

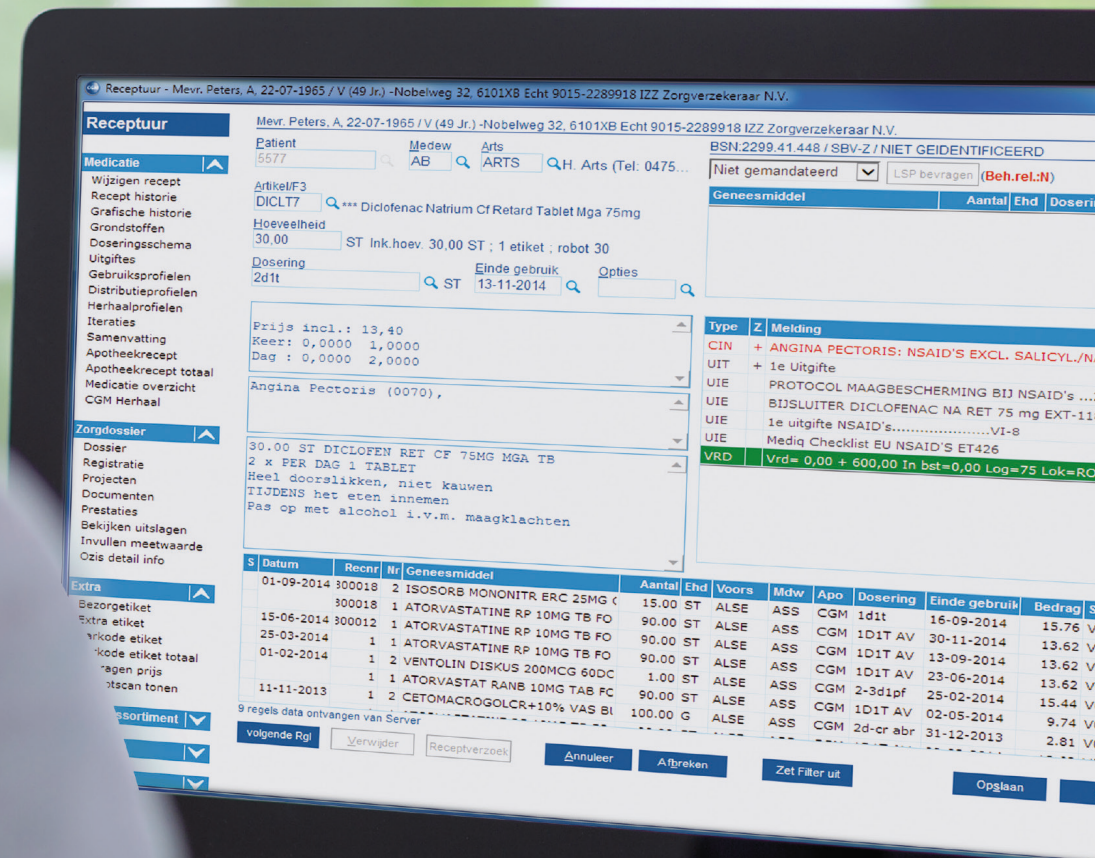
Foliolum



Design

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Prefaces

Editorial



Dear reader,

While I am writing this preface and looking out of the window, it becomes totally clear. Winter is coming. It's cold, there's lots of rain and the days become shorter and shorter. But winter also means Christmas is coming and this means P.S. will celebrate her 138th birthday.

2019 is almost over. It was a wonderful year with a lot of studying, many activities and lots of fun. I hope everyone enjoyed it as much as I did. Hopefully 2020 will be at least as amazing as this year was.

After our first volume about "Drugs as Medicine", we will continue with the theme "Design" in our second Foliolum. Design is a big concept in the pharmacy world. All over the world, scientists are working every day to develop new dosage forms, innovative medicines, personalized medicine etc. to improve treatment and patient-friendliness.

For example, research is being conducted by Prof. Dr. Slotboom to glutamate as a powerful cancer treatment. In this issue you can read about this research and view the first results. You can also read an interesting piece by Juliana Villacha, who is doing her PhD research at the Drug Design department of Alexander Dömling.

Now all I have to do is thank the Dies Committee for the theme and I wish you a lot of reading pleasure. Have a nice Christmas and a happy New Year.

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

Nienke Mones
h.t. praeses



Board



Dear reader, dear P.S.-er,

Time flies and this means that the second Foliolum of the "Panoramix" editorial committee fallen on the doormat again. The December topic of this Foliolum is, as usual, again dominated by the theme of the Dies Natalis Scientific Symposium. This theme was announced on the anniversary of our association and already promises good things. During this revelation, the Almanac was also revealed. It turned out to be a great party, where many curious members were drawn to.

This year, the Dies Natalis will be all about "Design". A subject that can go in many directions which resulted in a wide variety of speakers at the symposium. Prof. Dr. M. Schmidt will be the chairman of the symposium. Prof. dr. H.W. Frijlink will give a lecture about the development of the flu vaccine. In addition, Dr. Bowden will give a presentation about designer drugs, where he will give an explanation, among other things, about the possibilities of designer drugs. The director of PRA Health Sciences, Prof. dr. van den Mendel, will focus on the development of medicine and the analyses that are done. In addition, Prof. dr. Dekkers, Internist in LUMC and college member of the CBG, will talk about medicines, research and the uncertainty that comes with it. At last Prof. dr. Neefjes will talk about drug discovery in academic centers to reduce costs. Finally, I would like to thank the Editorial Committee for their efforts to realize our beautiful magazine and I wish everyone a lot of reading pleasure.

