

## History of the Board of Pharmaceutical Sciences

FIP's Board of Pharmaceutical Sciences (BPS) of the International Pharmaceutical Federation (FIP) was created on 4 September 1970 in Geneva, Switzerland, when the FIP Council approved its establishment to enhance promotion of the interests of pharmacy as an applied science. As such, the BPS replaced the Scientific Section of FIP, which had previously fulfilled this function through diverse interactions with other arms of the organisation. Down the years many prominent pharmaceutical scientists have provided leadership to the board as president (subsequently chair) and scientific secretary (see Table), often with passion and, invariably, with a strong desire to serve an area of science instrumental in developing their careers.

Table: Leadership of FIP's Board of Pharmaceutical Sciences from 1970-2020

Term	Name	Country	Elected position
1970-1972	Prof. Michel Guillot	France	President
1970-1978	Prof. Jacobus Polderman	Netherlands	Scientific secretary
1972-1981	Prof. Arnold H. Beckett	UK	President
1978-1989	Prof. Douwe D. Breimer	Netherlands	Scientific secretary
1981-1988	Prof. Peter Speiser	Switzerland	President
1988-1996	Prof. Kamal K. Midha	Canada	Chair
1989-1995	Prof. Daan J.A. Crommelin	Netherlands	Scientific secretary
1995-2003	Prof. Hans E. Junginger	Netherlands	Scientific secretary
1996-2000	Prof. Leslie Z. Benet	USA	Chair
2000-2004	Prof. Yuichi Sugiyama	Japan	Chair
2003-2011	Dr. Vinod P. Shah	USA	Scientific secretary
2004-2008	Prof. Daan J.A. Crommelin	Netherlands	Chair
2008-2012	Prof. Mitsuru Hashida	Japan	Chair
2011-2015	Prof. Henk J. de Jong	Netherlands	Scientific secretary
2015-2023	Prof. Giovanni M. Paletti	USA	Scientific secretary
2012-2016	Prof. Geoffrey T. Tucker	UK	Chair
2016-2020	Prof. Tatsuro Irimura	Japan	Chair



*The FIP Council approved the establishment of the Board of Pharmaceutical Sciences in 1970.*



*Past scientific secretaries (left to right): Daan Crommelin, Henk de Jong, Hans Junginger and Vinod Shah.*

### Science informing practice

In keeping with FIP's definition of a pharmacist as a scientifically trained healthcare professional, the BPS has striven to develop the concept of "science informing practice", first as a basis for effective interaction with the Board of Pharmaceutical Practice (BPP), secondly, with regard to the inclusion of relevant science into the programming of FIP congresses and, thirdly, as an element of key input into FIP Education (FIPed). Achievements include the institution of a highly successful series of Pharmaceutical Sciences World Congresses, showcasing new aspects of drug discovery and development and advances in the education of the pharmaceutical sciences workforce, and

publications including *Topics in Pharmaceutical Sciences* in the 80s and 90s and influential “Impact” (2012) and “Challenges” (2016) reviews appearing in the *Journal of Pharmaceutical Sciences*.

A particular area where BPS members have made a significant contribution, in partnership with the World Health Organization, has been the development of global standards for the regulation and assessment of the bioequivalence of drug preparations, summarised in conference proceedings under the title of “Bio-International — Bioavailability, Bioequivalence and Pharmacokinetics” (1993, 1995).

## Looking forward

But what about the future? There is still lots to do. Continuing challenges include the expansion of global representation within the BPS, enhanced engagement with predominantly scientific member organisations (PSMOs), fostering the involvement of younger scientists through monitoring programmes and appointments to the board, extension of the membership to pharmaceutical scientists who are trained outside the pharmacy educational system, and increased input into FIPeD, especially in defining what science should be reaffirmed in the pharmacy curriculum at a time when, appropriately, clinical skills and knowledge are beginning to dominate. There is also a need to emphasise and develop capability within the BPS in pharmacoepidemiology, pharmacovigilance and pharmacoconomics and to increase consideration of scientific ethics, with a focus on science and evidence-based pharmacy practice, particularly in relation to the use of unsubstantiated remedies and the real cost-benefit of pharmaceutical innovation.

FIP has recently adopted a new, unifying strategic plan that aims to support global health by enabling the advancement of pharmaceutical practice, sciences and education. The “One FIP” approach offers unprecedented opportunities for the BPS to demonstrate the value of the broad-based pharmaceutical sciences to all stakeholders and partners of FIP as a global federation.

To respond adequately to the demanding health challenges worldwide, it is imperative to support science-based development and regulation of medicines and health technologies as well as to assure that clinical decisions are based on unambiguous scientific evidence established using the highest ethical standards. With input from the diverse pharmaceutical sciences community, the BPS is actively contributing to the definition of overarching FIP Development Goals that include science-specific objectives and mechanisms. Collectively, these new FIP Development Goals will provide the logical next step in linking workforce development with pharmaceutical healthcare provision.

*The major part of this historic summary was collected by Geoff Tucker and Daan Crommelin.*

## Bibliography

- *Topics in Pharmaceutical Sciences*. Proc 41st Int Congress Pharm Sci of FIP, Vienna, 7–11 September 1981. Breimer DD & Speiser P (Eds), Elsevier/North-Holland Biomedical Press, Amsterdam, New York, Oxford, 1981.

- Topics in Pharmaceutical Sciences 1983. Proc 43rd Int Congress Pharm Sci of FIP, Montreux, 5–9 September 1983. Breimer DD & Speiser P (Eds), Elsevier Science Publishers, Amsterdam, New York, Oxford, 1983
- Topics in Pharmaceutical Sciences 1989. Proc 49th Int Congress Pharm Sci of FIP, Munich, 4–9 September 1989. Breimer DD, Crommelin DJA & Midha KK (Eds), Fed Int Pharm (FIP) (Int Pharmaceut Fed), The Hague, 1969.
- Topics in Pharmaceutical Sciences 1993. Proc 53rd Int Congress Pharm Sci of FIP, Tokyo, 5–10 September 1993. Crommelin DJA, Midha KK & Nagai T (Eds), Medpharm Scientific Publishers, Stuttgart, 1994.
- Bio-International — Bioavailability, Bioequivalence and Pharmacokinetics. Int Conference of FIP, Bad Homburg, 20–22 May 1992. Midha KK & Blume HH (Eds), Medpharm Scientific Publishers, Stuttgart, 1993.
- Bio-International 2 — Bioavailability, Bioequivalence and Pharmacokinetics. Int Conference of FIP, Munich, 15–17 June 1994. Blume HH & Midha KK (Eds), Medpharm Scientific Publishers, Stuttgart, 1995.
- Rowland M, Noe CR, Smith DA, et al. Impact of the pharmaceutical sciences on health care: A reflection over the past 50 years. *J Pharm Sci* 2012;101:4075–99.
- Tucker GT, De Silva B, Dressman J, et al. Current challenges and potential opportunities for the pharmaceutical sciences to make global impact: An FIP perspective. *J Pharm Sci* 2016;105:2489–97.