulrich (WHO Representative) and Professor Sylvie Négrier (Director of the Centre Léon Bérard – Observer). He also welcomed the two Observers from Brazil (Dr Marisa Breitenbach and Dr Luis Felipe Pinto).
3. Apologies for absence were received from Dr Florence Demenais (France), Dr Murat Gültekin (Turkey) and Dr Piet van den Brandt (The Netherlands).

DECLARATION OF INTERESTS

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

ELECTION OF RAPPORTEUR

5. Professor Richard Gallagher was elected Rapporteur.

ADOPTION OF THE AGENDA (Document SC/49/1)

6. The agenda was adopted.

PRESENTATION OF STANDARD REPORTS: THE INTERIM ANNUAL REPORT 2012
(Document SC/49/2)

7. The Director presented the IARC Interim Annual Report 2012 and its scientific highlights.
8. The Scientific Council discussed the Director's report, and the following observations were made:
 - The Scientific Council congratulated the Director on the impressive achievements over the past year;
 - The Scientific Council noted that the economic impact of cancer prevention activity is important and needs further consideration in IARC's work scope;
 - The Scientific Council asked whether IARC is planning on focussing on genetic profiling of the major cancer types. Some IARC resources are currently going to this;
 - The Scientific Council recommended that participants in control arms in IARC studies get the intervention after value of an intervention is established. The Director noted that this is underway in, for example, screening for oral cancer in India;
 - The Scientific Council requested information on major issues surrounding Hubs including how they are selected. The Director noted that Hubs are selected on basis of expertise of personnel in the area, as well as training facilities, IT and infrastructure. The Hub initiative is just starting so IARC will be monitoring progress on the registries attached to Hubs;
 - The Scientific Council asked how will the South East Asian environment, particularly China, be handled by a Hub which is centred in Mumbai. The Director and CIN Section Head noted that IARC is already working with Chinese registries individually and collectively.

PRESENTATION OF STANDARD REPORTS: REPORT OF THE MEETING OF THE 54TH SESSION OF THE GOVERNING COUNCIL (Document SC/49/3)

9. The Director mentioned that the full Minutes of the Governing Council meetings (GC/54/Min.1–3) were available on the IARC Governance web site (<http://governance.iarc.fr/GC/GC54/index.php>).
10. The Governing Council requested the Director to discuss with the Scientific Council how IARC's scientific future should be reflected in the new building (see document SC/49/11 and discussion below).
11. The Governing Council requested the Director to discuss with the Scientific Council the future of the Education and Training Programme (see document SC/49/7 and discussion below).
12. The Scientific Council noted the Report of the 54th Governing Council.

PRESENTATION OF STANDARD REPORTS: DIRECTOR'S UPDATE FROM THE 48TH SESSION OF THE SCIENTIFIC COUNCIL AND DISCUSSION (Document SC/49/4)

13. The Director presented a written report as an update from the last Scientific Council.
14. Changes in the structure and focus of the Scientific Council meetings were introduced as from the 48th Scientific Council to increase scientific discussion; in particular the current and planned initiatives of the Agency's research Groups/Sections.
15. Another change introduced in 2012, with the same aim as above, was the scheduling of the peer-review meetings of the two Sections in parallel and immediately before the Scientific Council meeting. This was judged successful as it allowed immediate discussion on the findings of the Review Panels.
16. These changes have been maintained for the current Session and will be fully assessed at the 50th Scientific Council in 2014.
17. The Scientific Council was pleased with the response given by the Director to its 48th Report.

PRESENTATION OF STANDARD REPORTS: BIENNIAL REPORT OF THE IARC ETHICS COMMITTEE (IEC), 2011–2012 (document SC/49/5)

18. Dr Martyn Plummer, member of the IEC presented this item.
19. The Scientific Council was pleased with the Ethics Committee report and noted that:
 - With respect to dealing with incidental research findings from projects at IARC, no guidelines are in place yet regarding what should be reported back to study participants. Rules should be developed as soon as possible;
 - Informed consent issues with projects include post-study use of samples, and this should be a concern of the Ethics Committee. Currently the Ethics Committee makes sure that the re-use of specimens is covered by the participants' original informed consent.

DIRECTOR'S RESPONSE TO THE REVIEWS OF THE SECTIONS OF CANCER INFORMATION (CIN) AND ENVIRONMENT AND RADIATION (ENV), HELD AT IARC IN JANUARY 2012 (Document SC/49/6)

20. The details of action taken following the reviews of the Sections of Cancer Information (CIN) and Environment and Radiation (ENV) were discussed.
21. The Director noted with satisfaction the high overall evaluation assigned to both Sections.