With kind regards,
on behalf of the 138th board of
G.F.S.V. "Pharmaciae Sacrum",

Jan de Boer
h.t. praeses



Prefaces

138th Dies Committee



Dear readers,

This December, our association will celebrate her 138th birthday. As the 138th Dies Committee, we are honored to organize a week full of activities to celebrate the birthday. It will be a week with many different activities and will be held in February next year. The Dies Natalis has a specific theme: Design. This theme refers to our committee name; DIESign. Next to our Dies week, this theme comes forward in the second issue of the Editorial Committee. Hopefully, you are as enthusiastic as I am to read this second issue, after a good first one last October!

As a committee, we have been working on all the different activities for a year. After all the work we have done during this year, on the 12th of December we may finally reveal our theme and activities on the Almanac-Dies party! This party gives us, most importantly, the possibility to celebrate the birthday of our association.

We will start the Dies week on the 5th of February with a scientific symposium. During this day the theme 'Design' will be central in all the presentations. We have chosen this theme because it is widely applicable in the pharmacy. Six speakers are passing by this day, who will all tell something about their expertise. Martina Schmidt will lead the symposium as chairman during this day. The first speaker, Prof. dr. Frijlink will speak about the development of the flu vaccine. Furthermore, there will be spoken about an artificial leaf that can produce medicines under the influence of sunlight (Dr. Noël), 'medicines, research and uncertainty' (Prof. dr. Dekkers), drug discovery in academic centers to reduce costs (Prof. Neefjes), a different and renewing vies on designer drugs (Dr. Bowden) and lastly about bioanalytical research in drug discovery (Prof. dr van de Merbel).

The symposium will be held in Pathé Groningen. During this day, everyone can enjoy the lunch in between the lectures and a drink afterwards.

After an interesting symposium, the Dies week will continue with a reception in the evening. This is the moment to congratulate the board with the birthday of the association. Invited guests can enjoy this activity while enjoying a drink. All P.S. members and their friends are invited to end this first day during the opening party of the Dies. After the first busy day, it is time for some relaxing on Thursday. On the evening of the 6th of February, there is the possibility to show your dance skills during a dance workshop which will be held in the Heerenhuis. On the last day of the Dies Natalis, Saturday the 10th of February, there is an outdoor day planned. We will experience a high school gym class, while playing 'Apenkooien'. In the evening the Dies will sadly come to an end, with dinner and prom. We will enjoy a three-course menu in the restaurant the Branderij. After this delicious dinner, we will go to the News café for the prom which will end early in the morning.

On behalf of the entire committee, I can say that we are very happy with the chosen program. I hope you are looking forward to the Dies Natalis as much as we are doing! We hope that you are enthusiastic about this week and we hope to see you all during one of our activities in February.

On behalf of the 138th Dies Committee of G.F.S.V. "Pharmaciae Sacrum",

Martijn Hagedoorn
h.t. praeses





Most classical drugs target receptors, following excitation or inhibition of their pathways. But what if we could design a molecule that targets proteins that regulate the uptake of essential nutrients into the cell? Such a molecule could be applied in treatment of many disorders. Prof. dr. Slotboom and his team are investigating the mechanism of glutamine uptake and found that this might be a potential target to treat cancer.

Targeting glutamine uptake in cancer cells for therapeutics

4 One of the defining structural features of life is compartmentalization. The basic building blocks of all forms of life are cells, which are enclosed by a thin membrane composed of two layers of phospholipid molecules. This membrane makes it possible to differentiate "inside" from "outside". Despite its thickness of only 5 nanometer (5 billionth of a meter), the membrane is a formidable barrier for hydrophilic (water-soluble) molecules, because it is energetically unfavorable for such molecules to partition into the hydrophobic interior of the lipid bilayer. Yet, all living cells need continuous import of water-soluble nutrients (such as sugars and amino acids), and export of waste products. To allow hydrophilic molecules to pass the membrane, proteins are used. For each molecule that must be imported into, or exported from the cell, a specific transport protein is needed. To underline the importance of protein-mediated membrane transport, it is noteworthy that more than 800 genes in humans (out of a total of ~20000 genes) code for membrane transport proteins¹. These proteins are nano-devices that allow the passage of one molecule at the time, and can be compared to sluices or locks to get from one waterway to another, revolving doors to enter shops, or elevators to move between floors. In contrast to their macroscopic counterparts, most transport proteins are strictly specific for one particular molecule, which is the reason that so many transporter genes are required.

In this way, cells can independently regulate the uptake of different nutrients. For instance, when glucose is in high demand, proteins involved in sugar transport are produced or activated, without affecting the transport of other nutrients.

The importance of membrane transport for humans is underlined by a plethora of illnesses related to the malfunctioning of transport proteins, including neurological disorders such as amyotrophic lateral sclerosis (ALS) and Alzheimer disease, cardiomyopathies, and mood disorders such as depression and addiction¹. It is therefore not surprising that membrane transporters prime are targets for the development of drugs to remedy these ailments. For instance, the antidepressants paroxetine and citalopram³ inhibit the activity of a membrane transporter for the neurotransmitter serotonin in the central nervous system, and the drugs to treat cystic fibrosis patients target membrane transporters for chloride in the plasma membrane of lung epithelial cells⁴.

My research group has a long-standing interest in the elucidation of the mechanisms of action of membrane transport proteins: how do sluice or elevator doors open? How is specificity for a single type of molecule achieved? How is opening of two sluice doors at the same time prevented? Answers

to these fundamental questions will facilitate the rational design of new drugs that can modulate the activity of the proteins, and treat diseases. Our work requires the visualization of the protein nanodevices at the atomic level (high resolution structure determination). In the past years, spectacular progress has been made in the development of electron microscopy as a technique to observe the intricate details of protein nanodevices at atomic resolution, culminating in a Nobel prize in 2017². In the Faculty of Science and Engineering of the University of Groningen, we have adapted early on to these developments, and have invested in one of the best microscopes available⁷.

