



Foliolum



Pharmacy & Religion

G.F.S.V. "Pharmaciae Sacrum" - University Centre for Pharmacy

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Content

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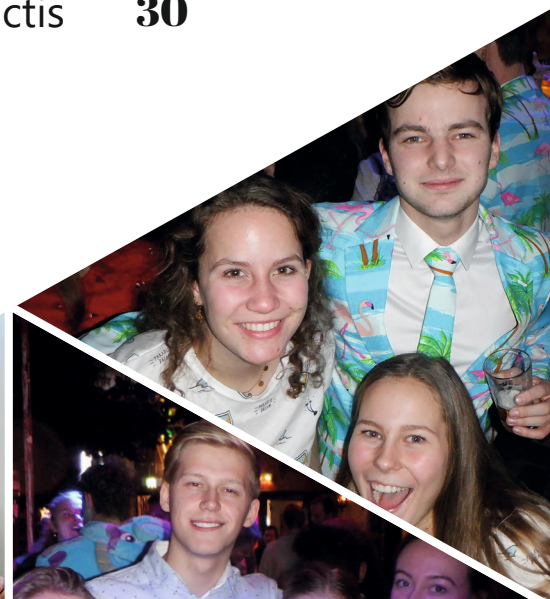
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Prefaces

Editorial



Dear readers,

In front of you lies our third issue, the March-issue. March is the third month of the year and it's also known as the 'Spring-month'. The weather becomes better and the days become longer. Personally, I really like spring. Flowers, good temperature and occasionally the sun. Lovely after such dark months. Even though these months were quite dark, there was a little sparkle in the first week of February. We celebrated the 138th Dies Natalis. Hopefully, you were all present. If you, unfortunately, did not attend, you can get a small impression of this special week in this third issue. We look back at a wonderful Dies Natalis with lots of pictures and stories of the people who were there.

Furthermore, this Foliolum will be devoted to religion. We have interviewed Dr. Helma Ruijs about the acceptance of vaccination amongst Reformed Christians. You can also read how Bahez Gareb conducted his PhD research during his regular curriculum and how he became a Hospital Pharmacist as well. Hoeke Baarsma will tell something about his career after fulfilling his Pharmacy education here in Groningen and Ceren Zwijnenburg will tell something about her time in Ghana.

Last but not least, we had an interview with prize winning student Lisa-Marie Smale. You can read about her Master research in Australia and how she won a prize for this research.

Now all I have to do, is wishing you a lot of reading pleasure.

Love,
on behalf of the Editorial
committee 2019-2020 "Panoramix",

Nienke Mones



Board



Dear reader, dear P.S.-member,

The second half of the academic year has been going on for a while and we are already secretly looking forward to the summer holidays. A lot has happened in our association in recent months. For example, the Foreign Trip Committee announced the location of our Foreign Trip during the February-drink. The 138th Dies Natalis der G.F.S.V. "Pharmaciae Sacrum" has taken place. We can look back on a fantastic week with many social, but also educational events. We hope that all members have enjoyed the many activities that have been organized in recent months.

This edition of the Foliolum has the theme "Pharmacy and religion". This edition will look at, among other things, the religious considerations surrounding drug use. In some parts of the Netherlands, it appears that the vaccination rate is a lot lower due to religious considerations when compared to the rest of the Netherlands. What effect does this have on the various diseases? And is it wise to make the use of medication depend on religious considerations? At the moment you're reading this, our successors have been announced and we are already approaching the end of our board year. There will be a few more busy months that we are all looking forward to. Finally, I would like to congratulate the Editorial Committee "Panoramix" with putting down another beautiful edition of the Foliolum. I wish you much reading pleasure.

Kind regards,
in the name of the 138th board
of G.F.S.V. "Pharmaciae Sacrum",

Jan de Boer
h.t. praeses





Helma Ruijs finished her study Medicine in 1990 and started working for the Municipal Health Service (GGD; Gemeentelijke Gezondheidsdienst) in Tiel. At the GGD she specialized in Public Health and control of infectious diseases. Currently, Helma is working at the RIVM (National Institute for Public Health and the Environment) at the National Coordination Centre for Communicable Disease Control. This centre is responsible for the guidelines on infectious diseases and coordinates the response to outbreaks. These guidelines focus on public health aspects of infectious diseases, not so much on the individual treatment of infected patients.

Acceptance of vaccination among orthodox Protestants in the Netherlands

After only two years of working experience at the GGD, Helma was confronted with the polio epidemic in 1992. This epidemic concentrated in an area in the Netherlands called 'The Bible Belt'. In this area, many orthodox Protestants live. Due to their religious beliefs, many orthodox Protestant parents chose not to vaccinate their children. Therefore, this area is susceptible to outbreaks of infectious diseases. Since the recent outbreak of the coronavirus, Helma has been quite busy preparing guidelines for a possible infection with the coronavirus in The Netherlands. Nevertheless, Helma could find some time to tell us more about her research into the acceptance of vaccination among orthodox Protestants in the Netherlands.

What was your motivation to research the acceptance of vaccinations amongst orthodox Protestants?

"I was quite impressed by my experiences during the polio epidemic in 1992. Part of the Bible Belt is located in the area of the Municipal Health Service in Tiel, where I worked at the time. During this epidemic, a campaign was launched in which sugar cubes with oral polio vaccine were handed out to unvaccinated children and teenagers at sports facilities. At some point, I met a boy who asked for a sugar cube with the vaccine. He explained: "I

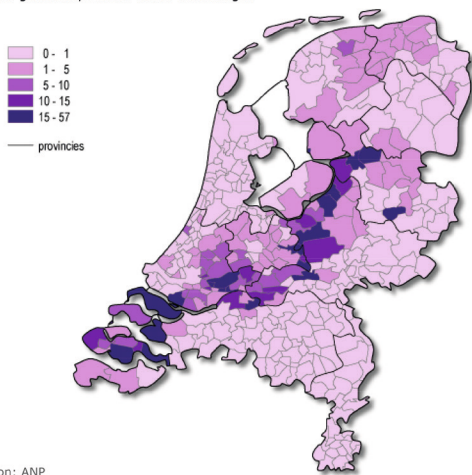
don't want to infect others. If God wants to punish me, He will punish me with cancer or another worse disease." I was very intrigued by his remark. **3** During this epidemic, I also visited some families of whom one of the children was hospitalized with polio. What really struck me was on one side the engagement of the parents with the health of their diseased child. But on the other side, the fact that these parents had such strong beliefs that they did not even consider vaccination even when one of their own children was ill. For me, as a non-believer, this was hard to understand."

What are the main considerations orthodox Protestants mention whether to vaccinate their children?

"Orthodox Protestant parents can be roughly divided into four groups. These groups are based on their decision whether to vaccinate their children and on the way this decision is made. The first group traditionally chooses not to vaccinate their children and does not take a lot of time to consider this. Their decision is based on the providence of God. People in this group believe that God foresees everything and guides the creatures on earth. If people fall ill, then it is God's will and humans should not interfere with God's will. The second group chooses not to vaccinate

their children as well, but this group takes their time to consider their decision very well. They base their decision on their personal belief and their trust in God. They completely rely on God and accept everything He sends them. Unlike the first and second groups, the third group chooses to vaccinate their children. They are convinced that humans have a responsibility to protect the life that God gave them. They consider vaccinations as a gift of God and thus choose to protect their children against infectious diseases. The fourth group doesn't recognize any relation between vaccinations and their religion. Like the majority of the Dutch population they traditionally choose to vaccinate their children."

SGP-stemmers 2017
per gemeente, Tweede Kamer verkiezingen



Geographical location of the Bible Belt in the Netherlands

Do preachers have a significant influence on the decision-making process of parents?

"In all four groups, the influence of religious leaders seems to be limited. This can be explained by the fact that religious leaders are elected by the church community. The church community tends to elect a leader that has an opinion comparable to their own on such topics. In less conservative church communities, the choice whether to vaccinate is not an issue. In those church communities, vaccinations are not a topic that is discussed. When parents do want to discuss this topic with a parson, it is useless because they cannot come to an agreement. Often one of them is vaccinated and the other is not. In very conservative church

communities, parents who consider vaccination know that this is not appreciated by the leadership and therefore they will not discuss it. That's why this topic is not regularly discussed with religious leaders in these communities."

How did the level of vaccinations develop the recent years?

"There appears to be an increase in vaccination coverage in orthodox Protestant communities. Except in the most conservative churches, there is an increase in vaccination coverage per generation. This increase is related to the increase in the level of education."