Section of Cancer Information (CIN):

- The Scientific Council suggested there is a need to develop connectivity among Hubs so they can share expertise and CIN Section Head, Dr David Forman, will pursue this;
- The Scientific Council suggested the possibility of an initiative in Hubs to identify risk factor profiles in cancer registry areas, and the possibility of looking at potential years of life lost in new Hub-associated registries;
- The Scientific Council suggested putting 'confidence intervals' around registry data in new start-up registries. CIN replied that these are already in operation in CI5 data for existing developed registries. CIN is contemplating a set of weights to attach to GLOBOCAN data;
- The Scientific Council suggested there should be a strategy for identifying and involving areas of the world where there are no cancer data. CIN noted that this is underway. CIN makes estimates in GLOBOCAN from neighbouring areas where no data is available;
- The Scientific Council noted there should be a group to strategize on ways to finance Hubs. CIN has identified areas where there is no information on cancer but there is a limit to how much CIN can do without further funds. A funding initiative is underway with UICC to provide more resources;
- Communication with local health authorities is important in order to ensure they are familiar with the importance of the cancer problem and provide the appropriate data.

Section of Environment and Radiation (ENV):

- The Scientific Council asked if a new post was being considered for ENV in exposure assessment. This is being considered plus the ENV Section Head noted a strong link with the Utrecht environmental assessment group.

SCIENTIFIC COUNCIL MEMBERSHIP OF SECTION REVIEW PANELS IN 2014

22. The Scientific Council discussed the Sections to be reviewed in 2014: Section of Molecular Pathology (MPA), Head: Dr Hiroko Ohgaki and Section of IARC Monographs (IMO), Head: Dr Kurt Straif.

23. Review Panel members need to be identified as soon as possible to ensure a timely process.

24. Drs Bettina Borisch and Christos Sotiriou will participate in the MPA Review Panel. It was agreed that Dr Borisch would chair the Review Panel.

25. Drs Ahti Anttila and Jim Bishop will participate in the IMO Review Panel. It was agreed that Dr Anttila would chair the Review Panel.

26. 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.

27. The Reviews will take place at IARC on 27–28 January 2014.

FUTURE DIRECTIONS FOR THE EDUCATION AND TRAINING GROUP (ETR) (Document SC/49/7)

28. Ms Anouk Berger, Group Head, presented this item.

29. Drs Anttila and Smith, both members of the Scientific Council, had been asked by Dr Mads Melbye (Scientific Council Chair) to prepare a preliminary review for discussion at the Scientific Council.

30. The Scientific Council is pleased with the overall new direction of the ETR activities and initiatives.

31. Drs Anttila and Smith reported that much of the focus of the ETR programme is on the individual scholar from low- and middle-income countries (LMICs) rather than the cancer or university organization to which they belong. IARC should take the advice of the local LMIC organizations on each programme's course content to make them applicable to local conditions.

32. Also perhaps more workshops rather than fixed courses should be considered depending on needs of the LMIC organizations. Outcomes of the training and courses should be monitored. Drs Anttila and Smith noted that online courses are being proposed and asked whether IARC is resourced and equipped to do these professionally.

33. In response the ETR Group Head, Ms Anouk Berger, noted that the Scientific Council comments are valuable. She said that plans are underway for ensuring that collaborating institutes have input on training. Ability to customize courses is currently limited due to resources. Local PhD experts help with content. The trainees also come for the most part with local projects already underway, so the IARC training they get is linked to local research projects.

34. Regarding web-based education, ETR proposes to start with web-based seminars not with courses. Material is now being put online and hopefully this will allow more people to use the material. The intent will be to get the participants to interact among themselves without formal assessment. Also before getting into courses rather than webinars, the levels of resources at IARC to support large numbers of participants will need to be assessed. The Director noted that Ms Berger has considerable expertise in web-based education and was recruited to develop this area of ETR.

35. Other Scientific Council members made the following observations:

- Interviews with IARC post-docs indicate that there is great support from IARC, but that there would be benefit from forming a Junior Career Scientist Association, which would include post-docs and students. This would involve them directly in professional networking, give them leadership opportunities, their own responsibility, and save resources;
- Additional inclusion of post-docs in interdisciplinary scientific teams and additional travel funds would be helpful;
- Alumni should be asked to provide information on use of training and to identify potential good future trainees.

36. In response to the request for advice on priorities, especially given the size of the ETR Group and the resources currently available:

- The Scientific Council noted that students recommend that IARC scientists might become more involved in mentoring trainees when they return to their home institutes, particularly in low resource areas;
- The Scientific Council would like a biennial report on ETR activities.