Using this technique, we set out to describe the mechanism of transport used by the human protein ASCT2^{5,6}, which is the main transporter of the amino acid glutamine across the plasma membrane. Glutamine is not only an essential nutrient for healthy cells, but the amino acid is also a metabolic regulator in cancer cells. Cancer cells have altered metabolic requirements than healthy cells to allow for growth and proliferation. ASCT2 provides cancer cells with glutamine, which -once inside the cancer cell- is used for ATP generation, contributes to the activation of regulatory pathways, and is a source of fatty-acid production. ASCT2 is present in higher amounts in cancer cells than in healthy cells to provide increased uptake capacity. The upregulation is linked to poor survival in several human cancers including melanoma, lung, breast, prostate, pancreatic, thyroid and colon cancer.

In a recent publication⁶, we have presented snapshots of the ASCT2 protein in action. Our work revealed that the protein shares more resemblance with an elevator than with a sluice. The protein has only a single door, which can open on the outside of the cell, then needs to close for the elevator to move to the inside, where the same door can open again (a "one-gate elevator"). The use of only a single door necessitates that the entire protein moves through the membrane. This mechanism contrasts sharply with the movements observed in other transport proteins that behave more in a sluice-like manner. In the latter case, only the doors can move. The large elevator-like movements of ASCT2 offer

opportunities for drug development. Small molecules may be designed that can behave like a spanner in the works, so that the elevator gets stuck (or slowed down), thus preventing cancer cell proliferation. We are currently testing the activity of such molecules.

Finally, I cannot overstate the importance of collaboration in this work. Without the team consisting of the PhD student Alisa Garaeva, and three independent group leaders (the (assistant) professors Albert Guskov, Cristina Paulino and myself), this work would not have been possible.



Figure 1: Photo showing Alisa Garaeva (front right), Albert Guskov (front left), Cristina Paulino (back left) and Dirk Slotboom (back right), impersonating the "one-gate elevator" mechanism. Legs are used as spanner in the works. Alisa holds the high resolution protein model in her hand (at ~ 100 million fold magnification).

References

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PhD

Juliana is the perfect example of someone that combines being a researcher and a pharmacist. Even though she is still very young, she already has experiences in both departments. Via prof. Dr. Matthew Groves, she got to know the Molecular Tumor Board (MTB) Groningen, where she is now a Ph.D. student. She will tell about her work and experiences with the MTB and her Ph.D.



When you cannot decide if you want to be a pharmacist or a researcher... be both.

6 I have been a Ph.D. student in Groningen for a year already and it keeps being what was at the beginning, a weird inconstant fun adventure. I am not new to the pharmaceutical sciences; I completed a full pharmacist degree in Brazil and then went on doing a master's in Medical and Pharmaceutical Drug Innovation at the University Medical Center Groningen. I always had my heart following the topic of medicinal chemistry, a part of pharmaceutical sciences related to understand and develop new drugs. I started focusing on the organic synthesis of new compounds but got amazed by how you can use computational tools to visualize drug-target interactions.

As soon as I finished my bachelor's degree, I was a young pharmacist that had experience working with research for a long time but also had a few hundred hours working at a hospital, handling patients' material and preparing their medication. Indeed, I was completely into research but the possibility to ameliorate peoples' situations with knowledge was also a very charming pathway to me. This torn heart led me to seek a translational project, a setting that would allow me to develop a scientific question but still have an impact on society in a short time. Fortunately, during interviews for my second masters'

internship, I came across prof. Dr. Matthew Groves and an interesting starting project in cancer. Despite his main field being neglected diseases, prof Groves had just started a collaboration with the Molecular Tumor Board Groningen (MTB) at the University Medical Center of Groningen to provide insights on the structure of cancer targets upon amino acid mutation. Based on his long experience with x-ray crystallography, he was included in the tumor board meeting to provide structural biologist advice concerning which drugs would no longer be suitable for specific cases in the face of novel mutations. This sounded like an intriguing and challenging project, exactly what I was looking for.

Throughout the six months of the master's project, together with prof. Groves, I fine-tuned the project by using well-established concepts of Molecular Modelling. Once we had a scientific-based approach our next action was to persuade the medical staff to not only believe in our results but also understand the molecular process behind those results. It was a rocky pathway but after 18 months, and a continuous demonstration of how useful Structural Biology can be, I can say we have a symbiotic relationship with all tumor board participants.

After conquering their confidence, we are at full work. Every week I actively participate in the Tumor Board meetings where novel kinase mutations that show to be challenging to treat or were never

discussed in literature before. Once the genetic team provides us the exact protein to be analyzed and which is the amino acid mutation of interest, we build three-dimensional models of patients' protein using homology modeling. In this step we take advantage of the vast supply of structures provided by virtual databanks, such as the Protein Databank (PDB), to seek the ones to be used as a template for our mutated kinase model. To provide a reliable pool of possible conformations of a kinase, we build different models using multiple different templates. Once the homology model is built and evaluated (i.e. SAVES server) we perform a visual analysis to identify the location of the mutation and to decide which methodology to apply. To mutations located in regions encompassing the drug-binding pocket that could directly affect drug binding, the next step performed is an ensemble docking of a selection of European Medicines Agency (EMA) approved drugs for the studied kinase. After the docking simulations provide thousands of conformations for the selected drug library, we applied filters based on chemical concepts of bonds and pharmacophores, we ranked all the drugs and provide a report to the medical team with an explanation of why one or more of these drugs might work or not. In some cases are easy to point out a sterical hindrance of the mutated amino acid that hampers the binding of any of the available drug treatments or a loss of a covalent bond point that would decrease the potency of covalent inhibitors.

