

# INTERNATIONAL UNION OF PHYSIOLOGICAL SCIENCES

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## Making IUPS more useful and relevant

August 2010

### A. Introduction

This document is part of a series of Outreach papers being circulated for comment and revision to the IUPS family of Member Societies.<sup>1</sup> It reflects the strong desire of the newly elected Executive Committee and Council to make the IUPS more useful and relevant to the world and to physiologists and physiology-related organizations around the world. This document also responds to the question echoed in the President's address at the Closing ceremony<sup>2</sup> at the Kyoto Congress in 2009: "What on earth does IUPS exist for?" For the full speech see

[http://www.iups.org/Kyoto2009/IUPS\\_President\\_Kyoto\\_speech\\_closing\\_ceremony.pdf](http://www.iups.org/Kyoto2009/IUPS_President_Kyoto_speech_closing_ceremony.pdf)

The general Mission statement of IUPS is posted on pages 4-5 of the Report of the Long-Range Planning Committee on the IUPS website:

<http://www.iups.org/Sections/Communications/FinalLRPCReport.pdf>

In this document we extract the most relevant statements. Those statements are indented and set in a different font to make it clear when we are quoting from the Report. We then explain what IUPS is doing to achieve the goals referred to in the Report. Finally, we consider a question that the Long-Range Planning Committee did not fully address: "What precisely can IUPS achieve that cannot be achieved by the member societies and adhering bodies without IUPS?"

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<sup>1</sup> Member societies include *Adhering Bodies* (e.g., The Physiological Society, US National Academy of Science), *Supporting Bodies* (e.g., American Physiological Society, Chinese Physiological Society), *Associate Societies* (e.g., Physiological Society of Ghana, Myanmar Medical Association), *Regional Members* (e.g., Federation of Asian & Oceanian Physiological Societies), *Affiliate Members* (i.e., International Society for Pathophysiology, International Society of Nephrology), and *Special Members* (e.g., Sankyo Co. Ltd, Novartis Inc)

<sup>2</sup> A video recording of the closing ceremony is on <http://www.iups.org/IUPS09-CLOSING.html>

## **B. Relevant extracts from Long-Range Report**

### **(1) Global role**

The role of IUPS should be a global one. While its congresses, meetings and organisation are naturally dominated by those regions of the world where our science is well-developed, they represent only 10-15% of the world's population. IUPS has an obligation to the 85-90% in the developing world, the under-developed world and what are called the 'war zones'. It should be a world beacon. We strongly recommend that its four year cycle of Congresses should be continued as one of the most visible parts of that beacon. Ways should be found to increase participation from poor and developing countries.

#### *What IUPS is doing to implement this recommendation*

A special Membership Committee has been set up to reach out to lapsed members and to areas of the world where IUPS has never had members. Saeed Semnanian (Iran) and Denis Noble (UK) are the co-chairs of this Committee and Sue Orsoni (Paris, past Executive Secretary) has been retained as a consultant to benefit from her long (35 years) experience and knowledge of the IUPS family. The initial focus of the committee will be on the Middle East, Africa and South America. The committee has already met three times (once in person and twice via Skype Conference calls) and is actively researching the information required to achieve its goals. In addition to the focus on the three areas selected, initiatives have also been made in relation to countries like North Korea and Myanmar (Burma), where the political obstacles to progress are most difficult. In the case of North Korea, we have already secured promise of funding for scientists to attend the 2013 Congress. In the case of Myanmar (Burma) we are making approaches via Thailand. Many similar approaches are planned by the Membership Committee.

### **(2) Integrative Physiology**

We recommend a re-orientation of priorities towards the integrative end of the physiological sciences, partly to meet the challenge of Systems Biology, and to service the growing awareness in the health care industries that integrative physiology is relevant and necessary.

#### *What IUPS is doing to implement this recommendation*

This goal was clearly in the minds of the Nominating Committee when it proposed candidates for the 2009 election of Officers and Council of IUPS. The disciplinary balance of the new Officers and Council shows that. Both at the Kyoto Congress and subsequently, IUPS leadership has been working actively on this issue, which we consider to be very serious. The swing towards systems approaches that began around 2000<sup>3</sup> should have been a swing towards physiology as the obvious 'integrative' discipline within the biological and medical sciences. That did not happen. Our subject is being 'reinvented' under various names of new departments and Centres but not usually acknowledged as physiology. This is the reason why the President devoted the whole of

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<sup>3</sup> Only 2 published articles before 2000 have 'systems biology' in their titles or abstracts before that date, around 3000 do so subsequently, 90% of them in the last 5 years

his lecture to the Kyoto Congress to this problem<sup>4</sup>. Since that Congress, similar lectures have been given at around 50 meetings and congresses around the world.