PROPOSED PROGRAMME (2014–2017) AND BUDGET (2014–2015) (document SC/49/8)

37. Mr David Allen, Director of Administration and Finance introduced this item.

38. The present Proposed Programme sets out the main lines of the Agency's research strategy and planned activities for the period 2014–2017. These follow the structure and priorities defined in the IARC Medium-Term Strategy and Implementation Plan for 2010–2014 and approved by the Governing Council (see document GC/52/6 and Resolution GC/52/R4).

39. The associated budget sets out the planned allocation of resources for the main areas of activities (see Document SC/49/8, page 1). The total proposed budget for 2014–2015 is €41 214 017, representing an overall increase of 4.55% from the 2012–2013 approved budget as a result of mandatory staff cost increases. This increase and the addition of the assessed contribution from Turkey in the 2014–2015 Regular Budget will allow IARC to maintain the critical non-staff budget and the current staffing levels.

40. The proposed budget is presented in three appropriation sections as in prior biennial budgets. Two changes are made in the presentation of the proposed 2014–2015 biennial budget in Appropriation Sections 2 and 3, as follows:

- Under Appropriation Section 3, the budget for the IARC Grants Office, which was presented on a separate budget line in 2012–2013, is now included in Area 4 of Section 3 following the integration of the IARC Grants Office into the Budget and Finance Office. The description of Area 4 is revised to Grants, Budget, and Finance services. Accordingly, the 2012–2013 figures on this line were adjusted to enable the comparison with the proposed 2014–2015 budget.

- A portion of non-staff budget for activities contributing directly to the Scientific Programme that used to be reported under Appropriation Section 3 Administrative Programme, Area 3 Conference, Office, and Building Services, has been moved to Appropriation Section 2 Scientific Programme, Area 8 Scientific Support. Careful analysis has been conducted to identify the relevant cost items and to apportion the move based on headcounts of associated units. The result reflects more correctly the distribution of the Agency's costs of the scientific programme and administrative services.

41. These changes have no impact on the overall level of Scientific Programme budget allocation and are a purely presentational change. If there were no change in the presentation, the budget allocated to the Scientific Programme in 2014–2015 would be 73.70%, an increase from that approved for 2012–2013, and the budget for the Administrative Programme would decrease from 27.34% in 2012–2013 to 25.87% in 2014–2015. After the changes, the Administrative Programme budget is further decreased to 21.50%.

42. Revision of the cycles of Programme, Budget, and Medium-Term Strategy is proposed for better alignment, eliminating overlapping of programme period, and ensuring approval of Medium-Term Strategies prior to its implementation: (i) the proposed programme cycle will be two years, the same period covered by the budget presented in the same document; (ii) the incoming Director (DIR) (whether on 1st or 2nd term) will be given the first year to prepare the five year strategic plan which will formally take effect after completion of two years at the Agency; and (iii) in order for the programme to refer to the Medium-Term Strategy and to align to the second year of DIR's incumbency, the current Medium-Term Strategy should be extended for an additional year, covering the period 2010–2015, the next strategy will cover 2016–2020, and there after continues on the five year cycle.

43. The Secretariat requested the Scientific Council for guidance and endorsement on three specific issues: (i) the strategy to maintain the current non-staff budget and staffing levels required to maintain commitments in place; (ii) change to the presentation of the budget, specifically as related to displaying a more comprehensive cost of the scientific programme under Section 2 of the Regular Budget; and (iii) alignment of Programme, Budget and Medium-Term strategy cycles which would allow improved planning and reporting.

44. The Scientific Council made the following observations:

- The Scientific Council queried whether the Medium-Term Strategy is appropriate for continuation through 2015. The Director replied that it is appropriate;
- The Scientific Council asked about whether overhead and indirect income from external funds can be increased. The Director indicated little possibility for increasing resources this way, due to the fixed overhead rates governed by WHO Rules and Regulations.

45. The Scientific Council recommended that the Governing Council:

1. Approve extension of one year to the Medium-Term Strategy;
2. Approve the 2014–2015 budget;
3. Approve adjustments to the budgeting format brought about by recent changes.

PURCHASE OF SCIENTIFIC EQUIPMENT (Document SC/49/9)

46. The Scientific Council considered the Director's proposal to request a contribution of 485 295€ from the Governing Council Special Fund for essential scientific equipment, to complement earlier investments, to maintain and upgrade IARC capacity to handle and process large numbers of biological samples and to acquire a pyrosequencing system.