For the mutations located outside the binding pocket, we perform a more complex and lengthy process, such as Molecular dynamic simulations. In these studies, we can analyze the effect of mutations neighboring the binding pocket that does not directly interact with drug-binding pocket by analyzing effects on protein flexibility, conformational changes and even interaction with other proteins. With all the information in hand, Matthew and I walk into the Tumor Board meeting room in a weekly schedule and discuss multiple real cases from cancer patients. During this meeting, we also hear from a team of geneticists, pathologists, medical doctors, and oncologists, as a conjoint effort to provide the best therapy for challenging cases. The MTB became a place to share experiences and

knowledge in a multidisciplinary manner. There I am not only a Ph.D.-student in structural biology but also a pharmacist that can contribute to a point of view based on the drug and its target. Indeed, the computational studies need to be further expanded to follow the growth of the MTB reach but we also celebrate the successful cases where molecular modeling was shown to be a suitable tool for supporting decision making in cancer treatments. While we celebrate our successful outcomes as published articles, prof Groves is already with his eyes in the future and assembling an experimental pipeline to express this protein in a recombinant manner using an inexpensive system such as E.coli bacteria to boost the experimental support for the computational results.

Looking at this project from a personal perspective, I saw a risky project that could be beneficially developed under the wise look of a multidisciplinary board of experts, such as the Tumor Board. I saw a chance to not only develop a thesis but also to actively contribute to society by providing a pharmacist view on the cases we discuss weekly. And it has been a great process with the contribution of multiple individuals, especially undergraduate and master students that contributed profoundly to the outcomes of this project.



Alumnus

Harry Kooiker studeerde in 1981 af als apotheker. Vol energie begon hij aan zijn opleiding tot ziekenhuisapotheker. Uiteindelijk bleek het werk in het ziekenhuis toch niet helemaal de verwachtingen waar te maken en lonkte de openbare farmacie.

Hardenberg, oktober 2019

Mijn keuze voor de studie farmacie aan de RUG in 1973 was eenvoudig. Een oudere broer die je enthousiast maakt geeft je het juiste zetje. De opleiding Farmacie was en is heel divers. Ressortierend onder de faculteit Wis - en Natuurkunde kent het tegelijkertijd veel raakvlakken met studies als geneeskunde, scheikunde of biologie. Je kan je ontplooiën als apotheker, maar bijvoorbeeld ook als klinisch chemicus, fysioloog of research medewerker in de geneesmiddelenindustrie. Met de juiste inzet, discipline en interesse biedt het je een scala aan carrière mogelijkheden in binnen- en buitenland.

8 Heel bewust heb ik er destijds al voor gekozen een gedeelte van mijn stage in de ziekenhuisapotheken van Curaçao en Aruba te lopen. Een stukje Nederland, maar dan wel bijna 8000 km overzee. Een onvergetelijke tijd van 3 maanden. Als afgestudeerd apotheker in 1981 ging mijn keuze aanvankelijk uit naar de ziekenhuisfarmacie en ben ik uit volle overtuiging de 3-jarige opleiding tot ziekenhuisapotheker begonnen. Na mijn registratie heb ik uiteindelijk er toch voor gekozen om als openbaar apotheker mijn loopbaan te vervolgen. Dit had vooral te maken met het feit dat ik gedurende de opleidingsperiode bijna 50 procent van de tijd doorbracht in vergaderruimtes. Noodzakelijk overleg met andere disciplines binnen het ziekenhuis en budgettaire perikelen waren hier debet aan. Helaas niet hetgeen wat ik me had voorgesteld bij aanvang van de opleiding.

“Na mijn registratie als ziekenhuisapotheker, besloot ik toch mijn loopbaan als openbaar apotheker te vervolgen”

Hardenberg werd uiteindelijk de plaats waar ik mij in 1985 vestigde als openbaar apotheker en

waar tot die tijd nog apotheekhoudende artsen actief waren. Ik voelde mij hier onmiddellijk in mijn element. Direct contact met arts en patiënt en je deskundigheid over geneesmiddelengebruik tonen geeft je veel voldoening als zorgverlener. Startend met 2 assistentes in een zogenaamde noodvestiging zorgden we voor de geneesmiddelenvoorziening van 4000 patiënten. Heel veel administratief werk kwam er op je af. De prijzen van geneesmiddel vergoeding werden bijvoorbeeld handmatig berekend en op het recept vermeld. Vervolgens werd met een rekenmachine een maandelijkse totaaldeclaratie opgesteld voor de zorgverzekeraar. Automatisering deed toen voorzichtig zijn entree in de apotheek. Ik kan mij herinneren dat een aanbieder van een apotheekinformatiesysteem eind tachtiger jaren vergenoegd een server aanbood met een opslagcapaciteit van maar liefst 54 MB. Genoeg voor de komende 10 jaar betoogde hij glimlachend. Het lijkt lang geleden maar het is slechts dertig jaar!

“Een server met een capaciteit van 54 MB: genoeg voor de komende 10 jaar!”



Foto 1: Publieksruimte Apotheek Kooiker anno 2019

Na maar liefst 11,5 jaar noodbehuizing konden we eindelijk verhuizen naar een moderne “state of the art” apotheek uitgerust met een ruime publieks- en inforuimte en annex een arts praktijk. Met gepaste trots en tevredenheid konden we hier

farmacie bedrijven in optima forma. De vorming van een maatschap met een plaatselijke collega, FTO-besprekingen, constructief patiëntenoverleg met huisartsen en specialisten, een nauw samenwerkingsverband met regionale collegae zorgden voor een ideale werkomgeving. Tezamen met een collega heeft het zelfs geleid tot het oprichten van een eigen groothandel Omnipharma, handelend in generieken en parallel geïmporteerde geneesmiddelen.