Do other religions also have opinions against vaccinations?

"Most other religions do not have any objections against vaccinations. However, there recently was an outbreak of measles in New York and London amongst Jewish conservative groups. And it is known that some Muslims reject vaccinations because of their formulation. Some vaccines do contain gelatine, which is derived from pigs. Pigs are seen as unchaste in the Muslim culture and therefore gelatine-containing vaccines are not accepted by some of them. Besides, some conservative Christian groups reject the vaccine against rubella, because the vaccine is developed from a cell line made of abortion material. The origin of this cell line already dates back to the sixties of the last century. Since Christians do not accept abortion, the rubella vaccine is not accepted by some of them either."

Does an epidemic outbreak has an influence on the decision on vaccinations or not?

"The last measles epidemic was in 2013/2014, during this period options were given to get early and catch-up vaccination. Normally, children get the measles vaccine when they're 14 months, this can be brought forward to 6 months in case of an outbreak. The options were given, but most orthodox Protestant parents did not make use of it. Many of them see measles as a childhood disease, that "just happens" and they accept that

the child can get it. Measles is not considered as a very serious disease, especially compared to polio, which is considered more serious. Overall, it can be said that an epidemic does not really stimulate orthodox Protestant people to get their children vaccinated.

During this last measles epidemic in 2013/2014, the Erasmus MC conducted research in the orthodox Protestant community. This study focused on the effects of the measles virus on the immune system. We took blood samples of unvaccinated children before and after infection with measles. These samples showed that the measles virus infects the memory cells of the immune system and therefore the immune system is affected by the measles virus. This proves that measles is not just an innocent child's disease like many people think."

Vaccinatie: voorzienigheid, vertrouwen en verantwoordelijkheid



How well is information provided by doctors and or nurses?

"To implement the results of our research, we made, together with the Dutch Patient Association (NPV; Nederlands Patiënten Vereniging), a brochure about vaccination. Besides the medical information, this brochure contains religious considerations as well. The brochure was distributed together with orthodox Protestant family magazines (Terdege and Gezinsgids). This brochure stimulated the readers to think about vaccination and also about different ideas of vaccination within their own group. It also made people think about their arguments for vaccinating or not. During the measles epidemic in 2014, the brochure was evaluated. Although people really appreciated the information, there still was no direct influence in the number of vaccinations.

It is difficult to determine the influence of doctors and nurses, since they supply medical knowledge, and orthodox Protestant parents base their decision mostly on religious arguments. In contrast, general practitioners who belong themselves to the Reformed denomination do receive questions about vaccinations. The questions these general practitioners are asked, mainly focus on the religious aspects of vaccinations, not on the medical aspects."

Ph.D

"With fame on my mind and my girl on my nerves, I was pushing myself to get something that I deserve." That line from Drake's song Under Ground Kings from the critically acclaimed and classic album Take Care, always takes me back to the summer of 2014. Needless to say, we broke up at the end of 2014." Bahez Gareb is a hospital pharmacist in the Martini Hospital Groningen, with expertise in pharmaceutical compounding. He is also a Ph.D. candidate at the departments Pharmaceutical Technology and Biopharmacy (PTB), University of Groningen, and Clinical Pharmacy and Pharmacology (CPP), University Medical Center Groningen (UMCG). They work together with the department of Gastroenterology and Hepatology, UMCG.

I enrolled in the Pharmacy study programme at the University of Groningen in 2009. My first impressions were good. I loved all the subjects as well as the depth. These were predominately exact sciences. I remember vividly the quantum mechanics of fluorescence that was taught to describe the observations we made during experiments with quinine. Some hated it, some did not understand it, but I loved it.

6 However, around year three of the Bachelor, I realized that all this in-depth knowledge was never ever applied by a community pharmacist. Of course, a community pharmacist knows his pharmacology. But how many of them know what HPLC column and eluent one should use for the analysis of a monoclonal antibody? Or know why certain drugs have a UV-VIS spectrum and the molecular mechanism behind this phenomenon? Or predict at what pH in what medium a drug is most stable? Or what happens with the blood concentration of a drug during sepsis combined with a low blood albumin but increased renal clearance? To me, these are exactly the questions that I find most interesting. I am not trying to bash community pharmacists, I am just trying to say that I want to work in an environment where these questions are asked and are relevant. To each their own.

residency, one specializes in clinical pharmacy, which is substantially different compared to community pharmacy. However, during the study programme, there was this belief amongst almost every student that becoming a hospital pharmacist was a rare phenomenon due to the strict requirements and the crushing competition. This is utter nonsense, although the competition is real. If you believe in yourself, have a healthy work ethic, get some clinical experience (preferably in a teaching hospital), you can get a residency within, say, three years. However, as a young student, I too believed all of that. So I wanted to distinguish myself early on. I did this by getting good grades and also starting a Ph.D. at the departments of PTB and CPP.

My Ph.D. consists of developing new and coated oral dosage forms that target the colon in inflammatory bowel disease. We intend to treat the colon topically with suitable drug candidates, from small molecules to proteins. Most of it is practical work, like compounding coated tablets. I then test these tablets in an in vitro gastrointestinal simulation system to investigate drug targeting as well as the release profile. This means that I compound drugs and also analyze the formulations with analytic methods that I developed myself: exactly the sciences and work that I fell in love with during the Bachelor programme.

"There was this belief amongst students that becoming a hospital pharmacist was a rare phenomenon: this is utter nonsense"

So, if I do not want to become a community pharmacist, what do I want to become? I learned that the specialization to a hospital pharmacist, which takes an additional four years after one becomes a pharmacist, was interesting. During this four-year

I conducted my Ph.D. besides my regular curriculum. I devoted one year during my Master thesis to my first publication. I also conducted research in my spare time. As luck would have it, at the time of finishing my Pharmacy study and the first publication of my Ph.D., three hospital pharmacist residency spots at CPP became available. Long story short: I applied and got the residency.

During this residency, I learned a lot about drug compounding, therapeutic drug monitoring,

pharmacokinetics, pharmacodynamics, distribution of drugs, quality systems, good manufacturing practices (GMP), but also 'softer skills' like managing a team, communication skills, and less exact sciences such as comforting a crying employee. I am not saying that in a funny way, but these are things that a supervisor of a team is confronted with and something you do not learn during your study.

Busy? Yes. A lot of free time? No. Angry girlfriend at times? Most definitely. But I loved it, and love it still.

I conducted Ph.D. research during my residency as well. Luckily, CPP and PTB are only separated by a 2-min walk. This meant that during my entire residency I would start an experiment at PTB, fly back to CPP and do my daily tasks, then fly back to PTB to continue the experiment, back to CPP again, and so forth. I also worked most weekends. Hectic? Yes. Busy? Yes. A lot of free time? No. Angry girlfriend at times? Most definitely. But I loved it, and love it still. We are nearing the end of my residency, September 2020. The things I loved most (I love all aspects, to be honest) about hospital pharmacy were innovating, pharmaceutical compounding, and pharmaceutical analysis. This is also the essence of my Ph.D. However, relatively speaking, there are not an awful lot of hospital pharmacies that compound drugs on a major scale. As luck would have it again, a compounding hospital pharmacist vacancy became vacant in September 2019 in the Martini Hospital, which has a large and modern compounding facility as well as a pharmaceutical analysis laboratory. Long story short again: I applied and got the job.

In the Martini Hospital, we compound numerous drugs and dosage forms. We make drugs for the individual patient, like suppositories for a patient that has trouble swallowing. Also, chemotherapy dosed based on body surface area of the individual patients by aseptically transferring X milligram from a vial into an infusion bag, after which this infusion bag is administered to the patient.

In addition, we produce drugs on a grander scale for the different wards of the Martini Hospital as well as other hospitals of The Netherlands. These products are produced on a scale of, say, 200-5000 units. These dosage forms may or may not be sterile. Dosage forms such as syringes ready to administer, vials, ampoules, oral solutions, capsules, and so

forth. To ensure a good and standardized quality, these formulations are analyzed for content and other physiochemical characteristics (pH, osmolarity, content, sterility) by our laboratory before they are released for human use.

As a compounding hospital pharmacist, you and a team of other hospital pharmacists, pharmacist, assistants, and analysts oversee these processes and ensure that these processes comply with strict GMP regulations and Dutch law (you cannot just manufacture what you wish somewhere in a shed). The objective is to always ensure a safe and high quality drug intended for human use. You help implement and validate new processes. These processes can be the compounding of a drug or the analysis thereof.