47. The following items were proposed for purchase:

- a) Pyrosequencing system 96-well PyroMark Q96 MD
- b) Liquid handling system for pre-PCR procedures
- c) Liquid handling system for immunoassays
- d) Liquid handling system for PCR products
- e) Liquid handling system for ChIP assays.

48. The Scientific Council considered these items and approved the suggested purchases.

49. In addition, the Scientific Council made the following observations:

- The Scientific Council questioned whether the equipment request is too low. The Director noted the equipment request is modest this year. IARC routinely looks for opportunities for sharing equipment with local collaborating institutes.

FUTURE DIRECTION OF THE IARC BIOBANK (document SC/49/10)

50. Dr Maimuna Mendy, Group Head, Laboratory Services and Biobank (LSB) presented this item.

51. The IARC Biobank is a key resource supporting the Agency's mission of coordinating and conducting research on human cancer.

52. The potential construction of a new IARC building provides an exceptional opportunity for planning an expanded Biobank equipped with state-of-the-art technology and designed to respond adequately to the current and future demands in this area.

53. In response to the request for advice from the Scientific Council in terms of the overall direction and development in the IARC Biobank core areas as well as on two new initiatives, notably the specification of the IARC Biobank as a core component of the proposed new building and the potential for the Agency to play a key role in supporting biobanking developments in LMICs, the Scientific Council made the following observations:

- The Scientific Council recognized the value of the vision of a large and high-quality LMIC shared Biobank at IARC. IARC is in a unique situation to take on such an initiative. Contact needs to be made with national governments to determine level of interest;
- The Scientific Council suggested that the proposed space for a Biobank in a new building may be too small and this is a major concern;
- The Scientific Council recommended IARC should consider fractioning samples in different places for disaster back-up;
- The Scientific Council recommended that IARC investigate a stand-alone Biobank adjacent to the main new IARC building;
- The Scientific Council recommended IARC investigate possible industries which produce liquid nitrogen (LN) as a by-product which the Agency might acquire at low costs;
- The Scientific Council noted that automation in a new Biobank will reduce personnel costs so that even if up-front costs are high, they may pay off over time;
- The Scientific Council recommended that there should be a short-term Biobank policy for the next six years along with a long-term policy for the new facility.

BUILDING FOR THE FUTURE: THE SCIENTIFIC VISION BEHIND THE “NOUVEAU CENTRE” (document SC/49/11)

54. The acute problem of the degradation of the current building had created an opportunity for IARC to reflect on how a new building should be aligned to its long-term strategy.

55. Whilst anticipating where developments in cancer research will lead the science in the next 20 to 30 years would be impossible, it is reasonable to anticipate the broad approaches, skills and infrastructure required to conduct research consistent with the IARC Statute over that timeframe.

56. The Agency needs a building which:

- enables interdisciplinary cancer research; this works best when the scientists share overall objectives, budgets and space in an infrastructure which promotes informal exchanges;
- has dedicated space for its increasing bio-specimen resource centre;
- permits effective processing, storage and retrieval of large amounts of highly complex research data in a secure manner;
- has facilities to host the many meetings, conferences, workshops and training courses which sit at the heart of the collaborations it seeks to promote;
- has a range of types of accommodation for its permanent staff and many visitors at different levels of seniority;
- has capacity for expansion, reflecting the increasingly international nature of cancer research, the growth in the international research community and the evolving demands on IARC for cooperation;
- has a lower environmental footprint, ensuring at the same time substantial reductions in running costs;
- provides an environment that promotes the well-being of its staff;
- is adaptable, allowing it to respond to the changes in focus of cancer research over the next 30–50 years.

57. The Scientific Council wishes to make the following comments for the Governing Council:

- The Scientific Council noted that the discussion on size and format of a new building is difficult in general. As outlined by the Director there is a need for expansion of laboratory space in the coming years. The Scientific Council recognized this but at the same time stressed the importance that a building of maximal flexibility is required;
- The Scientific Council recommends an architecturally interesting building as a way to reflect IARC’s role and importance internationally;
- The Scientific Council notes that the new building must work well immediately as well as being appropriate for long-term future;
- The Scientific Council stressed the importance that a new building have optimal configuration to promote collaboration between IARC sections;
- The Scientific Council recognizes that the initial principles outlined in document SC/49/11 for the new building are consistent with the envisaged future activities of the Agency.

PRESENTATION OF POSTERS BY YOUNG SCIENTISTS

58. As introduced in 2011, young scientists have prepared posters to present to Scientific Council members in a less formal setting.

