

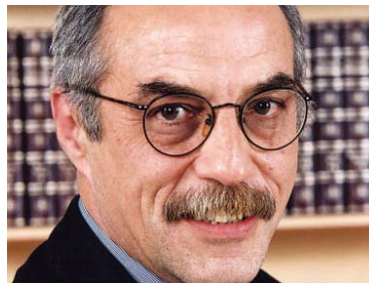


Learn from Each Other in Friendship and Trust

— An Interview with Prof. Herbert Jäckle, Vice President of MPG

On Jan 23rd, 2013, Prof. Dr. Herbert Jäckle, Vice-President of the Max Planck Society (MPG) and a world-renowned expert in molecular developmental biology, was honoured with the CAS Award for International Scientific Cooperation of 2012 due to his devotion to the cooperation between CAS and MPG. He shared the Award together with Prof. C. N. R. Rao from India and Prof. G. A. Zhrebtsov from Russia.

Prof. Jäckle has endeavoured to integrate a Max Planck model of management with the scientific research system of CAS in his catalytic efforts to establish and operate the CAS-MPG Partner Institute for Computational Biology (PICB) in Shanghai. In an interview with *BCAS* reporter SONG Jianlan, he is invited to recall his experiences in cooperation with CAS and share with us his thoughts.



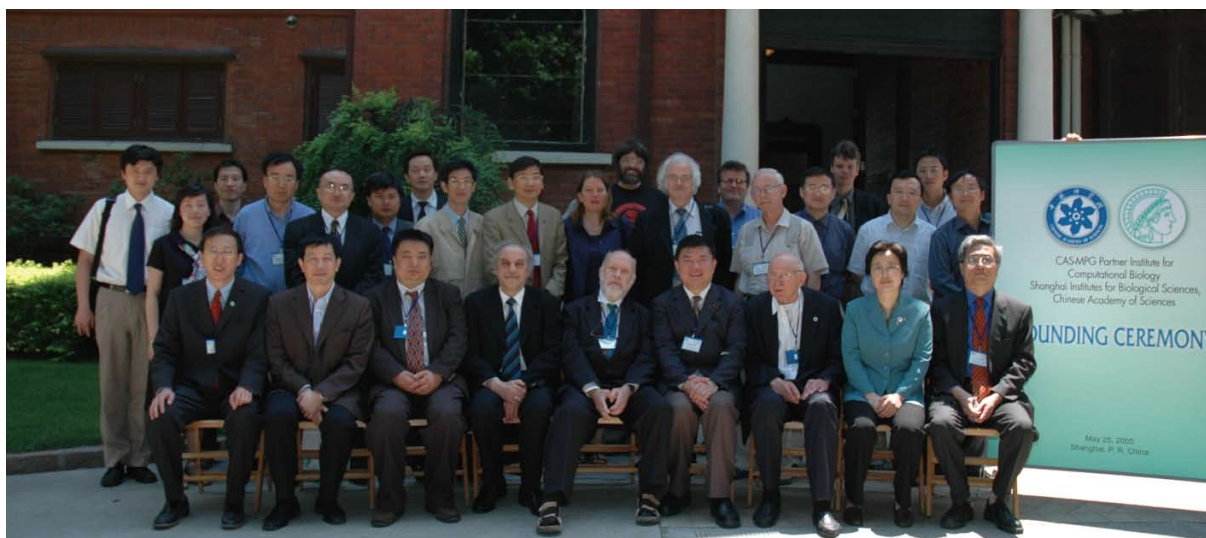
BCAS: As Vice-President of MPG you got involved in the establishment of the CAS-MPG Partner Institute for Computational Biology (PICB) very early and have witnessed its growth from a small seed of an idea to a thriving centre for science excellence. As we know, PICB, a "joint venture" of the MPG and CAS, is administered via some procedures and mechanisms typical for an institute of the Max Planck Society. How would you describe or evaluate the implications of setting up and running an MPG-style institute in the Chinese context?

