

Discussion of the presentations given by Dr. Sullivan, Dr. Papazoglou, and Prof. Putz

Prof. **Kroemer** asks, whether there is a problem in the United States to attract young medical doctors for scientific research. All researchers in Germany know that young physicians resign of performing research because of worse salaries than as a resident.

Dr. **Sullivan** strongly agrees. When medical students in the United States graduate as a MD, they have large debts and start their professional careers with big financial problems. Therefore it is much more difficult to attract young physicians for a scientific career at an institute. The only solution for this problem would be a radical change in the funding system.

Prof. **Putz** points to the average age of the beginners of a medical study. In Germany, students start usually immediately after the university-entrance diploma (Abitur) with the medical study, whereas in the United States the students are older (on average 22) in the beginning of medical studies. Does the entrance age exert any influences on the qualifications?

Dr. **Sullivan** remembers that in the United States there are no medical students at such a young age because of the different way of medical qualification. In the engineering faculties there are younger students as undergraduates as well. In general, in the United States undergraduate students have a complete different position than in Europe.

Prof. **Treede** asks, why the ERC has included the requirement of research experiences in addition to the academic degree of Dr. med. In Germany the Dr. med. is a qualification in research, whereas in other countries students receive the MD when they have finished their medical studies successfully. German universities are called to educate on a European level, but the ERC subsumes the research degree Dr. med. among other graduations, e.g. the MD. A process of re-thinking should start here. The German Dr. med. seemed to be simply mistranslated as MD, but it does not equal this graduation. On the other hand the consideration of a residency to be eligible for an application to a grant by the ERC surprises, since a residency (in Germany) is not mandatory related to research. It was a nice idea in Dr. Sullivan's pres-

entation that residents should be attracted to science. In Germany scientific organizations force the Bundesärztekammer or the Kassenärztliche Vereinigung to accept research work as a part of specialist training (Facharztausbildung).

Dr. **Papazoglou** reiterated that there are two components. The main decision in the ERC was that a professional medical degree did not equal the Ph.D. In 2007 the German Dr. med. was seen by the ERC more as a degree of a professional doctor. The ERC realized that this was not an optimal solution, because this simple provision excluded some very good applicants. The members of the Scientific Council of ERC were also cautious with regards to the debate on that topic in Germany. Both aspects influenced the position that in addition to minimum requirements other additional requirements should be defined, e.g. a research track record. The clinical practice is not enough to be eligible for a grant application. The clinical practice has to be complemented by the track research record. Therefore eligibility is not defined by an "either-or", but by "as well as".

Prof. **Kroemer** asks back how a clinical record should qualify for a scientific career.

Dr. **Papazoglou** specifies that a clinical record must be complemented by research activities independently from a supervisor. A clinical record alone would not provide eligibility for an ERC grant. The ERC has to deal with several thousand applications per year and a fair and equal handling should be secured.

Prof. **Menger** repeats that the MD is only the finalization of a medical study without any indication of research or scientific work. The German Dr. med., however, is a degree that is awarded for a self-contained research work. The German Dr. rer. nat. indicates only that this scientist has done his research work at a natural scientific faculty. It is a fundamental misunderstanding if a Dr. rer. nat. (translated into Ph.D.) would be considered as a higher scientific degree. Whether in Germany a doctoral candidate is awarded with the Dr. med. or with the Dr. rer. nat. is only dependent on the faculty he belongs to. It does neither depend on scientific merits nor on the quality of the doctoral thesis. The problem would vanish, if in Germany the Dr. med. would be replaced by the Dr. rer. nat. /Ph.D., but this would not influence the quality of

doctoral theses. On the other hand German Dr. med. theses are well accepted in the United States as additional research theses.

Prof. **Hickel** adds to the same issue the experience from the University of Munich. In Munich exists an EU-based contract with an Italian University, and young scientists receive the Ph.D. in Italy and the Dr. med. in Munich. For the same research work two different titles are awarded.

He criticises that the ERC has never compared the different titles but limited the eligibility on the Ph.D. without a deeper knowledge of national specifics.

Dr. **Papazoglou** specifies that an applicant with the German Dr. med. is not excluded from the granting process, provided that the applicant fulfilled the additional requirements. The 2007 rules of the ERC had been adjusted. It is very difficult to declare equivalency of a German Dr. med. with a Ph.D. in Italy or in France. According to the EU degree classification, the Dr. med. belongs to the highest level of degrees. The eligibility provisions of the ERC have now been adjusted, and anybody who does not have a Ph.D. degree has to meet the additional requirements to ensure equivalency.

Prof. **Hahn** asks why a large number of successful applications from the U.K. overtopped all other countries. What could be a reason for that, are there more applications invited or is there a pre-selection of applications in the U.K.?

Dr. **Papazoglou** notes that this question is a little bit outside of the topics of the meeting. However, it is a fact that universities and research institutions in the U.K. are successful in attracting high quality PIs. He reiterates that the real competition is between the individual scientists who have decided to apply for an ERC grant. The highest success rates are of applicants who are to be hosted by universities and institutions in Switzerland and in Israel. The ranking shown in the presentation reflects the attractiveness of the hosting institutions to highly competitive researchers. There was not enough time to comment on the situation in Germany during the presentation. German applicants compete both in the ranges of senior scientists as well as of junior scientists. The number of foreign applicants hosted by German institutions is small compared to the number of national applicants. Vice versa the num-

ber of German scientists hosted by other countries and applying for grants is relatively significant.

Prof. **Haller** asks why the German Dr. med. has not been accepted as a Ph.D. when the ERC released the 2007 rules.

Dr. **Papazoglou** answered again that equivalency between Dr. med. and Ph.D. is generally stated now. The debate at the time of the first approach was based on the experience of the members of the Scientific Council. There was the impression that a very large number of applicants with the German Dr. med. could overflow the application process. At that time the ERC had to deal with 9.000 applications. It was a decision to ensure the quality of the evaluation. This decision came from the scientists (in the Scientific Council) for the scientists; it did not come from politicians or from bureaucrats.

Prof. **Heidecke** comments to the presentation given by Dr. Sullivan that similar as in the Flexner report the German surgeon Billroth 100 years ago also drew conclusions regarding medical studies in the German speaking countries. Both reports showed very similar conclusions regarding deficiencies in medical education. The reports also included keeping patient files and patient records. How quality aspects, e.g. patient safety, could be regarded as parts of professional training?

Dr. **Sullivan** answers that he did not know the reports given by the German Billroth. The situation a century ago and today is completely different. The interaction and complexity of medical treatment is overwhelming. The understanding of how to improve the situation of the patients expands the knowledge base. One of the biggest problems in U.S. hospitals is morbidity and mortality. The most successful effort in the last decade to solve this problem was done because the hospitals were able to involve the entire staff in these activities. This included not only physicians, but also nurses and the variety of allied health professionals. They are now all discussing in medical conferences and working together. This is just a direction for today's medical education.

Prof. **Bitter-Suermann** comments that a considerable number of young doctors after the finalization of their medical studies also are awarded with the

Dr. med. and want to go abroad for a further scientific training – many of them to the U.S.. He asks, whether the impression that clinical practice is less excellent than scientific education – a comment that was often given by young German doctors after a stay in an U.S. institution – is still true. Are there differences regarding clinical practice or scientific education among the visiting young scientists from other countries? Do German doctors have an advantage since they are better trained in the scientific fields?

Dr. **Sullivan** answers that he cannot give a comprehensive comment on that. Medical students in the U.S. are trained for residencies; therefore the scientific training ranks second. German doctors are very skilled in scientific thinking.