

# From Research to Real-World Impact in Pharmaceutical Care

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On this FBD research day, it is valuable to highlight the uncertainties in research and research careers, while also exploring pharmaceutical care from a research perspective. My career encompasses biochemistry, biophysics, bioinformatics, and pharmaceutical care, reflecting an unconventional journey. This journey involves working with fully controlled, isolated model systems, using Newtonian physics at the atomic scale in a computational environment (i.e. molecular dynamics simulations), to addressing the complexities of implementing new pharmaceutical care services in the real-world setting of a contemporary pharmacy.

This trajectory features numerous serendipitous moments, such as the opportunity to start my PhD or the successful application of a 'Plan-B approach' to obtain it, made possible by the personal computer revolution 40 years ago. Subsequently, I pursued two postdoctoral positions in different countries, each offering unique contexts, cultures, and computational resources, which broadened my experiences.

The next and major shift in my journey was re-entering the practical realm of community pharmacy. I moved from molecular dynamics simulations aimed at solving aspects of the protein folding/unfolding problem to solving real people's problems and questions in my own pharmacy. While leaving academia may be atypical, it doesn't necessitate abandoning scientific principles, although it might not be the easiest path. When approached by my former internship supervisor, I was grateful for the opportunity to advise on postgraduate pharmacist education for several years, adhering to the same scientific principles. I also kept up some of my bioinformatics collaborations as a citizen scientist, using just a computer and internet connection, and often at the expense of sleep.

Thanks to these principles, another stroke of serendipity, and primarily the wisdom of a former department head, I was welcomed back into academia at this University after a 15-year hiatus. At first, I concentrated on part-time teaching, and more recently I have been increasingly engaged in research with the goal of impacting actual pharmaceutical care practices.

This research involves evaluating prescription habits, examining the implementation of new services such as medication reviews, promoting better collaboration among healthcare professionals, focusing on underserved populations, and exploring the use of AI's large language models in self-care from a patient perspective. These examples aim to convey the essence of pharmaceutical care, the research conducted within this context, and its potential real-world impact.

## References

<https://www.uantwerpen.be/nl/personeel/hans-delooof/publicaties/>