59. The Scientific Council was very impressed with the scope and quality of research projects presented by the young scientists at IARC, and thankful for their work.

CURRENT SCIENTIFIC INITIATIVES (document SC/49/12)

60. All IARC scientific Sections, except the Section of Early Detection and Prevention (EDP) and the Section of Nutrition and Metabolism (NME) which were the subject of a separate Review by a dedicated Review Panel in the days preceding the 49th Scientific Council session, have been requested to make a presentation on their current scientific initiatives. The Scientific Council made the following remarks:

Section of Cancer Information (CIN)

Global monitoring of the WHO '25 by 25' target for cancer

- The Scientific Council congratulated CIN on the important work done to date on this initiative. IARC clearly has a major role in monitoring the goals of this initiative regarding cancer;
- The Scientific Council noted that the proposed strategy for '25 by 25' is important and that addition of scenarios for specific cancer intervention should be dependent on resources. Opportunities should be identified to obtain outside funding for IARC to play a central role in meeting WHO's goals for cancer in the '25 by 25' initiative;
- The Scientific Council noted that modeling other related causes of death in addition to cancer might be important and could be done in collaboration with other institutions;
- The Scientific Council noted that parallel risk factor prevalence trends which drive future mortality rates over time might also be useful. CIN might consider also including 'deaths avoided' by prevention interventions;
- Are there short-term interventions which might have immediate effect on mortality? 2025 will come quickly so positive short-term effects, including on other disease endpoints, may help drive '25 by 25' initiative;
- The Scientific Council is concerned that data from LMIC settings in Africa and Asia are missing and feedback to be made to governments of these countries that access to data is required.

Section of IARC Monographs (IMO)

Future perspectives of quantitative risk assessment for the IARC Monographs

- The Scientific Council was not clear on how any quantitative risk assessment can be done on any except Group 1 carcinogens. Even for these agents, information on human exposure might be relatively minimal and might make quantitative assessment controversial. Dr Straif clarified that the initial approach, if this went ahead, would indeed be on Group 1 agents. The assessments would be done largely on risk factors

which have major public health impacts (such as diesel exhausts, tanning beds, cigarettes, etc.). From there, other insights obtained from a proposed quantitative risk advisory group might materialize;

- IARC might wish to consider a workshop on the nature and limits of quantitative risk assessment.

Section of Mechanisms of Carcinogenesis (MCA)

Early molecular (“driver”) changes in carcinoma development associated with environmental exposures

Identification of epigenetic biomarkers and their environmental determinants

Aristolochic Acid project

- The Scientific Council noted that using aristolochic acid (AA) as an animal/cellular model system for carcinogenic processes would be useful, but is there a simple assay for exposure to this compound which could be used in population-based studies? Dr Herceg noted that a number of assays are available particularly those which rely on DNA adducts, and how these translate into mutations. Urine samples might provide a useful specimen for detecting AA driven adducts.

Epigenetic Project

- The Scientific Council noted that recent advances make epigenomic studies a new and promising field for cancer research. The Scientific Council recognized that starting with breast cancer as an initial tumour model is a reasonable approach;
- The Scientific Council noted that this is a very big project and prioritizing specific epigenomic research questions to be answered is a key step in beginning this research;
- The Scientific Council discussed the issue of whether epigenetic changes seen in blood would fully define the changes taking place in the breast, and also whether other biomarkers should be considered;
- The Scientific Council noted that bioinformatics needs for the project may be important to consider.

Section of Molecular Pathology (MPA)

WHO Classification of Tumours series

- The Scientific Council noted that a move to online circulation of the ‘Blue Books’ would greatly expand accessibility to the resource, also in LMICs. However it is important to keep a limited print run as well as the online option. This is important as money derived from print publication currently actually supports the Section’s work;
- The Scientific Council noted that tumour markers and their levels, including genetic data, are becoming important in pathology. The Scientific Council believes marker information and interpretation should be integrated into future volumes.

Section of Infections (INF)

Infections and Cancer Biology Group (ICB)

Infections and Cancer Epidemiology Group (ICE)

- The Scientific Council noted that a long-term project to identify synergies between oncogenic viruses and environmental agents is important;
- The Scientific Council asked whether serology studies might find a place in the Section's programme going forward, but Dr Franceschi noted that good easily completed DNA based assays are available and pick up more infections than serology;
- The Scientific Council noted that search for new oncogenic viruses might be useful, and this is currently already underway in the Section;
- The Scientific Council noted that current models for cervical cancer prevention programmes, which include HPV vaccination and HPV-based screening, may be challenging in countries like Bhutan.

