Editorial

Dealing with Oreste was fun, instructive, enriching … with the passing of Oreste Ghisalba we all lost a friend, mentor and a biotech pioneer. Oreste's professional life spread over half a century and a critical time span for biotechnology. During Oreste's life time, biotechnology has become one of the most important global economic factors. During the 1970s, the largest fermenter ever built was constructed by ICI for single cell production. Genetic engineering became a reality in the industry when the first recombinant product (insulin) was produced with a recombinant *E. coli* strain. Within Oreste's lifetime the global market size of biotechnology has approached US$ 300 bn, and this does not include the biotechnology manufacturing steps adding value to products in many other industrial sectors, such as the food sector, because these final products are not perceived as biotech products.

Oreste's professional career started as a laboratory technician at Ciba Geigy (now Novartis) in the 1960s. He then chose the so-called 'second path education' to the Swiss Maturity, which he obtained following courses and exams alongside his work as laboratory technician. Such an itinerary requires much more resilience, determination and stamina than the 'normal' path to University *via* a high school education, which most of us took. Maybe his start as technician helped him to remain down to earth, helpful and accommodating throughout his impressive career and achievements.

The contributions in this special issue bring us back to the origins and large footprint of Oreste's activities at Ciba-Geigy and later Novartis central research laboratories, as expert of the Swiss National Science Program, the CTI (now Innosuisse), Swiss Coordination Committee Biotechnology, Swiss Biotech Association, Swiss Industrial Biocatalysis Consortium, The Culture Collection of Switzerland, SPP Biotech and many more. One reason why Oreste was well prepared to venture early into unchartered fields and mentor new forms of collaboration was one of his mottos he used to quote *"It is better to ask for forgiveness than for permission".* Honesty and openness was imperative to Oreste, who disdained what he called *"Tiefschwätzer"* and gossip. *"Dä het no nie Strom gliferet"* – was another one of his biting comments for people who talk a lot but do not deliver. A contributor to this issue and a witness of that time period writes how things have changed, as times back then were very research-friendly and researchers were encouraged by the management to spend some time apart from their core projects and experience. The creation and maintaining of an inspiring research environment is a *conditio sine qua non* for breakthrough discoveries, a view which both guest editors fully endorse.

As a nice coincidence, this issue's CHIMIA Column on Chemical Education by Catherine Housecroft deals with natural products and secondary metabolites, which was the central topic at the start of Oreste's professional life during his research on the biosynthesis of antibiotics.

The contributions for this issue were written well before the current coronavirus crisis, and it is interesting to see how some articles anticipate some possible options with respect to bringing together different stakeholders to achieve common goals and to build bridges between biotechnology and chemistry, academia and industry to overcome bottlenecks in value creation chains. The way in which Oreste Ghisalba built bridges in the past between industrial and academic institutions, science and society shows also the way how at present and in the future massive efforts and initiatives in science, new ways of global cooperation and science-based political decision making is key to overcome global challenges.

We were proud and honored to call Oreste a friend to whom we both owe a lot. We thank Jaqueline Ghisalba very much for her kind help and discussions in these difficult and extraordinary times. We also thank Pécub for the contribution of the art for the front cover and the text below.

Thank you Oreste for all you have done for us all – rest in peace!

Dr. Roland Wohlgemuth
Swiss Coordination Committee
on Biotechnology (SKB)

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Arts Western Switzerland HES SO

Les beaux esprits

Au moment de partir, les beaux esprits, ceux qui ont accompli une vie merveilleuse, réalisé des chefs d'œuvre, imaginé des méthodes, des magies par l'expérience, des biologies vertueuses, des technologies, des découvertes par le travail persistant, nécessaires et utiles à la vie de tous, de l'humain habitant la biodiversité, de l'intelligence respectueuse du zéro et de l'infini, du bonheur de bâtir la confiance, au moment de partir ces beaux esprits laissent un vide. Ce vide n'est pas triste, il est aussitôt rempli par la reconnaissance et l'admiration de ceux qui ont partagé la joie de cheminer un instant à leurs côtés.

Pécub

Pécub is the pseudonym for Pierpaolo Pugnale, an artist with a particular focus on work philosophy, living in Gilly (Canton of Vaud). The name '*Pécub*' *was bestowed on Pierpaolo by one of his mathematic professors. Pécub expresses his thoughts with a unique brush stroke and created countless cartoons together with characters for his comic strips. Léonard, for example, is a protagonist in his illustrations on work philosophy. But Pécub has also published illustrated books such as* '*Le cerveau est mort, vive le cerveau*'*. Pécub can be contacted via mail: pecub@pecub.ch and www.pecub.ch*.

The CHIMIA Editorial Board is very grateful to the guest editors, Roland Wohlgemuth and Hans-Peter Meyer, for creating such a fitting tribute to Oreste Ghisalba, a biotechnology pioneer, who used his knowledge, power and convictions to drive the development of the biotechnology sector in Switzerland.