

## WASTE WATER BIOTECHNOLOGIES

### [Joachim Paul Schaefer](#)

*General Manager and Co-Founder  
WasteWater Biotechnologies  
Germany*

### [George Kalos](#)

*General Manager and Co-Founder  
WasteWater Biotechnologies  
Germany*

We are very happy to attend this discussion and are grateful to Dr. Agni Vlavianos-Arvanitis for inviting us and whom we first met some three weeks ago at an environmental conference in Alexandria, Egypt, through the invitation of Mr. Sami El Gindy. We hope that our acquaintance with Dr. Vlavianos-Arvanitis and Mr. El Gindy will be the beginning of a very fruitful co-operation in the bio-environment.

George Kalos and I founded Wastewater Biotechnologies in Dusseldorf, Germany in mid 1998. The decision to form this company was actually made in the USA where we first met and where we came to the conclusion that the product we were looking at was ripe for Germany. George's background is in chemistry and biology, he has extensive knowledge gained in the pharmaceutical industry and had already worked in various areas to clean up parts of the suffering environment. My background is money. I worked as a money advisor and asset manager for 25 years before the two of us entered into this partnership, bringing our combined know-how to work for a company which would help the environment and at the same time give us a chance to earn a decent living.

We decided to market our biological product in Germany first, since Germany is among the most advanced countries when it comes to wastewater cleaning. Due to almost 90,070 households and industry connected to purification plants, large quantities of sewage sludge are a negative, and NOT a natural, result of the current technology of biological cleaning systems. Taking care of this sludge is a very costly matter: the treatment of sludge amounts to more than 2 billion DM per annum for Germany alone, and the amount is rising.

It was our mistake to believe that a sophisticated country like Germany would jump at what we had to offer: the first biological method of avoiding or reducing sewage sludge in existing purification plants at a very competitive price. Our main targets were municipalities, and in retrospect, this was the wrong strategy. Municipalities would hardly ever listen to us or would request references and university studies. Furthermore, we were to learn that municipalities would rather do what they are used to doing instead of jumping at new and very ecological innovations. This was a costly mistake but did not signal the end. Mainly because we were – in addition to our own funds and work – backed by private investors with high ethical investment standards and funds from a state-run bank which grants loans to start-up companies at low rates of interest. Since the beginning of this year, however, we seem to have started our success story and attracted a good number of customers, so that in the end our environmentally-friendly product will find its logical marketplace and we will eventually become profitable in a short period of time.

Profits for us are extremely important, not only to satisfy investors who backed us at the time but also to finance further improvements to our product as well as new innovative products for the water and wastewater industry. The importance of water for this planet and its future is incontestable, and there are several innovations in water management available around the world.

We have recently formed a group of small to medium sized companies, which will market some exciting products all over the world, for example, the construction of new purification plants. These are new in the sense of new technology. Many parts of the world currently making major efforts to clean wastewater, mostly for the first time, will not have sufficient funds to build purification plants the way they have been built for the last 50 or 100 years. Our know-how would allow decentralised modular plants for all wastewater, be it municipal or industrial.

The technology has already existed for over 15 years in some industries but was never built for municipalities. The advantages of this technology, which we call HPWT for High Performance Wastewater Treatment, are manifold. Not only does it cost much less than conventional biological plants, but can be built in almost any size – and almost anywhere – needing very little space and short transport of wastewater to the plants. This should become the reference standard, especially for poor countries, which will nevertheless make high investments to help their environment in the future. We will be happy to supply anyone interested with more information, and we have offered the technology to potential customers on a large Greek island. It looks as though we might build one of the first prototypes for Greek customers.

This is only one of many products which will be marketed by the German group which, as mentioned before, was formed very recently in Dusseldorf and Cologne and which will operate under the name of AAA – Aqua Air Association. All companies complement each other with various technologies such as the HPWT technology, membrane technology, air pollution and the like.

Only by generating profits for what we founded 3 years ago will we be able to finance projects which will otherwise not come to fruition, at least not now. A good part of the established industries are either not interested in changes or are not able to implement new ideas. But we feel that our common environment needs dramatic changes. We have, therefore, decided to enter the market with yet another venture capital firm. But this time

it will be different to what is already available in large numbers, even in Germany. There will be five founding members with environmental and financial backgrounds, all of whom have already worked together in various capacities in the environmental field.

Why is this new venture capital firm important and what is different? Germany is a country with many innovations yet very few of those innovations are ever implemented. Why is this? Partly because – as was said before – the German system has become rather lazy, especially in the area of universities and scientific entities. Money, on the other hand, is not readily available or at least has not been so. Only within the last 2 to 3 years has venture capital attracted a market both for investors and innovators or entrepreneurs. Needless to say, much of that new funding was being directed into "high technology" or the Internet, where a lot of it was wasted. Nevertheless, much money was used to finance innovations, and more recently, venture funds have found their way into a powerful industry of the future: the environmental industry.

We will share this trend which will shortly cease to be a trend and become a reality. We will prospect for wealthy investors with a responsible view towards the environment and profits, both individuals and institutions. Their investments will finance the existing know-how of various new products which should help in many areas of air, land and water. But above all, investors will profit from our network consisting of people who have innovations prepared or almost ready to enter the market, and our people and business aides who will help with all aspects of research, production and marketing. The money will help to speed up the process of patents and the building of prototypes and help finance the application and use or installation all over the world.

It is this important feature of environmental and technical know-how which we will add to the funds received from investors, which will differentiate it from most other projects. We feel very confident that a couple of our initial projects will generate a good rate of returns in a relatively short period of time. Why is this important?

We badly need profits to attract more funds for this enormous new bio- environment market, which actually, by now, should have already attracted more money than has been available. Our environment badly needs help. And our help starts with money. No doubt, products which can improve our environment and which can assist people around the world in their work for their environment and the future, are available in large numbers. Yet we need money for those products to enter the market and to attract the attention of entrepreneurs. If we can successfully market what we believe is just waiting for funding, we will automatically attract interest among many new entrepreneurs and their products, ideas and know-how.

It is the goal of our venture capital firm to raise 10 million Euro within the first few of months of its operation, coming from 5-10 investors, both private and institutional. These initial funds will be injected into projects which are already waiting for funding. We will subsequently raise an additional 40 million Euro, hopefully from the same group of investors who have gained experience with our first investments. We are very excited by this venture which will operate under the acronym PECC – Planet Environmental Capital Company.

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**Joachim Paul Schaefer**, joint General Manager and Co-Founder of WWB WasteWater Biotechnologies GmbH, has over 35 years' experience in sales, investments and asset management with some of the world's leading companies. He has been Assistant Sales Director with Alfred Teves GmbH, Sales Representative and Sales Manager with Airborne Freight Corporation Frankfurt, Purchasing Order Processing Manager with Souriau Electric GmbH, Investment Advisor with Prudential-Bach Securities Inc., Branch Manager Prudential-Bach Securities in Dusseldorf, and Independent Asset Manager in association with PSM Munich. Joining forces with George Kalos in 1998, he brought his considerable expertise and business acumen to the field of biotechnology.

**George Kalos**, joint General Manager and Co-Founder of WWB WasteWater Biotechnologies GmbH, holds a degree in Chemical Engineering. He has wide-ranging experience in the pharmaceuticals industry, both as an executive and in research and development, as well as sales and marketing experience in the field of biotechnology. For well over a decade he has conducted research into the development of chemical, physical and biological systems for industrial cleaning technologies and soil cleaning. More recently he has concentrated on waste water cleaning technologies, co-founding WWB WasteWater Biotechnologies GmbH in 1998.