

# Rewarding Excellent Teachers of Future Scientists

Twenty-one teachers from Germany, Austria and Switzerland took part in the two-day “Teaching Spirit 2.0” programme at #LINO23. With this outreach project, the Lindau Nobel Laureate Meetings make an important contribution to school education in science subjects.

Participation in the Teaching Spirit programme, taking place for the first time since 2019 recognises and rewards teachers who have made an outstanding contribution to the teaching of science at their schools – for example, by establishing or supervising project groups and similar measures beyond their general teaching obligations and over a longer period of time.

In accordance with this year’s focus on the disciplines of physiology and medicine, mainly teachers in the subjects of biology and/or chemistry were selected. Candidates were nominated by the education ministries of the federal states, the EWE Foundation, the German Philologists Association, the International Lake Constance Conference (IBK), the MNU, the Technical University of Munich, the German Life Sciences Association (VBIO), the German Chemicals Industry Association (VCI), Jugend forscht Foundation and Teach First Germany.

As part of the programme, the teachers had the opportunity to attend the lectures held by Nobel Laureates in the Inselhalle, to mingle with Young Scientists and experience the Bavarian Evening as well as the final day on Mainau Island. A lunch with Nobel Laureates who gladly devoted their time was another highlight of the programme.

However, the teachers not only gained an insight into the Lindau Meeting’s programme, but also received valuable input for lesson planning. The didactical core content of the programme “Teaching Spirit 2.0” was developed in a collaborative project incorporating chemistry didactics at the University of Tübingen (Professor Stefan Schwarzer) and biology didactics at the University of Giessen (Professor Kerstin Kremer). Funding was provided by Vector Stiftung and Siemens Stiftung.

Numerous hands-on experiment stations could be explored in detail by the curious participants. The work units’ main topics were nanotechnology and modern materials, antibiotic resistance and evidence-based medicine. Another station was devoted specifically to the use of virtual reality. Here, selected online laboratories of Nobel Laureates, which are also offered as online tours in the Lindau Mediatheque, could be tested using virtual reality headsets.

The afternoon session was enriched with a lecture by Nobel Laureate Bert Sakmann, who spoke in an informal atmosphere about his research journey that led to the development of the patch clamp technique. For this method, Sakmann and Erwin Neher were awarded the Nobel Prize in Physiology or Medicine 1991.



Teachers having lunch with Nobel Laureate Johann Deisenhofer



Nobel Laureate Bert Sakmann giving his presentation



Stefan Schwarzer introducing the programme "Teaching Spirit 2.0"



Testing a Nobel Lab 360° with virtual reality headsets



Teachers at the hands-on experiment stations



Theory and mostly practice during a whole afternoon



Didactic background for the experiments



Hands-on experiments for the classroom