Jäckle: The PICB was an experiment that the MPG and CAS conducted together on the basis of their many years of trustful collaboration. The Presidents of the MPG and CAS, Professor Peter Gruss and Professor LU Yongxiang, felt that, with the 30th anniversary of MPG-CAS cooperation in 2004, the time had come to usher in a new phase of research collaboration to raise the quality of partnership to a new level. Both sides were clear that this would not be an easy undertaking and that the outcome was uncertain. The test phase was therefore set at five years to start with. The very first appraisal by the Scientific Advisory Board showed that

the PICB was making very fast scientific progress. Being very international in nature, the Institute had garnered a lot of attention and its establishment was going well. The financial participation of the German side was generously facilitated by the Federal Ministry of Education and Research (BMBF) on the grounds that the MPG is prevented from funding any



Early involvement: Munich of September 2004 saw Prof. Jäckle in an MPG-CAS talk aimed at setting up a "Max Planck Institute" beyond territories of Germany, which is now known as the CAS-MPG Partner Institute for Computational Biology (PICB).



Prof. Jäckle poses with colleagues in celebration of the formal launch of PICB in Shanghai on May 25, 2005.

institutes abroad by the law regulating public grant-giving. Cultural and system-based differences did cause problems, such as with the term of the contracts for Directors, the role of the Administration and the contracts for PIs. But we got through all of that together and managed to keep coming up with solutions on the basis of the high level of respect we have for one another. Today, the MPG is jointly responsible for selecting Directors and takes care to ensure that international evaluation is carried out in accordance with the rules of the MPG. Essentially, the MPG concentrates on the independent *Max Planck Research Groups* at the Institute and on the training of doctoral students. The experiment has been a successful one. The PICB is internationally established. The MPG and CAS have reasons to be proud, but they must also continue to work meticulously to maintain a balance between the still very different systems and to achieve the goal of doing excellent research.

BCAS: *PICB is the first of the only two MPG Partner Institutes beyond the borders of Germany, a very special case for the MPG. In his speech at the opening of the Institute, MPG President Prof. Peter Gruss described it as a “daring venture”, as it was set up in an “unknown territory that did not seem easy to cross at first glance”. What do you think has helped us “cross” this boundary? What has made it possible to establish and operate a “German” institution in a drastically different context like China?*

Jäckle: Well, the Institute did not spring up out of nothing. Particularly in Shanghai, we had already gathered some joint experience in establishing a number of *Independent Max Planck Junior Groups* that could serve as

models. These had given practice in issuing international calls for applications, in selecting and evaluating candidates with an independent and international committee, in having fixed-term PI posts, *etc.* The current President of Tongji University, PEI Gang, for example, was one of the first Group Leaders. We were able to build on this experience from the 1990s. In addition to that, the Institute very quickly produced convincing scientific performance thanks to the outstanding work the founding Director, Andreas Dress, had done to build up the Institute. He gave it international visibility and made it unique in the Chinese academic landscape thanks to the numerous international contacts it had. Then Martin Vingron brought in a great deal of management experience from the MPG as Acting Director. The good rapport between the management teams of the MPG and CAS and the very good personal contacts at all levels of the Administration were always a big help.

BCAS: *From the perspectives of MPG Vice-President and a molecular biologist, how would you evaluate the academic importance of PICB? How has the cooperation between MPG and CAS enhanced its role in disciplinary and science development?*

Jäckle: The PICB addresses the subject of computational biology, a research field that has a tremendous perspective. There is bioinformatics to understand the genomes, neurobiology with which we would like to understand neural circuits and synaptic connections, evolutionary biology to understand where we all come from, how we evolved and what makes the difference between different species and individuals, personalized medicine, to



In talk with Prof. LI Jiayang (right), then Vice President of CAS and Prof. JIN Li (middle), Director of PICB in April 2008.

analyse the structure of molecules and three-dimensional microimages or systems biology to understand, for example, the process of aging. No doubt, our brain and experience would not be able to analyse the incredible amount of data and to extract the principles behind them. All these research topics would have no future without mathematical theories, algorithms and computation. In the initial phase of the PICB, we have chosen mathematics to be the field of the founding director, Prof. Dress. He developed the PICB into an international, multidisciplinary institute, which by now covers the fields of human evolution (Profs. LI Jin and Philipp Kraitovich), molecular systems biology (Prof. HAN Jingdong), Biophysics (Prof. Klaus Gerwert) and Bioinformatics (Prof. Martin Vingron).