Section of Environment and Radiation (ENV)

AGRICOH – a consortium of agricultural cohort studies

- The Scientific Council noted that the new agricultural cohorts in LMICs may be confounded by the fact that women might do most of the actual farming work in these countries;
- The Scientific Council questioned whether withdrawing resources from cohorts without cancer data would allow deeper investigation in the cancer cohorts and suggested Dr Schüz should consider whether it is likely that the resources freed up would be able to be used by the Section for more cancer cohort work;
- The Scientific Council noted that with regard to determining whether IARC should continue to support all aspects of the nuclear accident group ENV should look closely at whether more valuable detailed information may become available by continuing support for the whole programme, versus discontinuing support for some aspects.

Section of Genetics (GEN)

- The Scientific Council endorsed the approach of characterizing a few candidate genes in large numbers of subjects as well as characterizing the overall mutation spectrum within very specific and unique cohorts;
- The Scientific Council supported the Section's initiative to focus on areas of particular relevance to IARC and areas that the Agency is in a unique position to address;
- The Scientific Council endorsed the circulating tumour DNA study of lung and other cancers in plasma and serum and noted that its potential for future advances is great.

SCIENTIFIC REPORT OF THE SECTION OF EARLY DETECTION AND PREVENTION (EDP) REVIEW AND DISCUSSION (document SC/49/WP9)

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

62. The external advisors and Scientific Council members of the Review Panel were thanked for their valuable contributions.

63. The Review Panel noted the following recommendations concerning the EDP Section:

Overall recommendations for EDP

The Review Panel was impressed with the quality of the work performed in the Section and the extensive collaborative networks. The EDP senior staff are exemplary representatives of IARC at a global level.

- A. The Review Panel recognizes the excellence and importance of the current research programmes and their fit with IARC's mission. The Review Panel concurs with the opinion of Section staff that the on-going viability of the Section's current research programmes is dependent on continued and additional support from IARC core budget;
- B. The Review Panel recommends that the overarching strategy for this Section be reviewed as part of the process of planning for the imminent retirement of two senior staff;
- C. The Review Panel notes that one of the four objectives of PRI is to "engage in research on methods to implement existing strategies taking into account the social, economic and cultural differences". The Review Panel strongly supports that IARC pursue a programme of research in implementation science and notes that this should logically form part of the EDP Section. As a part of the development of implementation science, a decision should be taken concerning the model for acquiring the necessary skills, such as the balance between IARC recruitment and external collaboration. The Review Panel identified a need for additional expertise in, for example, behavioural science, policy research, and health economics;
- D. The Review Panel recommends that the Director continue the dialogue with junior staff to further improve the possibilities for professional development. Introduction of a mentorship programme would be beneficial.

64. The Section and Group Heads thanked the Review Panel for their timely and useful recommendations.

65. The Scientific Council discussed the report of the EDP Section and the following items arose:

- The Scientific Council noted that the summary recommendations particularly those that call for continued implementation science research at IARC are well founded;
- The Scientific Council regards prevention and implementation research, particularly low technology interventions as critical to the Agency's long-term mandate with regard to LMICs;

- The Scientific Council strongly suggested there may be a need to have health economics expertise embedded in IARC;
- Overall the Scientific Council congratulated the Review Panel on the breadth and depth of the EDP review;
- The Scientific Council noted that the EDP research and implementation programme is a perfect fit with the very important WHO noncommunicable disease initiative.

66. In response to the EDP Review the Director noted that:

- Congratulations are extended to the Section scientists and leadership;
- Implementation sciences are a key area for new opportunities for IARC. More resources will hopefully be possible to expand these programmes;
- New metrics for evaluating success in IARC Sections are being explored.

67. The Section of Early Detection and Prevention (EDP) Review Panel Report was formally accepted by the Scientific Council.

SCIENTIFIC REPORT OF THE SECTION OF NUTRITION AND METABOLISM (NME) REVIEW AND DISCUSSION (document SC/49/WP10)

68. The Scientific Report of the NME Review was presented by Dr Cornelia (Neli) Ulrich, Chair of the Review Panel.

69. The external advisors and Scientific Council members of the Review Panel were thanked for their valuable contributions.

70. The Review Panel noted the following concerning the NME Section:

Overall recommendations for the BMA Group of the NME Section

- In discussion with senior colleagues and his team, Dr Scalbert should clarify the BMA's Unique Selling Point (USP) and keep this centre stage when making decisions on what projects to bid for/undertake. Unique resources are the existing cohorts and collaborations on epidemiological studies. In addition, opportunities for collaborations for intervention and feeding studies should be sought;
- Give high priority to "proof of principle" work for their new approach to nutritional epidemiology to enable them to make rapid progress towards high impact publications which will put the new Group "on the map";
- Consider opportunities for strategic alliances with genomics experts within IARC to harness the combined power of genomics and metabolomics to open the "metabolic phenotype black box";
- The Group should increasingly utilize resources developed in the United States or elsewhere on metabolomics and be involved in networks.