Toch bleef er nog die andere uitdaging. Het verlangen om ooit weer terug te keren naar de Caraïben om daar in een botika, Antilliaans voor apotheek, te werken groeide. Met vrouw en 3 kinderen hebben we onze vertrouwde omgeving van Hardenberg in 1997 verruild voor een verblijf van een jaar op Curaçao. De apotheek in Hardenberg werd gedurende die periode professioneel beheerd door een freelance apotheker. Op een tropische vakantiebestemming met een andere cultuur en taal farmacie bedrijven is een belevenis. Menige discussies heb ik er gevoerd met collegae en lokale autoriteiten om de farmacie naar een hoger plan te tillen. Een collega kwam op een gegeven moment zelfs met het plan om de noodlijdende Botika Brievengat te kopen en nieuw leven in te blazen. Zo geschiedde. Gestaag is de apotheek daarna gegroeid tot een van de meest toonaangevende en servicegerichte van het eiland. Vele bedrijfsbezoeken heb ik sindsdien gebracht aan het eiland.



Foto 2: Apotheek Botika Brievengat anno 2019

“Op een tropische vakantiebestemming met een andere cultuur en taal farmacie bedrijven is een belevenis”

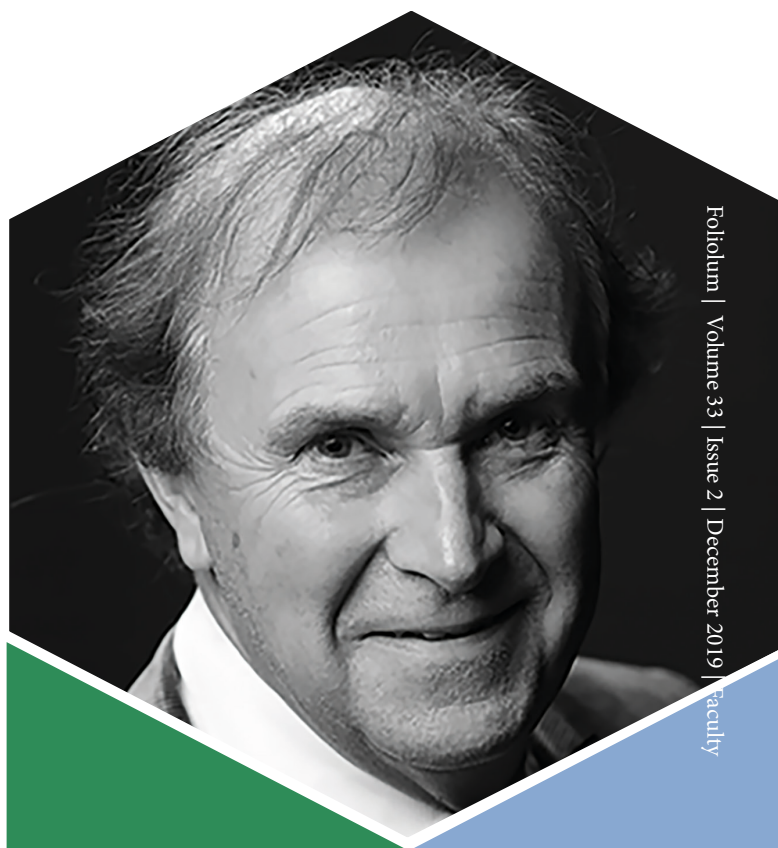
Na mijn sabbatical hebben we de farmaceutische draad in Hardenberg weer energiek opgepakt. In de loop der jaren zijn er vele moderne aanpassingen doorgevoerd en heeft serviceapotheek Kooiker een farmaceutische dienstverlening die aan de hoogste standaarden voldoet:

Smartfilling, een medicijnautomaat die 24/7 bereikbaar is, goed gekwalificeerd personeel, degelijke samenwerking met collegae, huisartsen, een hoge automatiseringsgraad, een grondige medicatiebewaking en receptcontrole en geschikte contracten met zorgverzekeraars.

De toekomst van de farmacie in Nederland ziet er rooskleurig uit, mits de tarifiering op peil blijft om innovaties mogelijk te maken en de dienstverlening op peil te houden. Als zorgverleners de digitale deuren nog meer voor elkaar openen, rekening houdend met de AVG, de algemene verordening gegevensbescherming, zal er met behulp van de alsmaar voortschrijdende automatisering een prachtige toekomst voor de farmacie in het verschiets liggen. De voorsprong die we wereldwijd al hebben zal in dat opzicht nog groter worden.

Harry Kooiker, apotheker te Hardenberg

9





Student in het buitenland

Clara Mayunga zat in haar vijfde jaar toen een stage in het buitenland haar heel erg aansprak. Ze had met Farmacie nog geen kans gehad om naar het buitenland te gaan, dus vond ze dat het nu tijd was. Via het Student Exchange Programme (SEP) kwam ze terecht in Cyprus bij een openbare apotheek. Ze kwam erachter wat de verschillen waren tussen het leven en de apotheken in Cyprus en Nederland en ze vertelt hierin over haar ervaringen.

Aan het begin van mijn vijfde jaar besloot ik dat ik een stage in het buitenland wilde doen met het Student Exchange Programme (SEP) van de International Pharmaceutical Students' Federation (IPSF). Ik vond het jammer dat ik tijdens de studie nog niet de kans had gehad om naar het buitenland te gaan. Dus besloot ik om een stage te regelen met de hulp van de K.N.P.S.V. Ik kreeg een stageplek aangeboden in de openbare apotheek in Famagusta, Noord-Cyprus.

10 Begin juli reisde ik vanaf Düsseldorf via Istanbul naar Famagusta. Cyprus is verdeeld in Noord en Zuid. In het zuiden wonen de Grieks-Cyprioten en in het noorden de Turks-Cyprioten. Noord-Cyprus wordt alleen erkend door Turkije, dus alle vluchten naar en van het noorden gaan alleen via Turkse vliegvelden. Op het vliegveld in Noord-Cyprus, werd ik ontvangen door de enorme hitte en drie meiden: de Student Exchange Officer (SEO) van Cyprus Miracle, een Local Exchange Officer (LEO) Soheila en mijn kamergenoot Hortense uit Frankrijk.