Moreover, you help develop new drug formulations. For instance, recently promethazine ampoules were withdrawn from the Dutch market. No good alternatives were available, so we developed this formulation and supplied the Dutch hospitals. In order to develop this formulation, these questions need to be answered (quickly): is the raw material (promethazine-HCl) available?; are the excipients available?; can we make the solution?; can we produce ampoules from this solution?; can we analyze the finished product?; and is it financially interesting to produce this product? To me, that is the essence of a true pharmacist: applying your in-depth knowledge about drugs in view of producing and analyzing drugs with the intention to help patients. And, let's be honest, make some money during this process too.



Alumnus

After Pharmacy students finish their studies, most of them will end up in a public or hospital pharmacy. Yet there are also many other options, including scientific research, like doing a Ph.D., or being involved in the Pharmacy education. Hoeke Baarsma talks about this and his further career in the following column.

Dear member of Pharmaciae Sacrum,

Are you already at the stage where you have to start applying for potential jobs after you finished your studies? The majority of you will most likely choose to become either a public or a hospital pharmacist after graduating; however, there are plenty of other career options to consider. Did you already decide on your future career yet? Do you consider other possibilities besides pharmacist? Last November the Editorial Committee (of the Foliolum) approached me and asked if I was willing to write a small story about working experience and my personal career choices after graduation.

8 During my Pharmacy studies (2001-2007), I became particularly interested in the molecular mechanisms of medicinal drugs and the scientific research behind it. Hence, after graduating I decided to pursue a scientific career by doing a Ph.D. at the Department of Molecular Pharmacology. After applying, I was appointed as the first Ph.D. student supervised by prof. Reinoud Gosens (dr. Gosens at the time). The daily activities of a Ph.D. student at Molecular Pharmacology comprise experiments in the lab, maintaining cell cultures, performing data analyses, supervision of students, preparing presentations, writing manuscripts amongst many other things. My research project was on chronic lung disease COPD and in the experiments, we simulated COPD in vitro, for example, by exposing cells to cigarette smoke, the main risk factor of this disease. For four years, we investigated two specific proteins (i.e. β -catenin and GSK-3) and their function in lung physiology and pathology using molecular and pharmacological tools. A successful Ph.D. defense concluded this project. Doing a Ph.D. is definitely hard work, but being able to present your work at (inter)national conferences, to discuss your data with renowned scientists and to contribute to the biomedical field by publishing your results in scientific journals was for me absolutely fantastic and highly rewarding.

In the lab of Dr. Dr. Melanie Königshoff (MD and Ph.D.) in Munich (Germany), I continued my scientific career with a postdoctoral research project. Munich is a wonderful city in the south of Germany with a rich history and is famous for the Oktoberfest, which is visited each year by 6 million people to drink a Maß (a characteristic glass with 1L of beer) or two, three...

“We performed basic research in a laboratory and tried to translate these findings into treatments for patients”

How did I end up in Munich? Well, Dr. Dr. Königshoff was already one of our collaboration partners and we met at an international conference, where we talked about science and the possibilities of me joining her lab. Our research group, called Lung Repair and Regeneration (LRR), was part of a big scientific institution named the Comprehensive Pneumology Center (CPC, Helmholtz Zentrum München). At the CPC, over 125 scientists from more than 20 different countries work on various aspects of chronic lung diseases. Performing translational research is the main focus of the institute, which means research from bench-to-bedside (both basic and clinical research). To put it in other words, we performed basic research in a laboratory and tried to translate these findings into potential treatments for patients in the clinics. The research did not only focus on adult patients with chronic lung diseases but, for instance, also on how to improve (mechanical) ventilation of preterm babies that do not have fully developed lungs yet.

As a researcher, you are expected to write grants and to get financial support from public and/or private (inter)national organizations, which allows you to perform your own research and to establish yourself as an independent researcher. My research aimed

to decipher a molecular signaling pathway that contributes to cigarette smoke-induced emphysema, a pathological feature of COPD, and was funded by two independent grants. It is (nearly) impossible for one person to perform all of the required research. Instead, our research group worked as a team with analysts, Ph.D. students and postdoctoral scientists working closely together. Moreover, we had help from national and international collaboration partners that provided us with indispensable clinical samples and molecular tools. By performing in vitro experiments on various lung cells, in vivo experiments in (genetically-modified) mice exposed to cigarette smoke, and experiments on ex vivo lung tissue of humans without and with COPD we were able to demonstrate that increased expression of a specific protein (i.e. WNT-5A) contributes to the development of emphysema. Most importantly, we could stop the pathological process of emphysema development in vivo by using an antibody against WNT-5A. The Journal of Experimental Medicine accepted our exciting data for publication and the manuscript has won the Stichting Astma Bestrijding (SAB) best paper award in 2017. Thanks to this work, I received the Young Investigator Award in Translational Pharmacology from the Federation of European Pharmacological Societies (EPHAR) and the European Association for Clinical Pharmacology and Therapeutics (EACPT).

“Once back in the Netherlands, I changed direction and started as a policy officer for Pharmacy Education”

After living for nearly 5 years in Germany, my family and I decided it was time to head back to the Netherlands. Once back, I changed direction and started as a policy officer for Pharmacy Education. The primary task was to write a reflection report concerning the Pharmacy education programme at the RUG. This was done in close collaboration with the Pharmacy programme deputy directors Dr. H. Woerdenbag and Prof. B. Wilffert. This reflection report is then used by an external panel of experts in the field to evaluate the quality of the education programme and the panel decides on accreditation of the programmes. The panel of experts gave the Pharmacy programmes at the RUG a positive evaluation and recommended further accreditation.

“It is just the nature of the beast, I guess”

Teaching students is something I really enjoy and it has always been a large part of the daily activities during my working life. As a Ph.D. student in academia, you are supervising several students that help you out with your research project. In Munich, I had a teaching position at the CPC Graduate School Lung Biology and Disease, an MD/Ph.D. training programme on Respiratory medicine and associated sciences. Together with a colleague, we educated students on the various aspects of lung biology and pathology, recently published scientific advances but also on a wide range of laboratory techniques that they could apply in practice. As a teacher, you pass on knowledge and skills to young people that are developing their (research) abilities to their full potential and it is highly rewarding to see your students' progress. At present, I am teaching various courses of the bachelor programme of Pharmacy, such as the Medicine Groups, the Pharmacology Practical, Academic Research and Communication Skills (ARCS), and the Bachelor Projects. And as might be expected, with great interest I still follow the scientific research at GRIP and the Department of Molecular Pharmacology – that is just the nature of the beast I guess.

9

I hope my story gave you some insights into alternative (scientific) career opportunities as a Pharmacy graduate besides becoming a public or a hospital pharmacist. Of course, the choice is up to you, but please do not be afraid to follow your own interests. I wish you all the best with the continuation of your studies and good luck with finding your own career path.

Regards,

Hoeke Baarsma



Student Abroad

After a board year at the K.N.P.S.V. there were still a few continents that Ceren Zwijnenburg had not visited yet, including Africa. This is why an internship in Ghana was the perfect opportunity to make changes here. Together with Fleur van Gelder and Inge ten Seldam, she did an internship at Health Access Work (HAN) and in the public pharmacy in Accra. She also made a nice tour through Ghana. She tells about her experiences of both the internship and the country in this column.

It all started with the wild idea Fleur had during our year as the board of the K.N.P.S.V. For a long time she had the wish to go to Africa and see what the pharmaceutical world outside of the Netherlands is like. During my year as board-member and being the commissioner of foreign affairs, I've traveled quite a bit within Europe, Asia, North- and South-America. Like an attentive reader might have noticed, Africa is not on that list. So, I immediately became enthusiastic! Our enthusiasm transferred to Inge and all three of us agreed to accomplish our plans at Enisa.

10 **"The highlight of our journey: the Boti Falls, the biggest market of West-Africa in Kumasi and the beautiful Mole National Park"**

Due to the advantageous planning of my fifth year, I was able to visit Ghana with my parents before the start of my internship. We traveled across the country from the south to the north in a taxi, a trotro (a small, rickety passenger bus) and an intercity bus. The highlight of our journey: the Boti Falls, the biggest market of West-Africa in Kumasi and the beautiful Mole National Park. The trip made me, due to the long waits, the uncomfortable buses and the friendly people, feel a little Ghanaian.