This group of highly distinguished Directors at the PICB is complemented by a number of PIs and Max Planck research groups with excellent young scientists who should use the PICB as a springboard into their career. Those young people are connected and collaborate with one of the 80 Max Planck Institutes of their choice in Germany, allowing them to further gain international experience. This way, both sides learn from each other towards shaping an international environment, which is intrinsic to science. As one of the truly international Institutes in China, at the level of Directors, PIs, postdocs and students, the PICB may play an important pioneering role for international research in a field with an outstanding perspective. I do think that without the mutual trust of the two organisations, which developed over almost 40 years, a joint effort to develop and strengthen a new field of research would not have been possible. This view is supported by strong positive recommendations of the international board of experts, the scientific advisory board who applauded to the recent development of the PICB.

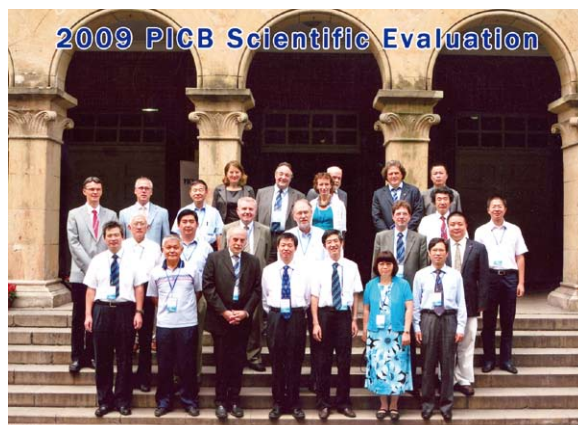
BCAS: PICB features a highly international staff: 68% of its employees are from abroad. Moreover, it has a distributed structure led by four Directors, all recruited globally in line with MPG standards and procedures. These are very unusual for an institute in China. What are the strengths and challenges of maintaining such a “complicated” structure in Shanghai? How do you view the corporation culture within the Institute?

Jäckle: The idea was to establish an Institute modelled on the principles of a Max Planck Institute. This means that it is run by a “Board of Directors” each heading his/her department.

From a scientific perspective, this model has the advantage of inherently offering the desired degree of interdisciplinarity and presenting good conditions for sharing ideas and methods and for jointly investing in and making use of equipment, all under one roof. Naturally, the necessary processes of agreement and approval do not always run smoothly, but the Board of Directors should see itself as a team. Another benefit is that it spreads the



Prof. Jäckle is seen attending the first international academic evaluation for PICB in 2007. The evaluation was performed in line with MPG criteria.



Prof. Jäckle poses with the experts attending the international academic evaluation for PICB in 2009.

administrative burden, and in a rotating system every three years, one of the Directors takes on the role of Managing Director, representing the Institute to the outside world and allowing the other Directors essentially to get on with their research during this time. This works really well at the PICB. The problem there is that the Directors — with the exception of founding Director Dress — are not there full-time. But that is going to change in the future. We will not be accepting any more part-time Directors at the PICB, as it is only through presence that the necessary continuity can be created and the support of the groups and junior scientists can be successful.

BCAS: In September 2012 you witnessed the international academic appraisal of PICB, which mostly followed the same criteria as those of MPG institutes. Were you on the expert panel? Do you think PICB is academically successful so far if measured with MPG standards?

Jäckle: As Vice-President, I was present during the appraisal but I was not a Member of the Scientific Advisory Board (SAB). Generally speaking, the SAB for an MPI does not have any members who belong to the MPG — this is to ensure that the SAB is completely independent. Due to the special structure of the PICB, we made an exception here and appointed an MPG Director to the SAB in order to bring in certain information about the PICB to the SAB.

The outcome of the last appraisal was very gratifying. The Institute has made excellent scientific progress: it publishes in the top international journals and has carved out an international position for itself. Above all — and this is important for the future of the PICB — it has a good reputation among young people due to its very international orientation, the large number of international staff members



Exchanging ideas with heads of MPG-CAS Junior Groups in April 2008.



Prof. Jäckle unveils the plate of the newly established Key Laboratory of Computational Biology together with Prof. Li Jiayang, then Vice President of CAS, in March 2010.

and the good equipment it boasts. I am very confident that the PICB has a great future because the field is evolving rapidly and we have put the structural and financial preconditions in place.

BCAS: Resulting from decades of efforts, MPG and CAS have launched and managed many cooperative projects, including some programmes for regular S&T cooperation and exchanges, like the MPG-CAS Junior Groups and Partner Groups. How have such cooperation mechanisms benefited both sides? Have their effects been as you anticipated?

