

Inspiring Professor Erik Frijlink awarded a royal decoration

Prof. H.W. Frijlink received a royal decoration on Friday 26 April by nomination of the University of Groningen. He was appointed Knight in the Order of the Dutch Lion. He received the accompanying decoration from Marcel Thijssen, Mayor of Tynaarlo.

Erik Frijlink (Meppel, 1960) is Professor of Pharmaceutical Technology and Biopharmacy and chair of the research group bearing the same name at the Faculty of Science & Engineering of the UG. After spending six years in the pharmaceutical industry, he started working as a Professor of Pharmaceutical Technology and Biopharmacy 25 years ago. Together with his research group, he has managed to set up highly successful research projects in both academic and industrial fields. For instance, hundreds of thousands of patients worldwide are grateful to benefit from the applications resulting from his research into powder technology, biopharmaceuticals, and dosage forms. Colleagues both in the Netherlands and abroad applaud his enthusiasm, warm personality, and collegial attitude, while students fondly recall his enthusiastic, dazzling lectures. He is also known as an academic innovator and is regarded as *the* perfect example of an academic entrepreneur.

Undisputed expert

Frijlink is known for successfully translating basic academic research into clinical impact and innovative applications. He is an undisputed expert in inhalation technologies and drug delivery, therapeutic effects, and shelf life of pharmaceuticals. The central focus of his research group is the development of so-called platform technologies that improve patients' quality of life. The success of this work is evidenced by the fact that Frijlink has 20 co-patents to his name. For example, he has developed a layer of sugar glass around pills, which has improved the safe oral administration of certain drugs. Another example is a technology to safely transport drugs from the stomach down to the colon, where the drug is dispensed.

Innovative inhalation technologies

One of the biggest societal impacts Frijlink achieved was with an innovative technology to administer drugs for asthma and COPD in powder form into the lungs. Based on this invention, he developed a powder inhaler that allows very high doses of drugs to be administered to patients suffering from cystic fibrosis or tuberculosis without causing respiratory irritation. In collaboration with a spin-off company, he has launched a new inhaler that eliminates the need for patients to use a time-consuming nebulizer. These improvements have had a huge impact on patients' lives, reducing the treatment burden to almost zero. He has also contributed to a European consortium for universal flu vaccines, and his group is developing a stable flu vaccine powder that can be administered through the respiratory tract. A clinical trial has yet to determine the effectiveness of this invention.

World-class reputation

Internationally, Frijlink has built a world-class reputation with more than 300 academic publications, 47 of which have been cited more than 100 times. He is among the top ten most renowned researchers in his field, particularly for his inhalation research. He is extremely successful in raising external research funds, with more than half of the grants being awarded in direct collaboration with the industry. He is also involved in several start-up companies and advisory boards.

Administrative activities

Within the University and various external professional organizations, Frijlink has taken on the necessary administrative tasks. For instance, he was Chair of the Board and at a later stage Scientific Director of the Groningen Institute of Pharmacy (GRIP), and Deputy Director of the Groningen University Institute of Drug Exploration (GUIDE). In his capacity as director, he devoted himself to promoting early-career researchers in tenure-track positions, which allow young researchers to progress from assistant professor to full professor in ten years. He also provided funding so that these young researchers could strengthen their European network and set up their own research lines without having to rely on external grants. As a member of the Pharmaceutical Sciences Task Force, he initiated talks with the Universities of Utrecht and Leiden to prepare the Dutch pharmaceutical research institutes for the Dutch Sector Plan aimed at strengthening science and research.

Standing up for Dutch pharmacists

Being closely involved in the pharmacy profession, Frijlink is concerned about the rapidly dwindling infrastructure and the impending shortage of knowledge and adequately trained staff for the local production of medicines in the Netherlands. By raising awareness of this problem on a national level, including during the radio programme *Dropwater en Cannabisolie*, several training institutes for pharmacy assistants have adjusted their curriculum.

Innovator and entrepreneur

Frijlink has successfully supervised a total of 50 PhD students, 36 of them as primary supervisor. This recognition for his work is also evidenced by his appointment as a member of the Royal Holland Society of Sciences and Humanities (KHMW) in 2005. He has also received several awards, including the Wubbo Ockels Prize in 2010 and the University of Utrecht Award of Excellence in 2015. In addition, he received the 2023 UG Innovation Day Award for being a perfect example of an academic innovator and academic entrepreneur.