The funniest story was on the way from Kumasi to Tamale. The night bus stopped only one time during the trip of 10 hours. Of course, everybody on the bus had to go to the bathroom and my tactic of just following the other women was successful. My mother also had to go and she asked if the toilets were where I came from. This conversation followed: "Yes, but there isn't really a toilet..." "A hole in the ground?" "No, not really." "Then what is it?" "It's actually just a dark alley, where everybody relieves themselves." My father expected something like that and was laughing next to her. My mom decided

that she could endure for the following hours and snuggled back into the way too tight, diesel-smelling coach.

We saw elephants in Tamale in the Mole National Park and we visited the cooking bag project of a distant acquaintance of my mom's. We parted ways afterwards and I left by plane to Accra to start my internship. My parents flew to Kumasi to explore my second internship location, the 'Holy Family Hospital' in Berekum.

Meanwhile, Fleur and Inge arrived at our accommodation for the next few weeks in Accra. A small problem: there was no wifi in our "hotel". Also, our internship guide knew more about pharmacy than sim cards, which is why Fleur and Inge couldn't contact me during their first day in Ghana. Lunchroom "De'lish" did have, luckily for them, fruit juice, air-conditioning and wifi, which saved Fleur and Inge from their isolation. They sent me their location, I sent my Uber driver to Okponglo and within an hour after I've landed in Accra we had finally been reunited.

"After doing some groceries, we arrived approximately two hours later than planned at our internship location"

Already on the first day, punctuality did not seem to be of most importance when our colleague Becky picked us up for the first day. She would show us how we could get to the Health Access Network using the trotro. We had a transfer, and according to our internship guide we couldn't do this on our own. It was raining, so Becky came later by car, because apparently you get wet in a trotro when it rains. After doing some groceries, we arrived approximately two hours later than planned at our internship location.





Our internship at the Health Access Network (HAN) of two weeks consisted mainly of reading British guidelines of public pharmacists and trying to adjust them to make them useable for the Ghanaian pharmacists. Furthermore, Mr. Allotey took us to the big players of the Ghanaian pharmacy world when he had the time. Like the Ghanaian FDA, Council of Pharmacy, College of Pharmacists, and the 37 Military Hospital. The HAN organized a refresher course about the legislation for pharmacists in Koforidua, which we could attend.

“In practice, we learned: Prescriptions? Only necessary for antibiotics and opioids”

We interned at a public pharmacy in Accra for a week after the internship at the HAN. The pharmacy, according to the Ghanaian guidelines, wasn't much different in comparison with their Dutch counterparts. In practice, we learned: Prescriptions? Only necessary for antibiotics and opioids. Pharmacy information system? No, just a cash register. Interactions? During their studies, they learned them all by heart. I was astonished at the state of affairs in the pharmacy. After questioning the pharmacist, it turned out that there wasn't much medication-related hospitalization and that patients didn't need prescriptions, because the doctors didn't prescribe any refills and a visit to the doctors took up the whole day.

Three weeks flew by and we were ready for the second half of our internship. It was time to head out to Berekum! We figured out that the bus leaving at 9 A.M. was (obviously) delayed after arriving half an hour before departure. Eventually, the bus left at about 1 P.M. directly to Berekum. Us having bought tickets to Sunyani didn't appear to be a problem until we arrived at Sunyani and were almost thrown out of the bus. Lucky for us, Inge had chatted with the bus driver during the entire trip and he was kind enough to take us all the way to Berekum.

**“Everybody wanted a piece of cake
or took it with them in a plastic bag
to show it to and share it with their
family”**

Here we did research to the prevention of Hydradenitis Suppurativa in Ghana and had a look in the hospital. The patients here didn't speak any English and we learned everything via our colleagues in the pharmacy. They also taught us a little Twi, the local language. Our pronunciation and questions caused many laughs. It was often very calm in the pharmacy, except when we brought cake for Inge's birthday. Everybody wanted a piece of cake or took it with them in a plastic bag to show it to and share it with their family.

In Berekum, the time moved slower compared to Accra, because we did more of the same here and we saw everything in the “city” after two days. We did leave every weekend to visit some nice places. After three weeks, Fleur left to travel some more with her boyfriend Huub and Inge and I went to a beach resort. Here we could finally relax to soak in all our experiences. This allowed us to start our homeward journey to the Netherlands, well-rested, proud and with many beautiful memories. This journey turned out to be a less relaxed undertaking, but how that went, Inge can tell you better.

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Prize-winning student Lisa-Marie

Annually, the dr. Saal van Zwanenberg Foundation awards master students who have conducted a research project in the field of pharmaceutical and / or medical sciences. The purpose of the prize is to stimulate more pharmaceutical research. The foundation is named after dr. Saal van Zwanenberg, who played an important role in the development of Dutch business and industry last century. He was himself not active in pharmacy as a pharmacist, but more as an entrepreneur. He was one of the founders of the Organon pharmaceutical group, known in particular for the development of contraceptives.

In 2019, the third prize was awarded to Lisa-Marie Smale, currently a sixth-year Pharmacy student at the RUG. According to the jury, Lisa-Marie has performed her research in an excellent way and has shown that her research is highly clinically and socially relevant. To conduct her research, she collaborated with Australian and Canadian researchers and even moved to Australia for several months for her research.

We wanted to know some more about this, so we decided to have a little chat with Lisa-Marie in the brand new Forum Groningen, whilst enjoying a cup of coffee.

What was the subject of your research and what were the main results?

"My research was about the mechanism of invasive aspergillosis. This disease is caused by an infection with a fungus of the *Aspergillus* family. This fungus can enter the lungs through inhaled air. In patients with an immune disorder, the fungus can also spread to other organs and cause a systemic infection. In my research, I focused on the interactions between pathogens and the host. From four different strains of the *Aspergillus fumigatus*, I studied the influence on cAMP in the host cell. I also investigated the difference in the pathogenicity of the fungi in different stages of growth and active and inactive stages." "For the research, I infected lung epithelial cells with the fungal strains. The most significant outcome of my research was that the *Aspergillus fumigatus* decreases the concentration of cAMP in the cell. cAMP plays a role in the protective mechanisms in the cell. By lowering cAMP, the fungus can settle more easily in lung epithelial cells. My research showed no difference between the different strains of the aspergillus family. However, there did appear to be a difference in the growth rate of the four *Aspergillus* strains, further indicating the complexity of the pathogen-host interactions in aspergillosis."

Why did you choose to research this subject?

"I had great interest in the detailed level of pathogenic mechanisms and I wanted to challenge my pharmaceutical knowledge as much as possible. That's why I chose to do my master's project with prof. dr. Martina Schmidt, at the department of molecular pharmacology. I pointed out that I had ambitions to do a part of my project abroad. I preferred an English-speaking country with a high quality of education and research. Considering the subject of my project, there was one thing I did not want to include: lung diseases. Together with Martina, I looked at different lines of research and then this research about invasive *Aspergillus* came along. Although this research involved lung disease, I became very enthusiastic after reading it and I even ended up investigating it. Little research has been done into pathogen-host interactions during invasive fungal infection, although this disease causes more deaths than tuberculosis, for example. I didn't know this before, but this certainly motivated me in choosing the project. Moreover, there was an opportunity to collaborate with the University in Newcastle, Australia,

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who were experienced in a special cell model that mimicked physiological conditions of the lung. All this combined made that I really wanted to do my research into invasive aspergillosis."

How did you find out you won the prize?

"When I was attending a lecture at the KNMP conference, I received a phone call. I had already been called by this number before, so I left the room to take it. The lady on the phone said: "Hello Mrs. Smale, I want to congratulate you. You are awarded the third prize at the dr. Saal van Zwanenberg student awards." At that time, I had no idea, because I did not know that I was nominated. Later I found out that my supervisor Martina Schmidt nominated me, and I was the only student who knew nothing about the nomination."

"Martina had sent not only my resume, in which extracurricular activities are important, but also a description of the research conducted and with that the scientific perspective offered by the research. Furthermore, she had sent a list of marks from my bachelor and master, a digital version of the proposed research report and all other information important for winning a prize. Besides, Martina had written a motivation letter that I have not read myself. But as I could read in the jury report, it was important that I always had side jobs in the pharmacy, worked as a student assistant and that I put the effort into the development of our study. So, it is not only important to get good grades, but also to get involved and have a good resume."

What are the positive outcomes of the prize?

