localization, we can obtain a definition such as, "the 37°-7.4-G1-Golgi-N-but-not-O-linked glycosylome." This system has enormous versatility and can be suitably expanded to incorporate other parameters, including cell source, developmental timing, and much more. Perhaps at first this may seem a bit cumbersome. But please remember that this nomenclature is no more intricate than the (±)-*N*-methyl-γ-[4-(trifluoromethyl)phenoxy]-benzenepropanamine used so effectively by chemists and many others. As a more wieldy alternative, we also propose that an Enzyme Commission (E.C.)–style nomenclature should be established that allows the incorporation of as many specifications as needed. In this format, the particular glycosylome mentioned above has been provisionally designated the 4.7.5.3.8ome. We expect that these numerical names, after a sufficient number of citations, will become as familiar as many E.C. numbers.

The adoption of our simplified system means that as new technologies emerge enabling the assay of yet more cellular constituents, the nomenclature is already in hand to deal with the discoveries. Which brings us to a final thought. As biologists approach a definition of all of the various machines that carry out life's basic processes, we should be able to define the ultimate 'ome, the collection of all of these machines: the "someome." Others might prefer to call this the "omesome," given that it defines the machine comprising all the 'omes. Either one is a vast improvement over their imprecise and prosaic synonym currently in wide use: the cell.

Reference

1. *Oxford English Dictionary Online* (Oxford Univ. Press, Oxford, UK, ed. 2, 2002).

RETROSPECTIVE

Willibald Jentschke (1911–2002)

Albrecht Wagner

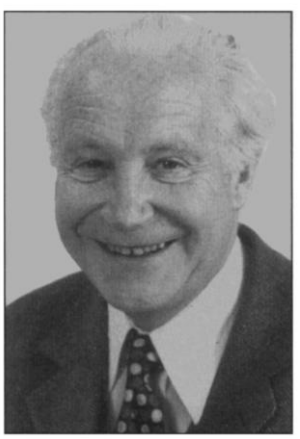
Willibald Jentschke, founder of Germany's particle physics laboratory DESY near Hamburg and former director general of CERN, passed away on 11 March 2002, a few months after his 90th birthday.

Born in Vienna in 1911, Jentschke obtained his Ph.D. in nuclear physics at the age of 24. He continued to work in Vienna until 1951, when he moved to the University of Urbana, Illinois, to become the director of the cyclotron laboratory.

When the University of Hamburg offered him the chair for experimental physics in 1955, he requested funds to create a modern nuclear physics research facility in Germany. After intense negotiations, during which Jentschke became famous for his negotiating skills and persistence, the Hamburg government offered him the high sum of DM 7.5 million for the construction of a particle accelerator. He accepted the offer and became a faculty member in 1956.

Jentschke had initially considered building a 2-GeV proton synchrotron, but after debating the question with his university colleagues in Germany, he decided to build a 7.5-GeV electron synchrotron instead. The Deutsches Elektronen-Synchrotron (DESY) was founded on 18 December 1959. Jentschke became its first director, and remained in this position until 1970.

The decision to build an electron synchrotron was driven by the wish to create complementary research facilities in Europe, especially given that the European Organization for Nuclear Research (CERN) was building a proton synchrotron near Geneva. Soon after high-energy physics experiments with accelerated electrons began at DESY, research with synchrotron radiation, emitted by the electrons during acceleration, became the second strong research area of the laboratory. For over 40 years, it has remained DESY's mission to build accelerators for particle physics and synchrotron radiation and do experiments with them.



Jentschke fostered strong links to universities and laboratories in Germany. He started the first international collaborations at DESY, a nationally funded institution. This cooperative approach later became very important, leading, for example, to the "HERA model" of international collaboration, where other nations contributed through accelerator components to the realization of the HERA collider. He also attracted excellent scientists to join him in Hamburg, together with whom he gave the laboratory its present form.

Once the DESY research program was up and running, Jentschke had to decide which machine to build next. Given the knowledge of particle physics during the sixties, the idea of building an electron-positron collider, DORIS, offered few prospects for exciting discoveries. A bigger synchrotron seemed a safer bet. But after intense discussions with advocates for either machine, Jentschke decided in favor of DORIS, of exploring new territory. We know today that this was the right choice, not only for particle physics but also for the future of synchrotron radiation.

From 1971 to 1975, Jentschke served as director general of CERN Laboratory I (the original Meyrin site). He oversaw the exploitation of important new research investments, notably the Intersecting Storage Rings (ISR), high-intensity proton beams, and an ambitious research program for neutrino physics. In 1973, this effort enabled physicists using the Gargamelle bubble chamber to discover the neutral currents of the weak interaction. Faced with such a major discovery, scientists at CERN were nervous, but Jentschke ensured that the CERN result was duly recognized. The discovery remains one of CERN's greatest achievements.

After his time at CERN in Geneva, Jentschke spent a sabbatical year at the Stanford Linear Accelerator Center before returning to Hamburg, where he became a professor emeritus in 1979. He remained interested in the developments at DESY, where he celebrated his 90th birthday with old friends and colleagues.

The secret of Willibald Jentschke's success lay in his personality, which was a unique blend of knowledge, competence, vision, ideas, charm, courage, and the talent to recognize and attract excellent colleagues. He listened and talked to the people working with him, always asking questions and generating ideas. He wanted a team and people to fit into it. This spirit is still present at DESY today.

As director general of CERN, Jentschke wrote in 1975: "I believe that we must base our future plans on international collaboration, certainly within Europe, or perhaps, if conditions eventually permit, within a wider context." That this vision is becoming a reality today is his testament.

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