Editorial

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The Art of Compounding in Hospital Pharmacy

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Pharmaceutical compounding is not as simple as external observers might guess. For non-pharmacists, compounding may just mean to mix different drug products or solutes together. In the case of aseptic compounding, uninitiated persons often believe that if you work in a safety cabinet or an isolator, everything is under control. In the case of toxic compounding (such as chemotherapy production), non-insiders understand that you need to protect workers and the environment but they do not always grasp the impact of working in a controlled area on the process itself (especially when it comes to productivity). This lack of knowledge sometimes has consequences: for instance, medical staff or nurses do not understand the time taken to produce a syringe of chemotherapy after its prescription, or hospital directors do not understand or approve the staff needed to allow a safe compounding process, sufficient training time for newcomers as well as the appropriate amount of money to spend on technical solutions for cleanrooms, robots, isolators, control apparatuses and so on. To get an insight into what pharmaceutical technology in the hospital is about, we recommend that all those “non-insiders” read our journal. If they do, they will learn that pharmaceutical compounding is an art in the sense that a hospital pharmacist has to combine many skills and knowledge to assure the safety and the quality of the compounded products.

In the following I will sum-up some of these skills to give the readers an overview of what we are dealing with in pharmacies. As a compounding pharmacist you have to adapt your work to the constraints of budget and the needs of medical staff and patients. You have to be able to define the best process suited to your hospital for each type of compounded product (parenteral nutrition, chemotherapies, eye drops etc.). Before using a process routinely, all steps of it need to be validated using reference guidelines. For every process you have to decide on all the controls to be implemented to ensure the quality and safety of the final product. For example, in the case of a single chemotherapy syringe it is not uncommon to find more than 15 different

controls along all of the process. You are also responsible for the circuit from your pharmacy to the wards where the drug will be administered (for example the monitoring of the temperature during the transport at + 2 °C to 8 °C). You also have the responsibility to determine the expiry date. This is done by critically looking at the scientific literature or by performing analytical studies on your own with a validated stability indicating method. Thus, as you can see through those examples, pharmaceutical compounding is a complex task. It is, in that sense, important to share knowledge about it – among colleagues but also with medical staff or hospital directors. If we pharmacists communicate more about what we are doing, the benefit will be for our patients at the end of the day.

In this issue you will first find an updated review from the Belgian team of J.D. Hecq. It is an overview of what is currently done in Europe on automation for intravenous therapy. As automation is a field at its turning point in hospital pharmacy, we think that this overview could be very useful for our readers. Subsequently you will find three different papers on stability testing – two from French teams (Colmar and Nancy) and the last one from a Norwegian team in Oslo. In those papers, the authors investigated the stability of the active moiety but also its interaction with the container and the physical stability in case of an emulsion. Thus, these three papers can be considered as very good examples of the range of stability studies performed in hospital pharmacies. Then you will find a Canadian survey on the centralization practices for preparation of non-hazardous drugs. This short communication gives a brief insight into what is done in Canada for non-toxic preparations. The provided list can be very valuable for readers worldwide and we should do the same survey in Europe to highlight the differences. Finally, this issue ends with a report I wrote together with Prof. Valerie Sautou after a workshop we organized during the last GERPAC conference on stability studies and container-content interactions. In this short text you will learn what was discussed during the workshop and the points that could require your attention if you plan to perform stability studies.

Once again we managed to gather some very valuable papers for the pharmacist readership, but also for all the persons working in hospitals who are trying to gain insight into what we are doing in our pharmacies.

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