It is therefore recommended that the Physiome Committee be renamed to become the “Physiome and Systems Biology Committee”. When the Physiome Project was launched (at a satellite of the 1997 Congress) we could not have anticipated that the appeal of Systems Biology would develop so rapidly. The present reality is that reference to Systems Biology is far more widespread than to the Physiome. We believe that, had that been known, IUPS would have considered launching the Physiome as a major part of Physiology’s contribution to Systems Biology.

*What IUPS is doing to implement this recommendation*

The Physiome Committee has been renamed as the Physiome and Systems Biology Committee. This is one of the most active amongst the IUPS Commissions and Committees and it has taken on this role with enthusiasm.

We see this issue as one on which IUPS can play a special role. There is more on this issue in the Report of the Long-Range Planning Committee. We will return to this question at the end of the document.

### **(3) Relations with International Bodies**

We recognise that IUPS’s relations with other international bodies like ICSU and UNESCO are small, but we consider them to be important precautions should the world situation deteriorate to the point at which important principles like the Universality of Science and freedom of movement of academics become threatened again.

*What IUPS is doing to implement this recommendation*

The new Secretary-General, Walter Boron (USA), has taken major responsibility for pursuing this issue. The Long-Range Committee’s reference to ‘small’ was not only correct, it was more correct that we knew! It applies in fact to the whole of the biological family of international unions and their interactions with ICSU (the International Council of Science). We have therefore played a major role, together with the 13 other biological science unions, to put this situation right. Those biological unions (BioUnions) now meet as a group prior to the ICSU General Assembly to co-ordinate their ideas and policies. The first of these pre-Assembly meetings occurred in Paris in March 2010. IUPS sent the largest delegation to this meeting. A refreshing outcome of that meeting was that the other BioUnions expressed their commitment to work together to on issues of common interest, including (but not limited to) outreach to the developing world, joint sponsorship of special meetings, and joint proposals to ICSU.

Why is this important? ICSU and UNESCO are listened to by governments and non-governmental organisations around the world, including the UN. It is essential that our voice should be heard. It should also be remembered that ICSU was formed (in 1931) to defend the free movement of scientists at meetings around the world. Only recently, one international union was reminded of the importance of this when some of its delegates

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<sup>4</sup> The video recording of this lecture is now on the IUPS website:

<http://www.iups.org/video/IUPS09-Noble-Lecture.html>

were refused visas to visit the country in which their Congress was being held. We must be vigilant on these issues. We are not immune from them. There are even clouds (hopefully only small ones) on the horizon in relation to our 2013 Congress. We are dealing with them and are succeeding in making sure they do not persist. Moreover, the BioUnions and others are pushing ICSU to use their political muscle to intervene in such visa issues.

#### **(4) Finance**

It is recommended that IUPS should form a Finance Committee chaired by the Treasurer, who would be relieved of day-to-day management of IUPS finance (see recommendations on Administration) and so more available for strategic initiatives. The Finance Committee could either be simply a subgroup of Council or it could also include some powerful friends of the physiological sciences (see Star Committee funding proposal below). As a matter of urgency the Finance Committee should consider the system of dues, the problems of currency shifts, and the best way to ensure that IUPS is financed effectively and fairly.

##### *What IUPS is doing to implement this recommendation*

The shift of routine financial administration to the Office of the Secretary-General has occurred, and the new IUPS Manager, Leslie Price, is now handling this and all other aspects of IUPS administration.

We are now researching names for the proposed Star Committee to be chaired by the Treasurer, Malcolm Gordon (USA). Suggestions from member societies and adhering bodies would be most welcome.

We are discussing the financial structure of IUPS and the dues system. A further Outreach paper will eventually be circulated on this issue.

#### **C. What can IUPS achieve that cannot be achieved by the member societies and adhering bodies without IUPS?**

We therefore detect a clear difference in attitude to IUPS Congresses from the different regions of the world. What we may caricature as the North American-UK position is sometimes (but by no means always) one of scepticism. The only submissions of evidence that proposed the possibility that IUPS should cease to hold congresses after 2013 came from the strongest national physiological societies for which it can be argued that the IUPS Congresses represent the smallest degree of added value over and above their own meetings. However, the view looks very different from the rest of the world. Attending a regional meeting such as the FAOPS Congress reminds one how much regions of the world outside the USA and Western Europe value the international congress format. It is worth reminding ourselves how different the situation looks in different regions. Using some rough criteria we can divide the world into 5 types of region:

1. Countries with strong, self-sufficient societies, capable of holding meetings that are themselves comparable to international congresses.
2. Countries with strong but smaller societies.
3. Countries in the developing world.
4. Countries in the underdeveloped world.
5. Countries in the "war zones"

Only those national organisations in the first category view the IUPS Congresses with varying degrees of scepticism. Yet, even in these regions, many value the experience of participating with the rest of the world. Positive comments on the San Diego Congress, even on the part of people from the US, reflected this. It is worth noting that the countries we would unambiguously put into this category, have a combined population of around 600 million, but nevertheless account for about 10% of the total world population.

