

In Memoriam

Dr. Harry Boddé, Associate Professor, Division of Pharmaceutical Technology, Leiden/Amsterdam Center for Drug Research (LACDR), Leiden University, The Netherlands

On September 8, 1996 Dr. Harry Boddé (45), Associate Professor in the LACDR's Division of Pharmaceutical Technology, passed away after suffering from an incurable disease. He is very sadly missed by his wife and two sons, his other family and his numerous friends and colleagues within and outside LACDR.

Harry Boddé started his research on drug delivery to and across the skin at the LACDR in 1984. His main interest in this field was the interaction between a drug delivery system and the drug absorbing membrane. Under his supervision biochemical as well as biophysical techniques (such as electron microscopical methods, fourier transformed infrared, confocal laser scanning microscopy) were developed. Visualization methods were not only used to study changes in the structure of the absorbing membrane, but also to visualize drug transport pathways. These methods were first explored for the skin, and later on the same methods were also applied to buccal tissue.

He worked with several different drug delivery systems, such as liquid crystalline systems, polymers, penetration enhancers and vesicular systems. More recently his main interest was drug delivery across skin and buccal tissue by iontophoresis and electroporation. He used a variety of drugs such as peptides, nitroglycerin and apomorphine and was especially interested in developing feedback systems based on the pharmacodynamics of the drug.

Most of the biophysical systems were firstly developed for studying interactions *in vitro*, but later on several of the methods were adjusted to be applied *in vivo* in man. In this way, it became possible to combine information *in vivo* in man (i) with changes in the barrier function (trans epidermal water loss), (ii) irritation aspects, (iii) changes in the structure of the skin (electron microscopy) and (iv) drug transport through skin.

The appreciation for Harry's work within and as well as outside our Center has been immense. But the appreciation for the way in which he undertook this, as a human being, is even greater. This has been articulated so accurately in the eulogy from his coworkers in the Division of Pharmaceutical Technology: enthusiastic, creative, inspiring, demanding, and, at the same time, also a friend in supervision and in solving problems. He was a very gifted communicator, in various languages, sharp and convincing in discussions, phrasing clear thoughts about new directions and main lines of research; very persistent too, but always larded with a significant amount of humor. He knew how to captivate others for his ideas, in a manner that yielded fruitful and close collaborations with many national and international research groups.

Harry has carried out groundbreaking work in the area of transdermal administration of drugs and has established an impressive international reputation, which made our entire Center, our University, shine. He met many competitors in the field, but his greatest competitors could become his best friends in the course of time. Mutual respect was its primary basis. One

of those is Dr. Richard Guy, who commented as follows on Harry's death:

My scientific interactions with Harry can be characterized as intense, stimulating, occasionally heated because we did not always agree (but that made it more fun), always constructive, collegial and productive. In addition, conversations with Harry were always full of humor, culture and insight (both scientific and social). Being around Harry was never dull and was always challenging.

The world is an emptier place now that he is gone and those of us lucky to be here must work harder to fill the gap that he has left. I can imagine him watching us fumble around and saying 'Come on, you can do better than that—you just need to think more clearly'. I hope that together with those students lucky enough to have been trained by Harry, we can live up to his expectations and standards.

Richard Guy is also the one who, at the initiative of Harry himself, has taken over part of the supervision of the current research of Harry's Ph.D.-students. Harry's work will be carried on; he has laid a foundation that we consider to be extremely valuable.

The other person who commented on his interactions with Harry is Dr. Carl Peck, who spent a sabbatical at Leiden University in 1994/1995:

Harry was a hero of mine, both as a scientist of the first order and as a lovely and truly courageous fellow human. I recall that Harry provided the best leadership for the finest Gordon Research Conference on Skin Research ever presented. His many original scientific contributions will inspire us all to strive to meet his high standard of scientific creativity and excellence throughout the remainder of our scientific lifetimes. But it was his astounding fight to the finish, so characteristic of Harry, that especially captured my admiration.

In these lines Carl Peck refers to a Gordon Conference which merely top scientists are invited to moderate. Harry has done so in a very impressive manner, not only because the science was on a high level, but also because on that occasion he revealed himself as a talented imitator and word artist. At the beginning of the congress he cited a self-written poem on a dilemma in his branch of science, i.e. on the question whether a certain part of the skin is alive or not:

*Dead or alive, whichever be the reed,
O cornified delight, would thou indeed
By either of these labels be so sweet
As to keep us forever off the street?*

These lines are a beautiful reflection of how an inspired scientist experiences the challenge of an unsolved problem. Harry all over in words. He was a very versatile person, a continuous source of wonder and delight to all who have known him.

He commanded great respect when his illness manifested itself several months ago and he determined his own treatment with all the dedication and fighting spirit so characteristic of him. And it has, certainly as a pharmaceutical scientist himself, disappointed him extremely that none of the current therapeutic

strategies could offer him any prospect of recovery. This compels us to a high degree of modesty.

Harry is being missed at our Center; such was already the case during the past few months, but there was still hope then. Now our grief is deep and continuous and we must direct our energy to all that Harry has left us with, in and outside his work, in which he continues to live and which we wish to honor.

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