"I received a money prize for my thesis, which is of course very nice. Personally, I valued the appreciation for my work the most and for me that was the best thing to get. I believe that there is a lot of pressure among students nowadays. Therefore, I believe the hard work of students may also be rewarded from time to time. There are a lot of students who work very hard, I happen to be the one who has won the prize this time, but others would also deserve to be put in the spotlight for their hard work." "In addition, I received a lot of nice reactions of teachers from the University in Groningen, the Honours College of Groningen and of my supervisors at my internship at Radboud UMC. I had a great opportunity to develop myself in Australia, and set up the fungal research line since they were not specialized in fungal



research in Australia yet. This would not have been possible without the support of all my colleagues and supervisors. Due to them, I was even allowed to present my project at the Nanyang Technological University in Singapore. This unique chance was truly a unforgettable experience!" "In addition to all the chances I got in this project, my master's project has brought me other good things. Of course, I did my project in Australia. Furthermore, I have applied for various funds in the Netherlands with success. And at last, of course, I found a research project of my heart."

Will you continue with the research?

"When I think about my project carefully, the aspect of my project that interested me the most was the social relevance. There is so much room for improving the treatment of invasive fungal diseases, but we will have to continue with researching this condition. Therefore, I am really pleased that Martina will do so! Personally, my challenge is acquiring more knowledge in the pharmacy, as we are educated to become caregivers and to be in contact with patients. For now, that is were I'd like to focus on. Nevertheless, during my master project I discovered my interests in the scientific way of thinking about socially relevant problems, and that is for sure something I will take with me in the future!"

"At last, I want to say it's worth it to go off the beaten track. Follow your ambitions even though this is not the easiest way and also not always fully supported by the regular curriculum."

Photos by Hilde Jansen



Bryan Boulevard



Graduates

Tjeerd de Boer

Ariana Cakiqi

Berber Hospes

Gerjanna Kamps

Rosa Kortekaas

Timo Michiels

Willemijn Post

Mathilde Wienk

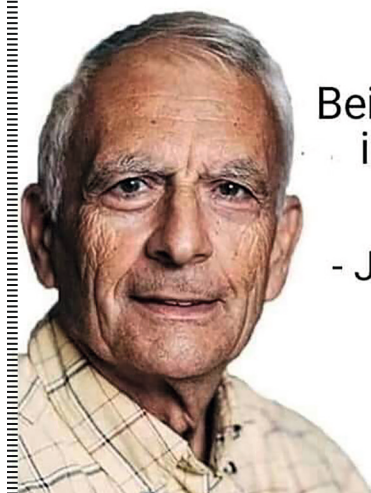
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Congratulations on obtaining your degree!

Did you know that a vaccine for cat-allergy is on its way? A team of scientists is developing a vaccine against the protein Fel D 1, produced by cats. About 10% of humans are allergic to this protein. The 'HypoCat' vaccine produces antibodies in cats, that neutralize the Fel D 1-protein. The vaccine will not be released on the market before 2022.

President Trump wants to make money available for research for a vaccine against drug addiction. In the United States drug addiction is very large problem and every year more than 10.000 people die because of an overdose. Nowadays, Naloxon and Narcan are being used to treat the effects of an overdose of opioids. In the end of the year 2017, scientists developed a vaccine that counteracts the effects of heroin in rats and mice. Antibodies in the vaccine prevent the euphoric effects of heroin.



Being a pharmacist
is not stressful
at all

- Jim, 28 years old

Pharmwar

Some people think children will develop autism from vaccines and others think that they are very dangerous because of different reasons. For example, it is thought that vaccines contain high amounts of mercury, which is very harmful.

Facts & Fun

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In the Netherlands, pet owners are not obliged to vaccinate their pets, although it's very important to vaccinate your pets. The vaccination rate of animals in the Netherlands is decreasing a lot, which means that, for example that more diseases are coming back which haven't been seen for a very long time. Pet owners fear illnesses and genetic defects and think these are caused by vaccinations.

Scientists of the Catholic University of Leuven are working on a vaccine against the Chinese Corona virus. Animal testing of the vaccine should start within two months. Researchers in China have published the genetic code of the virus to enable other scientists to help cracking the code to fight the virus. The university of Leuven is already researching for a possible method to develop a vaccine in a shorter period of time for a while. The genetic code is put in a kind of blueprint that is designed to develop a vaccine.

Pharmaceutical companies earn lots of money with vaccines. It is determined that big companies cannot decide which vaccines should be given. This is determined by the ministry of health.

One day before a pharmacy exam



I become the most religious
person in the world

The VVD in the Netherlands is considering a program whereby parents will get less child subsidies when not vaccinating them. In Australia, this measure has already been taken in 2016, as a method to get more children vaccinated. This law is called the 'No ja, no pay' rule. In some states in Australia children that are not vaccinated are not allowed on childcare and preschool.

Wil jij werken aan product- ontwikkeling?

Wij zijn op zoek

naar ondernemende bachelor- en
masterstudenten die hun ambities
in de praktijk willen brengen!

Pharmaline, dé GMP bereidingsapotheek die investeert in de ontwikkeling van haar medewerkers

Pharmaline is een jonge, innovatieve, semi-industriële bereidingsapotheek. In 2009 begonnen we met 30 medewerkers; op dit moment zijn dat er ruim 140. Ons hoog gekwalificeerde bedrijf is opgezet volgens de meest recente GMP-richtlijnen. Wij bieden ongeveer 700 apothekhoudenden in Nederland een rationeel en volledig pakket van farmaceutische oplossingen, service en advies. Standaardisatie, rationalisatie, kennis en expertise staan hierbij centraal, waardoor de kwaliteit van de zorg toeneemt terwijl de zorgkosten afnemen.



Care for lives and Saving costs

Activities



Pharmaline Lunch Lecture

By: Daan Boellen

Dear fellow pharmacists,

After we have enjoyed a delicious lunch, Charlotte Jacobs gave us a presentation about Pharmaline. Pharmaline is a GMP preparation pharmacy. Charlotte is one of the 9 pharmacists who work at Pharmaline. They prepare a great amount of different pharmaceutical products, for both stocks and ad hoc. Ad hoc medication is specially prepared for a specific patient case or situation. Next to their daily preparations, Pharmaline also plays a major role in finding solutions for problems like medication recalls or specific shortages of medicinal compounds. They have to find ways to, regarding all rules and laws concerning medication, fill up shortages in the market and to make sure that patients will get the medication they need. As you can imagine, this can be very challenging and difficult, but the more satisfactory when succeeded. Altogether, the Pharmaline lunch lecture was educational and certainly made me more interested in preparation pharmacies, like Pharmaline. I would like to thank Charlotte for taking the time and effort to travel to Groningen and teach us about Pharmaline, and GMP preparation pharmacy in general.

Kind regards,
Daan Boellen



Hooghoudt Excursion

By: Floris van den Broek

This year, the yearly Hooghoudt excursion was held on Wednesday the 11th of December. Together with our fellow freshmen and two members of the board, we cycled to the distillery of Hooghoudt. After we arrived, we were escorted to a wooden room with a bar in which we got some explanation about the history of Hooghoudt. We also got to learn about the different types of jenever that they have produced throughout the years. During the explanation, we had one of their alcohol-free jenevers as a drink. After the guide was done explaining the history of the distillery, the group got separated into two. One half would begin with the tour around the distillery and the other half would stay around for a bit to ask questions. The tour would include explanations about the packaging, how the jenever was contained in big barrels for several years and we got to take a look at the full storage space. We also went into a chamber where the fragrances were added to the jenever and it smelled really good in there. After the tour, we would assemble in the wooden room again. Here we could taste all the different kinds of jenever from Hooghoudt. Some were mixed with, for example, ginger ale and others were just drank purely. Some tasted really nice and others were a bit too strong. After the tasting, we were led to the shop where we could buy some the Hooghoudt jenever for our own. After that, the tour was done.

Activities



Senior Symposium

By: Lotte van Hal

On January 9 the Senior Symposium took place. The afternoon began with a delicious lunch in the hallway in front of the Keuningzaal. Different speakers spoke about the theme 'Performance enhancing drugs from students to sports' with Prof. Dr. Woerdenbag as chairman of the day. The first speaker of the symposium was prof. dr. Haisma. Among other things, dr. Haisma is a member of the Gene and Cell Doping Expert Group of the World Anti-Doping Agency (WADA). He told us about gene-doping, which means the adjustment of genes to enhance performance. Fun facts: the difference in performance between men and women is about 10% and 1% of the (Olympic) athletes use doping. Secondly, dr. Jeneson talked about his research in ketone-esters to improve exercise in patients with muscle diseases and his role in the development of magnetic resonance methods.