Jäckle: Yes, the *Max Planck Research Groups* that we set up in China are very close to our hearts because they contain a lot of the spirit of the MPG: meticulously selected, excellent junior scientists receive the great freedom to establish something by themselves for a fixed period at an early stage in their careers. It is a springboard to a career and it is well used.

The *Partner Groups* can also serve as a career springboard, but the idea behind them is more to do with establishing lasting networks between MPG and CAS. Here you find former MPG research fellows from China who have now returned to their homeland and who continue to work closely with their former MPI guest institutes, who exchange doctoral students and who publish together. We have already built up more than 30 such groups in China, also on a fixed-term basis. The two programmes complement each other well and are effective instruments of international cooperation for the MPG in other countries, too.



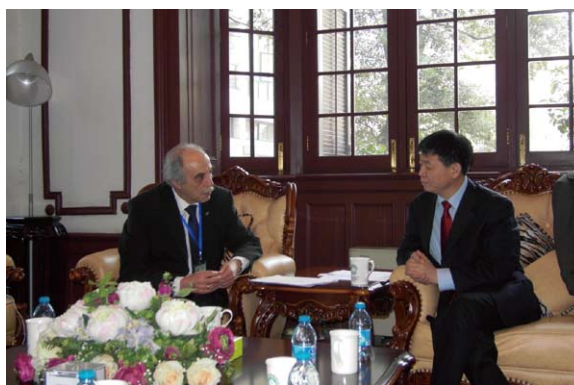
BCAS: *MPG and CAS have been in a close and fruitful partnership for about 39 years. Approaching the end of the fourth decade of the partnership, how would you summarise the S&T cooperation between the two sides? What do you think is/are the most important achievement(s) of the past decade?*

Jäckle: Collaboration between the MPG and CAS today extends way beyond the boundaries of exchanging scientists and cooperating on a project basis: It is a strategic partnership of equals. The MPG is very well connected in China, and its visibility is closely linked with the leading role of the CAS as a significant research organisation.

“Prototypical experiments” from the collaboration, such as the Partner Institute in Shanghai (PICB), the Exploratory Round Table Conferences (ERTC) and the planned MPG/CAS programme for shared career development, can be successfully delivered with the CAS because the longstanding experience of MPG-CAS cooperation has created the necessary trust between scientists. The ERTC, for example, are a newly created conference series that focuses on topics that are just beginning to emerge in the scientific community. The Max Planck Society and CAS offer a platform for a small circle of internationally leading experts and for scientists from the Max Planck Society and CAS to become acquainted with new areas of research, discuss them and discover their potential. At the end of a conference, recommendations are given to both Presidents. This activity goes directly into the research planning of both of our organisations. That is something only organisations that are friends with each other can do.

BCAS: *Would you give us some ideas about your future plan for the cooperation between MPG and CAS?*

Jäckle: The potential for cooperation has not yet been exhausted. China’s investments in new research fields, infrastructure and cooperation instruments open up new perspectives for continued collaboration and the scientists from both our organisations are very interested in taking the cooperation forward. Our aim is to intensify the strategic cooperation with the CAS and to bring in new features. For example, it’s conceivable that we might enter into trilateral cooperation with universities through the new centres that are currently being established by CAS in conjunction with China’s universities. And we are very interested in promoting brain circulation and shared career development between our two countries by having more young scientists from our institutes work in China. We made an agreement to this end in 2012 and we are going to pursue that now.



Prof. Jäckle meets with Prof. LI Jiayang, then Vice President of CAS, in March 2011, Shanghai.



Prof. Jäckle talking with ZHANG Yaping, Vice President of CAS in September 2012, Shanghai.

BCAS: *On receiving the CAS Award for International S&T Cooperation, what else would you like to say to CAS and MPG staff and the international scientific community?*

Jäckle: The scientists from both of our organisations make excellent contributions to the acquisition of knowledge and I would like to thank everyone involved at all levels of the scientific and administrative cooperation for the brilliant work they have done to help make the MPG-CAS collaboration such a success. Next year will see the MPG and CAS celebrate 40 years of cooperation and we look forward with great hope and anticipation to the years ahead of us, in which we plan to push ahead with our collaboration for our mutual benefit, in the service of science and with a view to our social responsibility for the development of our countries and the world. Most importantly, however, we can learn from each other in friendship and trust!