Samen reisden we naar de Eastern Mediterranean University (EMU) campus waar alle SEP-studenten in dormitories verbleven. Het leek ontzettend veel op een Amerikaanse campus zoals je op tv ziet. Het was zo groot, dat vanaf onze kamers het minimaal 20 minuten lopen was naar de Faculteit van Farmacie. We liepen, omdat er tijdens de vakantie de bussen maar om de paar uur reden.

Stage

De SEP-studenten waren voornamelijk Europese studenten. Er was één Canadees meisje bij. De studenten hadden een stageplek in de openbare apotheek of in het onderzoek. Ik liep stage in de apotheek van Çisem. In dezelfde straat waren er om de paar meter meerdere apotheken te vinden. In Noord-Cyprus mag je overal een apotheek openen, zolang je maar geld hebt. De apotheek had een groot assortiment in handverkoop. Er waren geen ladekasten, maar vitrinekasten waar alle medicatie achter de balie zichtbaar was. Het was in de kasten niet ingedeeld op stofnaam, maar op indicatie. Het eerste wat ik dan ook mocht doen, was leren waar alle medicatie lag. Ik voerde voornamelijk de taken uit die de apotheker mij gaf. De lokale bevolking spreekt Turks, dus verder dan Merhaba (Hallo) kwam ik niet. Engelsspreekende patiënten kon ik wel helpen. Vanwege de universiteit, wonen er veel internationale studenten in Famagusta. Ook komen Grieks-Cyprioten naar de apotheken in het noorden. De geneesmiddelen in Turkse Lira zijn namelijk veel goedkoper dan in Euro.

Nog een aantal verschillen met Nederland:

- De apotheken hebben geen apotheek informatiesysteem (AIS). Mijn stage-apotheek heeft Pharmacom, maar deze wordt alleen gebruikt voor het opvragen van prijzen.



- Omdat er geen AIS is, is er ook geen patiëntenbestand. Er kunnen geen etiketten worden uitgeprint. De apotheker legt het gebruik mondeling uit aan de patiënt én schrijft het gebruik op de doos.
- Voor de controle van eventuele interacties en/of contra-indicaties is de apotheker afhankelijk van de informatie die de patiënt haar geeft.
- Het grootste deel van de recepten is nog handgeschreven en dat kan op elk papiertje wat de arts maar kan vinden.
- In principe is alles over the counter, zelfs antibiotica.
- Daarnaast is een verzekering niet verplicht. Er zijn een aantal mensen die een overheidsverzekering hebben. Zij betalen 20% van de prijs van een geneesmiddel. De apotheker vertelde dat het leven in Cyprus veel duurder is dan in Turkije. Ook hebben ze veel last van geneesmiddelentekorten. De economie is op dit moment niet goed in Turkije. Daarom gaat de productie van een aantal geneesmiddelen niet door.

SEP-uitjes

Na stage in de ochtend, zochten we voor afkoeling aan het strand. Famagusta kent vele stranden, zoals EMU Beach, Palm Beach en Salamis Beach. Voor onze SEP-uitjes bezochten we verschillende plekken in het noorden van het eiland. In Famagusta bezochten we o.a. de Salamis Ruins. Ook gingen we naar de havenstad Kyrenia. Hier maakten we een boottocht, bezochten The British Village en Escape Beach. Ook bezochten we Nicosia. De hoofdstad van Cyprus dat deels in Turks Cyprus en deels in Grieks Cyprus ligt. Hier staken we de grens te voet over, om de stad ook aan de zuidkant te verkennen. Er is genoeg te doen in het noorden en dus zeker een bezoekje waard als je op het eiland bent!

Ook gingen we tijdens SEP-weekenden naar andere plekken in het zuiden. Het zuiden is net als Griekenland: de beelden, de Griekse patronen, de straatjes, etc. Het eerste bezoek voor mij in Grieks-Cyprus was het WaterPark in Ayia Napa. Later tijdens ons verblijf op het eiland zijn we nog teruggegaan naar Ayia Napa voor de Jeep Safari, een boottocht en het zwemmen door de grotten. Het verschil tussen noord en zuid is groot. Het leek wel alsof in

het noorden de tijd had stilgestaan. Zo is er Palm Beach, een strand recht voor Ghost Town. Het stadje is onbewoond en wordt door de Turkse militairen bezet. Op het strand zag ik de eerste toeristen van het noorden. In het zuiden was het anders: overal toeristen. Ik was blij als we weer terugreisden naar Famagusta.

Na drie weken was het tijd voor mij om naar mijn volgende bestemming te gaan: de EPSA Training New Trainers event in Tsjechië. Ik heb het ontzettend naar mijn zin gehad in Cyprus. Op mijn stageplek mocht ik alles vragen en doen wat mogelijk was. Ik kon het goed met apotheker Çisem vinden. Ze gaf me zelfs tips over wat ik kon doen op het eiland. Er was wel altijd iemand waarmee je iets kon gaan doen. De lokale studenten verbleven ook op campus en stonden altijd klaar om ons te helpen. De SEP-studenten waren verdeeld over twee huizen. Het was daarom makkelijk om elkaar te leren kennen en zelfs om een paar woorden in een andere taal te leren! Ik wil Imke en Bram van de K.N.P.S.V., Miracle, de LEOs en alle SEP-studenten bedanken. Wil je ook een buitenlandse ervaring, houd je van reizen en nieuwe mensen ontmoeten, dan raad ik je zeker aan om een SEP-stage te doen!