After a short coffee break, it was prof. dr. Blokland's turn. After studying Psychology at Radboud University Nijmegen, he researched learning and memory and talked about cognition enhancement. The use of Ritalin and Modafinil, which are commonly used drugs among students, was discussed. The last speaker, dr. Venhuis, who is a Senior Scientific Officer and Policy Advisor at the Dutch National Institute of Public Health and the Environment (RIVM), held an interactive lecture about the import of illegal performance-enhancing substances. Many products, such as nutritional compounds, do not contain the substances shown on the label. All in all, it was an educational afternoon on a very interesting topic!



Linda Quiz

By: Michelle van der Ploeg

Tuesday the 28th of January it was time for 30 students of P.S. to test their knowledge in the latest quiz: 'Deze Quiz Is Voor Jou'. At 3 p.m. all the students gathered at the central station of Groningen and final snacks were bought, as there was no time to have a proper meal before the TV recordings started. Sitting in the train, with snacks and all your friends, truly felt like an old school field trip. Whilst some filled their time studying for their exams, others enjoyed their time having a mini quiz as preparation. Once arrived in Baarn, there was a bus waiting for us. However, only 10 people could fit on this bus, so the decision was made to walk to the studio.

We were assigned seats and when everybody was seated, the game was explained. The game was simple: three rounds containing 15 questions and every round the student with the most correct answers, would win 1000 euros. We also started practicing an enthusiastic applause and what to do when you were the one to win that 1000 euros. Who else than the one and only Jan de Boer then had a moment to shine, because he was commanded to stand up and act to have won 1000 euros. After all the practicing, it was time to start.

In the show, Jörgen Raymann and Freek Bartels fought against Leonie ter Braak and Roos Moggré under the jurisdiction of Linda de Mol. After round 1, our own Lilly van Rooi had the most correct answers. Unfortunately, round 2 and 3 were not won by one of us. The quiz was won by Jörgen and Freek, and together they collected over 30.000 euros for one contestant in the audience. After the recordings, it was time to make our way back to Groningen.

Activities



Hospital Pharmacy evening

By: Emma van Kampen

On Tuesday, December 10th, the Hospital Pharmacy Evening took place. Before the lectures started, we enjoyed a lovely hotchpotch dinner. After we were all satisfied, we went to the Boeringzaal for the serious part of the evening. The first speaker of the night was Ilona Can. She is an AIOS, which means she is a hospital pharmacist in training. She told us what you have to do in order to become an AIOS, what the training goals are and what her week looks like. Besides being an AIOS, she is also a member of a committee of jongNVZA, an association of pharmacists in training as a hospital pharmacist. She concluded her talk with a Kahoot-quizz. Unfortunately, I did not do very well, but I enjoyed her talk a lot!

After Ilona Can was finished, it was time for the second speaker of the evening: Krijn Dekens. He had also worked in a military hospital years ago. I thought it was amusing to see how that was so different from now. He is currently a hospital pharmacist at Martini Hospital in Groningen. He taught us a lot about different aspects of his job. He talked about different aspects of hospital pharmacy, such as preparations, ordering drugs and toxicity. He also stressed that collaboration between hospital pharmacists and doctors is essential for providing the right care for the patient.

All in all, the evening was very informative and gave me a clearer view of what the hospital pharmacy looks like.



Pharmalead Pubcrawl

By: Carel Botterman

The Pharmalead Pub crawl, organised by the Master Committee, started with a welcoming drink at the P.S.-Boardroom. After we had split up in small groups, we were handed our first puzzle. It was a nonogram that led us to café 'De Sigaar'. Here, we got a complementary drink and we met the Pharmalead-pharmacist that would join us for the rest of the pub crawl. The second puzzle was a coded sentence we had to translate. Solving the code, it led us to café 'De Koffer'. In the second pub, we played the P.S.-version of 30 seconds, which was made by the Master Committee. After a few hilarious rounds of this game we received the third puzzle. Specific letters from the answers to a list of questions revealed the third pub, café 'De Drie Uiltjes'. After some more drinks we got the final puzzle, a list of photos from P.S.-activities where one P.S.-member was made hard to recognise. By figuring out who this was on each photo the final location of the pub crawl was revealed, this was Buckshot Café. After all the groups arrived at Buckshot and got a drink, the two pharmacists from Pharmalead that had accompanied us during the pub crawl gave a small presentation about what it is like to work for Pharmalead and answered some questions from the crowd. After some more drinks a fun and informative activity came to an end. Although most of the participants continued the pub crawl elsewhere!

Carel Botterman





'That's a great question. Come to think of it, I'm not sure what I have been trying to tell you'.

Activities



Dies Symposium

By: Dennis Berends

In honor of the 138th anniversary of our beautiful association, of course, a scientific symposium was organized. Both students and pharmacists came to gain more knowledge and to get an update with recent innovations in pharmacy. The Dies committee did their very best to compose an interesting programme and after attending this symposium I can conclude they succeeded in this. Speakers of several interesting fields had an excuse to travel to the beautiful north and leave their dusty offices of not to mention universities.

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Professor Frijlink had the honor to be the first on stage, after the usual opening, under the guise of well begun is half done. His talk was about vaccinations and the current developments in this field. Besides, he stated the benefits that can be gained when looking at new routes of administration of vaccinations, instead of the current ones that go through injections. An example of this is the pulmonary administration of vaccinations. This was illustrated with good results from experiments with the Twincer® as the Cyclops®. Finally, Professor Frijlink demonstrated another innovative form of vaccination, namely in the form of small implants that can be placed under the skin and can deliver the vaccine there. Professor Dekkers was then honored to talk about drug research and the uncertainty that comes with it. For example, drug testing in 2020 is preferably performed in a randomized design, although this type of research, unfortunately, does not offer absolute certainty about a therapeutic effect. Based on his story, some uncertainties must be taken into account during this type of investigation. Professor Dekkers showed other designs as well, such as the Mendelian randomization study and the $n = 1$ tests. Each of these designs explains the uncertainties that should be taken into account

when assessing a therapy.

Dr. Qiao gave her presentation on various anthracyclines such as doxorubicin and its analogs related to cardiotoxicity. Her research focuses on the fact that doxorubicin can be oxidized by considering chemically the mechanism of action of this drug. A very interesting development if you ask me. Dr. Noël, from always happy Flanders, gave us a look in his kitchen. Here he is working on an artificial leaf, where the luminescent solar concentrator (LSC) is integrated into the concept of photo-micro-reactors. As a result of this innovative design, solar energy can be used directly for photochemistry, without the need for intermediate energy conversion. To achieve this, Dr. Noel uses microfluidics where the sunlight is collected and converted to light with a very narrow wavelength range. This allows medicines to be made from other biologically active substances. With the greenhouse effect, I think this is definitely a technique with perspective! Finally, it was prof. dr. Van de Merbel's turn, who works at PRA Health Sciences in Assen and also teaches pharmaceutical analysis C. He gave us an update on the techniques used during bioanalysis. For example, it became clear that the HPLC setups we use during training have not been used in practice for around 20 years. Only LC-MS is used there for the analysis of small molecules and ligand binding tests for the analysis of large molecules.

Now I have to put an end to it. Just like me, you can now see that the program of the scientific symposium was very varied and interesting. Hereby I want to thank the 138th Dies Committee for the successful day.

Sincerely,
Dennis Berends

Activities



Dies Cultural Evening

By: Myrthe Boerrigter

Hello everybody,

Last 6th of February it was time for the Cultural Evening. This activity fit like a glove for me, namely style dancing. The activity took place at 'Het Heerenhuis', where four experienced National Championship dancers tried to teach us the Quickstep and the Cha-cha-cha. Firstly, the man had to ask the woman to dance. Because there were more women than men, some women had to function as a man. By learning the Quickstep, I had the pleasant honour to function as a man. This meant dancing with many women. After the Cha-cha-cha I was done dancing as a man, so I went back to my normal roots. In this way, I was able to shake my hips a lot! :) Well, now seriously! After the men had asked the women, the quickstep could start. We had to do just 4 steps, but it seemed very difficult to many of us. We just had to go from left to right. By dancing the Quickstep it's important to do the first step slow and the rest very fast. That is also why Quickstep = Quickstep. After people finally understood, we could dance in a circle and switch. After the Quickstep, there was a break with the memorable moment to see many P.S.-members drink soda. During the break, the National Championship dancers were dressed up and showed us how they danced at competitions and we were allowed to ask them many questions. After the break, it was time for the Cha-Cha-Cha. Many people experienced this dance to be a lot easier and it was fun to shake and turn. We finished with a drink and everyone was ready to show their dance skills at the coming Gala.