Overall recommendations for the DEX Group of the NME Section

- With such a broad scope, the DEX Group would benefit from prioritization of research topics taking into account the size of the Group and the number of experienced investigators. This would allow emphasis on the projects of the highest scientific value and mission of IARC;
- The DEX Group should continue judicious use of roadmaps to determine the best step-wise approach to move forward on new large initiatives, such as the new work in Africa;
- DEX is encouraged to continue the high quality, innovative work in adaptations of EPIC-Soft and development of infrastructure and expansion globally;
- The DEX Group would benefit from continued and expanded work with other Groups at IARC that can assist with IT, dissemination and training;
- Senior staff should provide opportunities for junior staff to collaborate on projects in NEP and BMA;
- The DEX Group should consider collaboration with others working on the “nutritional transition” so the other key behaviors/exposures altered by the transition can be measured at the same time as the dietary measurements and with appropriate accuracy and precision. This will be essential to avoid confounding when attributing changes in outcomes (cancer risk) related to altered dietary exposure since several behaviours/exposures may be correlated;
- The DEX Group should collaborate with experts to ensure state-of-the-art assessments of physical activity to support research on energy balance/obesity;
- The DEX Group should continue partnerships with WHO Headquarters and other international organizations in pursuing the worthwhile aim to provide comparable dietary assessments on a worldwide basis.

Overall recommendations for the NEP Group of the NME Section

- Increase integration with the research conducted by the other two Groups in order to align priorities and goals, especially with regard to the populations under study and the use of metabolomics;
- Set priorities for new projects based on scientific value and chances to be funded;
- Seek a greater leading role in EPIC to optimize current and medium-term opportunities from this unique resource;
- Continue building resources in LMICs for future research, in a multi-phase approach. The Review Panel supports this strategic investment, which will take a few years to mature;
- Continue to build strong links with other IARC Sections/Groups (e.g. Genetics; Epigenetics);

- Consider carefully the opportunity cost of diversifying into research on healthy ageing and seek out appropriate expertise/collaborations;
- Consider whether it is timely to devote resources to epigenetic measurements in epidemiological studies. Epigenetics (including DNA methylation and microRNA expression) is a very fast moving field where rapid progress in both concepts and technical developments can be expected and which may help in making strategic decisions about when it is best to enter the field and what would be appropriate to measure. Stronger collaborations within and beyond IARC are recommended.

Overall recommendations for the NME Section

The Review Panel was impressed with the quality of the work performed in the Section and the extensive collaborative networks. The NME senior staff are exemplary representatives of IARC at a global level.

- The Review Panel recommends the NME Section to develop a process for prioritizing research topics taking into account the size of the Section and Groups and the number of experienced investigators. This would allow emphasis on projects of the highest scientific value with more funding opportunities;
- Develop a strategy to focus on areas of greatest expertise and unique strength, particularly where NME Groups have a clear competitive edge;
- Seek out collaborations and other networks to benefit from existing complementary international expertise;
- Research on nutritional epidemiology and metabolism in LMICs is laudable, and should be in an appropriate multi-phase approach, in collaboration with other IARC Sections and international partners;
- Ensure that the work is informed by the latest understanding of the biology of cancer development to maximize the likelihood that i) the relationships investigated are causal and ii) the outcomes from the NME research can be fed back into cancer biology studies;
- IARC continues to play a key role in translating its research tools on nutrition to support WHO priorities and would benefit from additional resource mobilization from WHO;
- The Review Panel recommends a greater number of P1 positions to enable longer-term planning and provide continuity and opportunities for talented trainees;
- Strengthen communication within NME and within Groups. Build teams to enable cross-talk around unifying themes and initiatives. This will encourage interdisciplinary interactions and innovation;
- Expand space and computing facilities;
- Bioinformatics and biostatistics are critical resources for NME and appropriate capabilities should be provided;

- The EPIC cohort is a unique resource that is critical for IARC and should be supported and strengthened with appropriate infrastructure and personnel;
- Expand the postdoctoral training programme and maintain appropriate mentoring and professional development.