*What can IUPS do to implement this recommendation?*

Notice the change in the subheading for this section. On this issue we need a dialogue with member societies.

The IUPS family consists of organizations with a vast range of type and size. IUPS relates to these bodies in rather different ways that depend both on their size and the region of the world. Some regions have strong regional associations like FEPS and FAOPS. In other regions, the associations are either non-existent, inactive or in various difficulties. Inevitably, great attention is being paid to the problem areas (see the earlier comments on the work of the new Membership Committee), which can carry the risk that these IUPS activities may seem less important to the large societies. In some respects it would be correct to say that these large societies do not 'need' IUPS – a view that has often been expressed. From the perspective of societies such as the American Physiological Society, The Physiological Society, or the Japanese Physiological Society, the question, "What is the added value of IUPS?" may appear to have an obvious answer. Namely, those societies would function effectively, and would continue to play an international role even if IUPS did not exist. To some extent, their meetings are already, effectively, international or regional congresses. These societies also have resources far larger than IUPS. In recent meetings between IUPS and representatives of the large societies, IUPS Officers have freely acknowledged this point.

Despite of the strength of the individual meetings of the large societies, the IUPS Congresses add richness to the large societies ... only an international organization can truly organize an international meeting. Moreover, the rotating venues of the Congresses give the membership of the large societies the opportunity to interact with scientists around the world who would otherwise not be able to attend the far-away, annual meetings of a large national society.

The IUPS also adds richness by co-publishing the journal *Physiology* with the APS. Although it is true that the APS bears the lion's share of the responsibility for producing the journal, it is equally true that the IUPS gives the journal its international character, which in turn allows *Physiology* to recruit Editorial Board Members from around the world, and to draw upon the good will of the international community. Thus, in joint ventures such as Congresses and the journal, the IUPS and large societies need each other.

There are, however, major diplomatic and practical reasons why even the large societies need IUPS, just as do the smaller societies (about 50 of them) and the nations (around 100) where IUPS members do not exist. In essence, the reason is the same as that for the existence of bodies like the UN and ICSU. The rest of the world is inevitably uncomfortable if the strong countries dominate the initiatives too much. There is a balance to be struck between acknowledging the weight and resources of the large societies on the one hand, and respecting the needs and wishes of the small societies on the other. We have only to recall the great diplomatic difficulties that faced the General Assembly in Christchurch when, at short notice, the location and nature of the proposed 2005 Congress were changed. Those problems did not centre on the reality of what eventually happened (the 2005 Congress in San Diego was widely perceived to be a great Congress), they centred entirely on the diplomatic problems arising from a large society making a unilateral decision.

In addition therefore to IUPS being naturally and obviously essential to the great majority of the world (estimated to be 85% of world population in the Long Range Report) where strong societies do not exist or are developing, IUPS is also essential to the role that the large societies can play in collaboration with the rest of the world. In a nutshell, IUPS is both the defence against colonisation, whether real or perceived, and the route through which some of the global initiatives from the large societies can be channelled diplomatically because they can be implemented in consultation with the IUPS family of societies and adhering bodies.

We propose therefore that the way forward—as we develop a more federal structure of IUPS governance—is a dialogue with the larger and richer societies to determine more precisely the ways in which IUPS can be used effectively to this end. That dialogue has already begun and is proving very fruitful. As the Outreach proposals are further developed, continued dialogues will be critical to success.

IUPS would particularly like to seek the collaboration of the larger societies in the fightback strategy on behalf of physiology worldwide. We were all greatly encouraged by the Kyoto Congress. It demonstrated just how well physiology can react to the challenge of the sudden growth of systems biology. It also demonstrated effective outreach to school students (the ‘parallel Congress’ for schoolchildren was highly successful but probably hidden from the view of most Congress participants). We have every confidence that the 2013 and 2017 Congresses will carry these initiatives forward. We have had highly productive meetings with the 2013 UK organising committee, and are beginning such discussions with Brazil 2017.

Denis Noble  
President

Walter Boron  
Secretary General