Lots of love,
Myrthe



Dies Outdoor Day

By: Xander van Es

On February the 8th we went back in time and had the possibility to enjoy 'Apenkooien'. To warm up our bodies for this intensive morning of exercise, we played the Dutch game 'Iemand is hem, niemand is hem'. In pairs, we tried to hit each other with a ball and to collect the most ribbons. After that, we began with 'Apenkooien'. In the different variants of the game we used all our energy to avoid the 'hunters'. The 'monkeys' jumped over the vaulting-buck and swung the ropes to prevent getting ticked or being hit by a ball. In this particular game called 'Knal aap' the 'hunters' were not allowed to touch all of the obstacles, which was not well understood by everyone. Unfortunately, Michelle's hair touched the bench and the yellow team lost the victory by just a few seconds. Before the Outdoor Day was over, we played one last game called 'Brazilibal', which stands for absolute chaos. The purpose is simple, you have to score in/on the other team's goal by using the ball as a basketball, volleyball or football. All sweaty, exhausted and, for most of us, unscathed, we left the building and went to 'het Hok' to regain some energy with a delicious lunch from Domino's. After that, it was time to prepare us for a long evening at the Gala.

Xander van Es

Activities



Dies Dinner & Gala

By: Lotte Hulskotte

The Dies week flew by and on Saturday evening, it was already time for the Gala Dinner and Gala. I walked up the stairs in a gala dress and heels at the ' &Zo'. One tip for the ladies: lift your dress when you walk up the stairs, otherwise things will go wrong. I was Joeri's date, so I got a nice accessory. This was a toy car that was able to drive! Completely happy I sat down at the table. The tables were somewhat small, but this made it nice and cosy.

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After a brief review of the week we got the appetiser. A delicious 'Groninger' mustard soup was served to me. I finished the soup within no time. Luckily, I had a date who dropped the quesadillas. He got a 'Groninger' mustard soup instead and it turned out that there were some quesadillas left, so he got two appetisers. Obviously, this was also in my advance. Quickly, the wink game was introduced. A few beers and wines were chugged. After that, it was time for the main course. I chose the vegetarian lasagne, which was delicious. If you ever have dinner at &Zo, I highly recommend the lasagne!

In between, the sister associations held a chat and sang their association songs. Nice though, that everybody sang the U.P.-dissong so enthusiastic that U.P. never finished their song. Good job, P.S.! The singing got us a dry mouth, so we deserved a couple of beers. I had little room left for dessert, but a delicious white chocolate cake could still fit. Unfortunately, it was so filling that I could not eat the whole thing.

After a delightful dinner it was time for the Gala. We walked to 'News Café' on heels, with spare shoes in the backpack. Of course, I left my bike

at ' &Zo', but that was a problem for later on that night. Once at the party, I got handed a drink with berries and spa red. At first, I had to get used to it, but I eventually liked it. You could get four drinks every time and so I did. I brought it to the bar table for a couple of drinking games with my friends. Meanwhile we were enjoying the music of the band. This reminded me that I learned new dance steps at the Cultural Evening. While flying over the floor, we performed the Quickstep and the Cha-cha-cha. Those National Championship dancers could learn from us. A typical 'when the student becomes the teacher' situation, if you ask me. I even think that we invented some new dance moves, how clever!

Halfway through the evening it was time for a shoe change. I left my heels at the wardrobe and moved on with my sneakers. While I walked back to the ballroom, I stood still and watched how everyone was enjoying their evening. People were partying hard and some of them were having a very, very cosy time, if you know what I mean. It was a great night, one to remember! Or not, if you have been partying too hard. I want to thank the 138th Dies Committee for this week, it was very well organised and I really enjoyed it! Without you it would not have been so fabulous!

Love,
Lotte Hulskotte

Having dinner with... the Career Day Committee

Since the Career Day is approaching we decided to meet up with the Career Day Committee. They invited us to Carel's place for a nice dinner and some drinks. We had a really nice evening where the 'younger' got to know the 'older' P.S.-members and we ended up partying in "t Vaatje".



On a cold winter night, Monday the 9th of December, we had dinner with the Career Day Committee. When we did the shopping for the beer and ICE's, we had a tough discussion about how much to buy. Some of us didn't want to drink that much because they had lab courses the next day, but eventually we ended up with enough drinks for a small town. We arrived a bit late, as usual, at Carel's place but luckily for us the pizzas had not arrived yet. There were not enough seats for all of us, so Wies had to sit on a beer crate. This meant for Wies that she had to hand open beers to everyone for the whole evening, so she had to learn how to open beers.

Lotte: "I had 3 ICE's, 2 in and 1 out"

Shortly after we arrived the pizzas were delivered, but when everybody had a slice it became clear that there was not enough pizza for everyone, so a new extra pizza was ordered. To kill the time we started playing "stress mexen" and Daniël was so stressed by this game, he even forgot the names of his committee members, Emma and Manon. Then finally the pizza guy arrived with the extra pizza.

After the meal, we started our lovely board game. The game was very exciting and everybody was very close to each other the whole game. Nienke and Lotte had to drink an ICE, this was the second ICE for Lotte this evening, and the last one was tough.

Ulrike: "Sneezing feels like a mini-orgasm"

After a long game, Lotte won the game, and thus also won Flip. Unfortunately, we forgot to bring Flip to the mix, so Lotte could pick up Flip the next day in the boardroom.

Then we discovered something very weird, Nienke

admitted that she couldn't blow her nose, so we all tried to teach her how to do that.

Lotte: "Carel sucks like a calf" (while drinking a rietadt)

When we were cleaning up the mess we made, Carel started vacuuming his room because someone spilled a lot of potato chips on the floor. Some people were fascinated by the fact of Carel vacuuming his living room.

When the mess was cleared we all went to "t Vaatje" **27** and continued our party over there with the rest of the committees. After the necessary drinks and dances, we decided to go home and sleep tight looking back on this great night!

We thank you, Career Day Committee, for this amazing mix and we hope more drinks, talks and dances will follow!



Having dinner with... the Student Counsel Pharmacy



On Monday the 13th of January we had a very special “dinner with...”, because it was the first time the Student Counsel Pharmacy excited of four members instead of three. Sadly, it was a small mix since we were only with 8 persons and Nienke joined the mix later, but this didn’t spoil the fun of this evening and it promised to be a lovely evening.

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It was Monday again, it was January the 13th 2020 and it was very cold, but for the Editorial Committee a nice evening was planned; dinner and drinks with the Student Counsel Pharmacy. Except for Nienke, she had to work and arrived later in the evening. Ruud also could not join us for this mix. After the usual shopping for beer and ICE’s, we arrived, for the first time as the Editorial Committee, on time at Frank’s place. The Student Counsel Pharmacy was just as surprised as we were. Nevertheless, they had a little surprise for us; an ICE for everyone on their designated chair. When the pizzas were ordered, we had some time to kill before they were delivered. We again decided to play a small game, this time we chose to play ‘F*ck the dealer’. Finally, the pizzas were delivered, and we could enjoy this meal. There was plenty of food for everyone. Suddenly someone mentioned the sad loss of Frank’s beloved hamster Bingley, but Emma thinks it was for the best.

**“I think hamsters are useless animals” -
Emma**



After the memorial of Bingley, we started our board game. It was difficult to make couples by function this time. Since the Student Counsel Pharmacy was only with 3 members, the following teams were made; Lotte & Emma (assessor I), Anieke & Tim (assessor II), Wies & Daniël and our last team Frank and Manon (for some obvious reason). It was an exciting game, all teams were very close, except for Anieke & Tim. They had to go back to start and were not in the race for the win, to Anieke’s disappointment. In the meantime, Nienke finally arrived from a long evening of working. She brought her own small bottle of wine and was really enthusiastic about that. The game continued and the famous ICE was won by Frank & Manon and Frank also won Flip. After the game, we had some more drinks and Frank found some weird glasses in his drawer, Anieke put the glasses on her head and went outside to fix her bike. When she came back, the glasses were broken because they had fallen on the ground, but nobody believed her.

**“The wind blew the glasses off my heeaaaad!”- Anieke (with strong
Twents accent)**

The glasses were fixed with tape, the last drinks were downed and some of the mess was cleaned up. Then it was already time for us to go to ‘t Vaatje’ and have some more drinks and dances with the Student Counsel Pharmacy and all the other P.S.-committees. Sadly, the glasses fell on the ground sometimes in ‘t Vaatje’, eventually they were broken. We partied for a long time and decided to go home early in the morning. Dear Student Counsel Pharmacy, we had a really fun night with you guys, and maybe soon have another mix, this time with Ruud and Nienke!

