

Prof. Ralph A. Schmid: both, academic enthusiasm and mastering professional expertise are required to make a good surgeon

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Editor's note

The 9th National Trachea Surgery Conference was successfully held in Shanghai on November 10th, 2018, gathering many renowned experts and surgeons from home and abroad to exchange new ideas and techniques in trachea surgery.

During the meeting, Prof. Ralph A. Schmid (*Figure 1*), from University Hospital Berne (Switzerland), gave a wonderful speech titled, “Stem cells in upper airway”. Seizing this opportunity, we were honored to have Prof. Schmid for an interview (*Figure 2*).

At the beginning, Prof. Schmid briefly introduced the project about the thoracic tumor stem cells in his laboratory. He said his team is working on identifying these cells. However, the malignant cells are very clever. They can acquire stem cells properties and hide away. Once released again, they will recur. It sounds simple; however, this is a very complicated issue. Hence, Prof. Schmid and his team hypothesize that prolonged pretreatment with pemetrexed could be beneficial, as prior depletion of nucleotide pools could sensitize cancer cells to subsequent treatment with cisplatin. And they are evaluating this hypothesis in this direction.

With regard to the difficulties in this project, Prof. Schmid said his lab has 15 people currently working on different subjects currently. It is clinical, translational research which requires a lot of financing and technical skills. Moreover, Prof. Schmid underlines that the lab is cooperating with other the research groups, for example oncology, to better progress.

Cancer stem cells (CSCs) are a type of malignant cancer cells characterized by self-renewal, high tumorigenicity, differentiation potential, and drug resistance. They not only retain the characteristics of normal stem cells, but also possess their unique features. The study of CSCs can help doctors develop new strategies for targeted therapy of cancer. In this regard, Prof. Schmid told us that we need to find ways to inhibit the development of CSC which can be seen as a resistance. If we give therapy, we try to block their escape way, so the cells cannot be conversed and they



Figure 1 Prof. Ralph A. Schmid is delivering a speech.



Figure 2 Prof. Ralph A. Schmid: both, academic enthusiasm and mastering professional expertise are required to make a good surgeon (1).

Available online: <http://www.asvide.com/article/view/29265>

cannot take over these stem cells property. We think, with such an approach we can treat cancer better. The better oncological treatment will be, the more successful surgeries will achieve its final goal, cure the patient.

Oncogenic KRAS mutations comprise the largest subset of lung cancer defined by genetic alterations. Regarding the current strategy, Prof Schmid said that while KRAS mutations were found in NSCLC as early as more than 20 years ago,



Figure 3 Professor of Surgery, Director, Division of General Thoracic Surgery, University Hospital Bern, Bern, Switzerland.

there is still no effective approach to specifically treat KRAS mutant tumor. Prof. Schmid said the problem is that mutations in the KRAS gene, however, is very difficult to be targeted.

In the end, Prof. Schmid shared with us his understanding about the most important quality in to be a good surgeon. He told us that one special characteristic that all the outstanding people share, is that they can make the impossible possible. They did things that most people do not deem promising and they finally succeeded with true grit and perseverance. “To be an excellent surgeon, in my view, one needs to be very academic and question the state of the art in order to develop new perspectives.”

Expert’s introduction

Prof. Schmid (*Figure 3*) was born on July 16, 1959 in Zurich. He received his Doctor of Medicine from University Zurich in 1989. He received his residency in Division of Surgery, University Hospital Zürich (1988–1994). After that he went to America for his fellowships at Department of Thoracic and Cardiovascular Surgery, Washington University Medical School (1994–1995). From 1996 to 1999, he became a staff surgeon at Division of Surgery, University Hospital Zürich. From 1999 to present, he is the Director of Division of General Thoracic Surgery at University Hospital Bern, Switzerland.

Besides, Prof. Schmid is an active member of many renowned medical societies, such as European Society of Thoracic Surgeons (ESTS), International Society Heart and

Lung Transplantation (ISHLT), German Society Surgery, Swiss Society Surgery. He was the president of the Swiss Society of Surgery (2012–2014).

His Clinical and Research Interests are thoracic surgical oncology, malignant pleural mesothelioma, thoracic trauma, molecular oncology of thoracic malignancies, gene therapy, and transplantation immunology/lung transplantation.

Interview questions

- (I) Would you like to briefly introduce the project of the tumor stem cells in thoracic oncology? What’s the current status and future direction?
- (II) What’s the most difficult part in the project and how do you handle it?
- (III) CSC represent potential therapeutic targets, and several strategies are already in clinical development. If the CSC hypothesis is correct, then their therapeutic targeting has the potential to delay or prevent disease recurrence. What’s your perspective on CSC?
- (IV) Oncogenic KRAS mutations comprise the largest subset of lung cancer defined by genetic alterations. Currently, what’s ideal strategy in treating it?
- (V) From your perspective, what’s the most important quality of being an outstanding surgeon?

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1. Yuan A. Prof. Ralph A. Schmid: both, academic enthusiasm and mastering professional expertise are required to make a good surgeon. *Asvide* 2019;6:001. Available online: <http://www.asvide.com/article/view/29265>

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