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Graduates

**Faisal
Sandra
Niek
Anke
Hugo
Hidde
Lotte
Hadil
Nuhoda
Wasiq
Evert-Jan
Maaïke
Daniëlle
Stefanie
Arvid
Arjen
Jitske
Nicole
Niels
Anouk
Marc
Martijn
Rudolf
Mark**

**Benmhammed
Buljac
Metzlar
Nabuur
Schouw
van Steenwijk
Valk
Alali
Aldarij
Bawary
Bremar
Diesveld
Eikelboom
Erceg
Hedemann
Hitzert
Hoogland
Huijgen
Jacobs
Jansen
Joosten
Kloezen
Kloppenburger
Kluitman**

**Keri
Saskia
Lennard
Corine
Svhan
Petra
Taha
Alien
Nienke
Lisanne
Lars
Naomie
Niels
Tanja
Charlotte
Vigen
DeeDee
Jens
Job
Mathijs
Sophie
Maïke
Claudia
Kaling**

**Magnus
Mulder
Ringnalda
Rollema
Sarbast
Scholtens
Şen
Veld
Veld
van de Ven
Verkleij
de Vries
Westra
Zijp
Boddeke
Dawood
Ferwerda
From
Klever
Pals
Scheepers
Tromp
van Winkel
Xian**



Congratulations on obtaining your degree

Year representatives

Shown below are the year representatives of college year 2019-2020. If you have any questions or comments about subjects, teachers, exams etc. you can contact them.

Year 1: Malou Kruseman & Martin Issa

Year 3: Wies van Bakel & Sven Stegen

Year 5: Inge ten Seldam & Laura ten Broek

Year 2: Niek Berends & Emma Dorenbos

Year 4: Nienke Mones & Laura Schot

Year 6: Maxime Tijoe, Fleur van Gelder & Tine Folkertsma

Year 1



Year 2



Year 3



Year 4



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Year 5



Year 6



Committees



End-of-Schoolyear Committee (JAK)

At the end of each academic year, students need a way to blow off steam and regain energy and focus for the last few months till the summer. What better way is there to do this than to camp and party all day with your fellow students? A couple of years ago, some members of 'Pharmaciae Sacrum' thought the same and organized the first edition of the End-of-Schoolyear Camp (JAK in Dutch). This year it is our pleasure to organize this great activity.

Our praeses is Melle van Meel, he is a student for quite some time now. He is a member of the 'G.F.H.D. Snoeihard' and aspires to be like Max Verstappen one day.

The abactis of our committee is Charlotte van den Herik. Next to handling the communication of this committee, she likes to play badminton in her free time.

The quaestor of our committee is Jesse Fakkert. It is his job to make sure that the costs for this activity are as low as possible. Also, Jesse is a very fanatic AJAX supporter, "WZAWZDB" is his slogan.

Our assessor I is Susannah Wever. She might be the youngest, but she parties like she has been doing it for years!

Our assessor II is Xander van Es, he will take the first chug ('adt') of beer during the camp to officially open the party. And of course, he wants to show off his amazing drinking skills. In his free time he plays volleyball.

Together we call ourselves kortJAKje.



Internationalization Workgroup

We are Daan, Jip, Nick and Pedram and we are the internationalization workgroup. Our duty is to obtain a clear overview of how both foreign and native people perceive the internationalization of the study and study association. Therefore we focus on making connections in order to build bridges between people and between nationalities.

Daan: "Hello, I'm Daan and I'm currently in the second year of Pharmacy. I consider this workgroup to be interesting as I believe providing a confidential space for international students is crucial to improve internationalization. Moreover I think that getting in contact with different cultures is merely beneficial for anybody."

Jip: "Hi, I'm Jip! I'm a third year student and I am also active at the study association P.S. where I'm in the LOS-committee. My year is the last year of the bachelor degree programme that will be taught in Dutch. However, I am very interested in the internationalization process of this study."

Nick: "Hi, I'm Nick! I'm redoing the first year of Pharmacy. So I'm attending the second year that this study is English-taught. My interest in this workgroup came when I saw the differences between last and this year."

Pedram: "Hey, I'm Pedram, I'm originally from Iran and I'm a second year Pharmacy student. I am among the first generation of the internationalized program. Since I started this study, I have made amazing multinational friendships and of course I had some challenges, but I am curious what you think about the internationalization and more importantly, your proposals to improve this process!"

If anything regarding internationalization ever bothers you or crosses your mind, do not hesitate to contact us (PSinternationalization@gmail.nl) or bump into us in the hallways!

Committees



Charity, Entertainment & Sports Committee (LOS)

Hello!

As the new LOS Committee, we would like to introduce ourselves. Jip, our praeses, will be the leader of the squad this year. Unfortunately, she always gets lost and therefore prefers taking the bus. She will never arrive on time. Besides, she only eats salt instead of vegetables, but we still love her.

Marijke is our ab-actis, and we also named her as our lovely small punisher, with an emphasis on small. Whenever someone of our committee does something which is not to her liking, she will punish them in the worst way possible. As the mother of the group, she makes the best lasagne (which she is very proud of) and makes sure there's enough to drink.

Hessel is our treasurer and possibly our most active member who always stays until the end of every social drink in 't Vaatje. You can find him at every party. He is very cute with his girlfriend and likes spending time with her, but not more than with us ;)

Maud is our assessor I and is one of the first-year students. She is from Denekamp (wherever that is). Sadly, in about four months she will have to skip some of our amazing committee evenings, because she needs to attend carnaval in her small village. Fun fact: she has a weird obsession with chickens.

Floris is our assessor II and also a first-year student. His main focus is to drink a casual beer from time to time. We're preparing him for taking his 'adtjes' which he will have to take when we announce one of our activities.

Kisses from us,
OPGELOST



Multimedia Committee (MMC)

Hello! We are MMC santé!

We are responsible for taking amazing pictures of P.S.-activities and parties. Furthermore, we make beautiful posters for our study association.

Let us introduce ourselves: first of, our praeses Laurine, her guilty pleasures are After Eight chocolates and Disney films. Her favourite movies are Coco and Ratatouille.

Second is our ab-actis Emma, at home she has a John Deer and two sheep.

Our quaestor is Michelle, her favourite activity is listening to her Spotify playlist; 'Slebba Fissa' whilst drinking Malibu cola.

