
SOCIEDADE BRASILEIRA DE QUÍMICA - 30 YEARS ON

Simon Campbell*

Royal Society of Chemistry, London - UK

SOCIEDADE BRASILEIRA DE QUÍMICA - 30 YEARS ON. On the occasion of the 30th annual meeting of the SBQ, a joint accord between SBQ and RSC was signed, which prompted the author to reminisce about his early involvement with the NAS/CNPq program in the 1970s. Remembered were first students, research and social activities. Looking back over these last 30 years, one realizes that teaching and research in Chemistry have greatly expanded but, nevertheless, increased investment in innovation is needed.

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I was delighted to attend the 30th anniversary of the SBQ in Aguas do Lindoia at the end of May and I was very impressed by the active participation of some 2,500 members from all parts of Brasil. Sessions were well attended, question times were lively and of course social activities were not neglected. I was also very pleased to join Professor Norberto Lopes to sign a joint accord between the SBQ and RSC, and to chair our joint meeting on Chemistry and Innovation

30 years is a substantial time for any activity, but my scientific involvement with Brasil dates back to 1969 some 38 years ago and is quite a long story. At the beginning of 1968, I joined Bill Johnson's laboratory in Stanford, California where I carried out the first stereoselective synthesis of juvenile hormone from cecropia moths. Carl Djerassi was also a professor at Stanford at that time, where he was pushing back the scientific frontiers with his pioneering studies on mass spectroscopy. Carl was a great activist and he brought the National Academy of Sciences in Washington and the Conselho Nacional de Pesquisas in Rio together to sponsor a novel Program of Postgraduate Research and Training in Chemistry to help build scientific capacity in Brasil. The objective was for experienced US professors to act as mentors for Visiting Fellows who would spend up to 3 years in Brasil to establish a series of research based clusters initially in Rio and Sao Paulo. Carl invited me to join the program, Bob Ireland at CalTech agreed to act as my mentor and Jill and I arrived in Sao Paulo in February 1970. Originally, Marcelo do Moura Campos was to have been my sponsor in Brasil, but Nicola Petragani kindly agreed to take over almost as soon as we arrived and I owe him an enormous debt of gratitude. Rob Ronald arrived a few months later and of course, Tim Brockson inherited my group when we returned to the UK in 1972

Thanks to the Brazilian Air Force, we were able to import modern equipment and chemicals and I soon established my own research team in synthetic organic chemistry. My students included Lumi Tsuchiya, Jose Romero and Ursula Kamphausen, names that will be familiar to many of you. We worked on nucleophilic additions to α -haloketones tropyne, and the stereoselective synthesis of bakkenolide, amongst other research topics. In addition to Nicola, colleagues in the chemistry department were also most helpful, and names like Hans Viertler, Vera Pardini and Jose Riveros come quickly to mind. It was a pleasure to meet up with them and other friends from that era during the SBQ meeting and afterwards in Sao Paulo. Colleagues also made us very welcome socially, with

dinners, parties and of course the weekly football clash with Hans and others on the terrao. But of course, our fondest memory was the birth of our son Duncan in Sao Paulo in March 1970, and he still holds his Brazilian passport!

Some of the presentations at the SBQ meeting kindly mentioned the CNPq-NAS program as a starting point for the establishment of new research projects in Brasil and I am delighted if we have contributed in any small way to the enormous progress in chemical sciences over the past 30 years. Brasil spends more on higher education than other Latin American countries, and 27 universities now offer courses in chemical sciences. The number of PhDs awarded more than doubled from 157 to 380 over 1990-97 and Brasil leads Latin America in the growth and output of publications. The teaching and research base has been greatly strengthened with centres of excellence throughout the country. Economically, the chemicals sector is now a major player with consistent growth over the past decade and an annual turnover of around \$80bn in 2006

But what of the future? Brasil spends 1.2% of GDP on R&D which is high for Latin America but is somewhat behind the US and EU targets of 3%, although the government has set a target of at least 2% for the coming years. Lower manufacturing costs are a significant competitive advantage for Brasil at present, but this will erode with time and increased investment in innovative R&D and the generation of new products will be necessary. More research should be carried out by industry and funds are being made available to develop closer links with academia. Our joint SBQ-RSC Symposium focussed on transforming academic ideas into commercial products through spin out companies, and while this sector is enjoying significant success in the US and Europe, Brasil has barely tapped the surface of its intellectual property. However, Brasil is committed to science and the government is responsible for over 40% of total R&D expenditures and the support of over 80,000 fellowships at home and abroad through the Ministry of Science and Technology. Importantly, 2,500 scholarships are targeted at foreign students studying in Brasil and there are active external exchange programs that ensure that Brazilian scientists participate at an international level. All of these initiatives are important as Brasil develops an internationally competitive science base which will require that chemical sciences continue to prosper in order to exert profound and positive effects on social and economic progress.

The SBQ has an important role to play in Brasil's future development and I wish the current President Professor Antonio Mangrich and the Society every success over the next 30 years, when I shall look forward to strengthened relationships between our societies, members and countries.

*Former President of the Royal Society of Chemistry (RSC) – UK
e-mail: campbellsimon@btopenworld.com