Having dinner with...

Committee Pharmaceutical Sciences 'SSS'

On Monday the 10th of Februari we had dinner with the Committee Pharmaceutical Sciences "SSS" at Marlyn's place. After a heavy Dies-week everyone made it to be there on time. On the way to Marlyn, Wies and Nienke thought about what we were going to eat on our wraps. At Marlyn's place we discovered that Menno was really liking cheese, which we appreciated a lot!



After a beautiful Dies-week, it was time for a nice mix with the Committee Pharmaceutical Sciences "SSS" on the 10th of February. This time the question was not whether we should get another case of beer, but whether two cases were too many. Everyone still had kind of a hangover from last week. With two cases of beer and good spirits, we arrived at Marlyn fairly on time. Fortunately, the delicious wraps were already waiting for us. Everyone enjoyed the wraps, but for Marlyn this turned out to be a bit more difficult than expected. For example, she spread the crème fraîche on the bottles of beer and the beer went into her wrap.

"This is how a normal evening with us goes..." - Menno

All the juicy gossip from last week was discussed, while eating our meal and enjoying our first beers. For some of us, there was too much to gossip about. After dinner, Daan also arrived. He was still busy with his Honours College. This meant that we were complete and that we could start our legendary game. Where normally the battle is to not get the ICE, it now seemed important to avoid the 'back to start' square. Emma and Daan succeeded in avoiding this square, so they were also the lucky ones who were eventually allowed to drink the ICE.

Another square that was a big favourite was 'the bus'. Everyone seemed to get along well, only Anna and Wies took a little longer than usual. A bus with no fewer than 9 playing-cards that were all closed was just a bit too difficult.

"I CAN DO SOMETHING" - Marlyn coming out of a 3-card bus

In the end, it was Daan and Emma who reached

the finish line first. Daan is, therefore, the proud new parent of Flip! After the game, it was time to have a few more beers and talk a lot more. We had heard that Marlyn was really looking forward to an ICE this evening, so it was no longer necessary to hide it, we could give it to Marlyn immediately. Hesitantly she got rid of the ICE and it seemed to be a bit heavier than expected.

"Where are we?" - Marlyn
"At your place!" - Anna

After the ICE had been finished, the last mess had been cleaned up, Daan still had not eaten and only drunk more beers, and some of us had already gone home to continue working on deadlines. Eventually everyone decided to put an end to this pleasant evening. Unfortunately, we no longer continued the party with the rest in 't Fust'. Dear "SSS", thank you for the nice mix! Hopefully, we will repeat this when we are all less tired!



Getting to know...

Ab-actis of the 138th P.S.-board

We decided to have a talk with the ab-actis of the 138th board of P.S. We asked her a few tough dilemma's to get to know her a bit better.

Ab-actis

Name: Robin Emaus

Age: 22

Place of birth: Doetinchem

Previous P.S.-committees: EJC, SSS, MMC and DIES



Why did you choose to do a P.S.-board year?

"From the first year it just seemed like a lot of fun to do a board year. And I wanted to do something different than studying for a while because I didn't want to graduate in one go. If that happened, I would be 23 and already be a pharmacist. I think a board year is fun, you create many connections and is good on your resume."

Why is function 2, ab-actis, the best?

"I like it so much because it's nice to keep order and keep track of everything. I always make lists of everything, so I make a list every day with what I'm going to do that day and otherwise I will postpone it. I know most of what everyone else is doing because you can keep an eye on everyone. People often do not know what I am doing, but I do know what they are doing."

30 What does a normal workday look like for you?

"I don't have a normal day. What I have to do every week is the standard things which sound boring. Keeping track of the mail, sometimes picking up some letters, keeping track of the agenda, making the annual planning and things like that. It is mainly planning, keeping order, correspondence and autistic things that I like."

"It is very busy, but you get used to it and because of this you enjoy your rest more"

Did anything happen this year you not expected to happen?

"Not something that comes to mind. There are probably small things, but they have always worked out well. I've been here in pharmacy for four years, so I've seen a lot of boards and I knew a lot of things that could go wrong. The only thing is that I am chronically tired and I am getting fatter every day. It is very busy, but you get used to it and because of this you enjoy your rest more. If I have nothing planned in the evening and I am watching series, I want to do something again immediately. What I do run into a bit is that it is quite hard work, I expected that it would be more chilling at 't Hok' but it is a lot of hard work. I can't do nothing for a week, then I'm lagging with everything."

What is the most fun or strange thing that happened this year and what are you looking forward to?

"I'm looking forward to the DIES. Also, because I did



the DIES-committee last year. Back then I thought "why is the board doing nothing" in that week while the committee did a lot. That's not bad and that's also the intention, but it is extra nice that I'm allowed to do nothing this year."

"I mean, look at my fellow board-members: we experience enough crazy things"

"The craziest is just everything. The fact that P.S. is your life is sometimes crazy to realize, but it is also super fun. I have also experienced a lot of crazy moments though; I mean look at my fellow boardmembers: we experience enough crazy things. For example, we had a reception in Utrecht and then we were all very drunk. We were on the train and we had to go back to Amsterdam and switch over. Bjorn and I got on the wrong train here and ended up somewhere else and both didn't understand it anymore. I was calling Jan and I no longer understood the difference between a tram and a train. We slept at a place of a girl we know in Amsterdam.

Name a nice trait of your fellow boardmembers?

"Jan can get away with everything with everyone and they think it's funny. He can walk into the hall and meet someone from another board and say "Oh my god, you are so ugly" and then he walks on and people can still laugh about it. If I did this, it would be more uncomfortable than when he does. Bjorn is super forgetful; you can tell him anything and say that something happened while it did not happen. Sometimes Bjorn forgets to put on his jacket, no matter how cold it is. He just arrives at "t Hok' in a shirt, which is especially funny. What I like about Anniek is that she is my fellow female board member, so we often think the same about things and we can go against the men together. Joeri can always do very awkward, very crazy dances that he then randomly does without looking at anyone."

Committee or board year?

"Board year."



Negende Cirkel or 't Vaatje?

"It depends on your intention. If you want to go all the way you have to go to the 'Negende Cirkel'. 't Vaatje is more for the relaxed pharmacy-evenings. It also depends on what the mood is."

Blue or yellow?

"Blue."

Doetinchem or Groningen?

"During the summer it depends on how much money I have. I always work in my hometown in the summer, because then I don't go out so I don't spend that much money and my parents pay for my food."

Favourite animal?

Without a doubt: "A cat. Cats are more fun than goats."

Most fun P.S.-activity?

"I think the entire DIES."

E-mail or carrier pigeon?

"E-mail, because of sustainability."

Drinking beer or tapping at Villa Volonté?

"You also drink while tapping right? At least I did, I didn't stand sober behind the bar at Volonté."

Puzzle Page

Spot the 6 differences!



List of activities

March 2nd Afgestudeerd, wat nu?
March 3rd P.S.-Social Drink
March 4th Beer Cantus
March 12th First-year Symposium
March 17th EJC-party
March 19th De mogelijkheden van de farmacie
March 24th General Members' Meeting
March 31st Pre-BEC drink

April 14th NIA Lunch Lecture
STOF theme meeting
P.S.-Social Drink
April 15th - 19th Foreign Exchange
April 24th Master Activity
April 28th After-BEC drink

May 7th Educational Afternoon
May 8th TOC Game-night
May 12th P.S.-Social Drink
May 13th TalentCare Workshop
May 14th Women's Activity
May 19th SPITS Workshop
May 25th Committe Carroussel
May 29th Functionarissen Activiteit
May 30th Bicycle Performance Tour

June 2nd General Members' Meeting
June 5th-7th End-of-Schoolyear Camp (JAK)
June 9th STOF-meeting
P.S.-Social Drink
June 16th EJC-Party
June 26th Master Activity

Colophon

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Studenten farmacie gezocht...

Wij zijn op zoek naar enthousiaste farmacie studenten die lekker willen bijverdienen met een vakinhoudelijke klus. Vanaf februari 2019 starten we bij jou in de regio. Samen met andere studenten ga je op zaterdag of zondag inventariseren in verschillende apotheken. We zoeken representatieve, enthousiaste studenten die netjes en secuur te werk gaan.

Ben of **ken** jij die persoon waar wij naar op zoek zijn? Stuur dan direct een mail naar werkenbij@pharmalead.nl

PharmaLead

het zorgbedrijf dat je ziet



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