71. The Scientific Council noted the recommendations concerning the NME Section and its Groups and the following discussion items arose:

- The Scientific Council asked for clarification of the relationship between NME and the EPIC study. A formal Memorandum of Understanding is now in place with EPIC defining how IARC can support EPIC and use the data and specimens;
- The Scientific Council supports the fundamental importance of use of stored samples available to the NME Section as well as other IARC Sections;
- The Scientific Council noted the importance of the EPIC specimens and the opportunities to do unique work in this area and encourages the Director to make a special approach to the Governing Council for more resources for this function;
- The Scientific Council asked about the possibility of the Section getting involved in intervention studies, however, resources within the Section are limited for this, and the Scientific Council recommends that studies be prioritized to concentrate on the NME Section's present strengths.

72. In response, the Director noted:

- The positive review of the Section reflects well on the Section and Group Heads who have accomplished a great deal in a short time.

73. The Section and Group Heads thanked the Review Panel for their input.

- The Section Head noted that there is significant collaboration between NME and other Sections and Groups within IARC, as well as outside scientific organizations in Europe and other parts of the world;
- Also it was noted that methodologies must be fully developed prior to being utilized in studies.

74. The Section of Nutrition and Metabolism (NME) Review Panel Report was formally accepted by the Scientific Council.

FEEDBACK FROM THE SCIENTIFIC COUNCIL REGARDING CONDUCTION PEER REVIEWS IMMEDIATELY PRECEDING SC SESSIONS – EXPERIENCE DRAWN FROM 2012 AND 2103 SC SESSIONS; TO INCLUDE A DISCUSSION OF GRADING SCALE

75. At its 51st Session in 2009 (see Resolution GC/51/R11), the Governing Council authorized the Chairperson of the Governing Council, upon the request of the Chairperson of the Scientific Council, to adapt the guidelines in light of experience in conducting reviews and that any such adaptations shall be presented to the next session of the Governing Council for approval.

76. In light of the experience drawn from conducting reviews immediately preceding the 2012 and 2013 Scientific Council Sessions, the Scientific Council recommends that the scheduling for reviews continue using the present system of meeting immediately before the Scientific Council meeting.

Discussion on the issue of the scoring system (jumping from "Outstanding" to "Satisfactory" with no intermediate categories):

77. The Scientific Council made the following comments on the scoring system:

- The Scientific Council noted that a four grade system might not be fine enough to capture nuances of the review process and it was suggested that more 'granularity' be introduced into the scoring system;
- The Scientific Council decided that the Scientific Council Chair and Vice-Chair together with Professor Nicholas Jones and the Secretariat will work up a new system for scoring that will then be circulated to all Scientific Council members for final approval before presenting the recommendations to the Governing Council in May 2013 [please refer to document SC/49/13 Add.1].

ELECTION OF CHAIRPERSON AND VICE-CHAIRPERSON FOR THE 50TH SESSION OF THE SCIENTIFIC COUNCIL IN 2014

78. Dr Mads Melbye was elected Chairperson.

79. Dr Neli Ulrich was elected Vice-Chairperson.

DATE OF NEXT SESSION

80. Wednesday 29, Thursday 30 and Friday 31 January 2014. The MPA and IMO Review Panels will take place on Monday 27 and Tuesday 28 January 2014.

ADOPTION OF THE SCIENTIFIC COUNCIL REPORT (Document SC/49/13)

81. **The report of the Forty-ninth Session of the Scientific Council was adopted.**

CLOSURE OF SESSION

82. The Scientific Council especially congratulated the Director on the excellent quality of the ongoing work at the Agency and the progress made in the short time of his tenure at IARC.

83. Dr Wild thanked Drs Mads Melbye, the SC Chair and Dr Neli Ulrich, the Vice-Chair as well as the outgoing members of the Scientific Council, Dr Florence Demenais (France), Dr Richard Gallagher (Canada) and Dr Giulio Superti-Furga (Austria).

ANNEX
STATEMENT FOR THE DECLARATION OF INTERESTS

Declarations of interest were provided by all Scientific Council members.

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

- ✓ Research funding from and consultancy for commercial entities;
- ✓ Provision of legal expert opinion;
- ✓ Commercial interest in private companies.

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

Scientific Council member	Declared interest(s)
Luca Gianni	Advisory Board member of various commercial entities; Committee member on a study by Sanofi Aventis and Glycotope
Martyn Smith	Consulting in litigation + expert opinion + testimony in courts and written reports for various law firms in the USA and the US EPA
Giulio Superti-Furga	Consulting for and current investment in commercial entities
Cornelia Ulrich	Received honorarium from Roche Diagnostics in February 2011 for a conference on lung cancer survivorship