Assessor I is Sacha, she is the ginger of the group and can always be found in the Oceans. Besides that, she has a shoe addiction.

Assessor II and III are Jens and Sylvan, on Mondays they sleep together and cook a 5-star meal for the rest of us. Jens loves baked bread (in Dutch: gebakken boterham) and when Sylvan is happy he shouts: HOPPA!

If you don't want your ugly pictures on the website you can always buy us a beer and we will consider!

We will see you at the P.S.-activities!

p.s. Download Michelle's 'Slebba Fissa' playlist on Spotify

p.p.s Sylvan is still looking for a room here in Groningen

Committees



Committee of Pharmaceutical Sciences (SSS)

Dear P.S.-ers,

We are the Committee of Pharmaceutical Sciences, called the 'SSS: Sur Sum Scutra'. We will organize the 'First Year Symposium' and the 'Senior Symposium'. At the end of the summer, we will go on a 'Dutch Company Visit', where we will visit several pharmaceutical businesses. Let us introduce ourselves. First, we have Marlyn, our praeses. She is the grandmother of the group and takes care of all of us. Marlyn is born in Twente, so she's going to blow us all away with her 'Twengels' accent.

Then we have Anna, our ab-actis. If you want to get in touch with the SSS, you can get in contact with her. Then you can have a nice chat, via the online chatbox.

Menno is our quaestor. He takes care of our money and as a former board-member he does this with all his passion and dedication.

And last but not least we have our crazy assessoraat consisting of Daan and Vera. Daan is our assessor I with more energy than a level 5 hurricane. He will not stop until we have done all the things necessary for an activity.

Vera is our Bueno-loving assessor II. But besides all that chocolate, she loves alcohol the most. Despite the fact that she doesn't have a room in Groningen, she is always the last to be found in 't Vaatje.

We hope this brief description of ourselves will make all of you enthusiastic for the upcoming events we will organize and we hope you will come to our activities.

Lots of love,
Sur Sum Scutra



Technical Supporting Committee (TOC)

Hi everyone!

We are the T.O.C., short for Technical Supporting Committee. The T.O.C. is the youngest committee of P.S. and was founded last year as successor of the Internet Committee.

Our committee consists of five people: Adnan, Remco, Cees, James and Rob.

Adnan ('Zadnan') is our chairperson and leads the meetings.

Remco ('Petje') is our secretary and keeps track of everything we blur out during our meetings.

Cees ('Mr. Boon') is our judge and makes sure we all follow our rules.

James ('Jamoesi') is our Adobe expert and has all the knowledge about Photoshop and InDesign.

Rob ('The Dawg') is our newest member and a Freshman. He will be the future Tech-Guru of P.S..

Unlike many other committees of P.S., we don't organize many activities. It is our task to support the association with all technical affairs. You can see us as the back office of the association. This task is mainly done by good communication with the board, but also by answering questions of other committees and members. We help by doing things like installing hardware where needed and we give advice for every big purchase the association must make on technical purview. We also give short courses about the use of the adobe programs, Photoshop and InDesign, to help others realize their ideas.

We do organize ONE very awesome activity: The Game Night! After last years' success it will return in April 2020 #I'LLBEBACK. This night is full of both video- and boardgames and having fun together. We hope to see you all in "het Vaatje"!

Love,
the T.O.C. 2019-2020

Activities



Masters' activity

By: Frank Pierik

Dear readers,

It was on Friday the 25th of October when a band of devoted Masters' students set out for the Holland Casino in Groningen. Remembering the winning of 'Miljoenenjacht' by a Pharmacy student gave us a sense of invincibility. If a Pharmacy student can win 'Miljoenenjacht', then surely the Holland Casino was no match for our wit. Fortune was on our side.

Nearly recovered from the successful EJC-party of the night before, we assembled at the entrance of the casino. After dropping our jackets and the strip search of Akkad, we received a welcoming package of the casino. In it was fifteen euros worth of playing credits and two vouchers for drinks. Thereafter, we were divided into three groups. Each group would, in turn, receive a short walkthrough of the games blackjack and roulette and some additional information about the different slot machines. At the blackjack and roulette tables we were even able to play some practice games.

Finally, we were ready to set off on our own adventures. Much like the process of osmosis, we spread out over the floor of the Holland Casino. There was something for everyone inside the casino. Some of our more senior members found refuge at the old school, but profitable, bingo slot machines. Whereas, others tried their luck at one of the other 350 slot machines or the roulette tables. The younger and more thrill-seeking among us, however, resorted to a game of blackjack.

Blackjack is a card game in which players try to acquire cards with a face value totaling 21 and no more. If you have ever played or watched a game of blackjack at one of the galas of Pharmaciae Sacrum, then you know the fanaticism of some of our students when it comes to blackjack. Where during

the study some pass statistics by the skin of their teeth, in the casino they evolve in master statisticians. I myself listened to these master statisticians and gathered decent winnings over the course of a few games.

Up until this point, the evening was seemingly quiet, with no extremely big winnings. When suddenly, out of nowhere, Luke came in a sort fight or flight response running for the blackjack tables. Waving his Holland Casino credit voucher, as if he had just found 'Willy Wonka's golden ticket. With a stake of just five euro's he had just won a price many times that in some random slot machine. Thereafter, Melanie at the expanse of half a heart attack also gathered a small fortune at one of the slot machines.

After being in the casino for nearly 4 hours most went home richer with either money or life lessons. A small delegation, however, proceeded to the city center. To drink to their victory in the 'Ninth Circle'.

Overall, it was a very entertaining night and I would like to congratulate the Master Committee on their first successful activity!

Yours truly,
Frank



“Transform
passion and
innovation into
life-changing
solutions.”

Fagron is de wereldmarktleider in magistrale bereidingen. Als wetenschappelijke R&D-onderneming bieden wij artsen en apothekers het breedst mogelijke spectrum aan geïndividualiseerde bereidingsmogelijkheden. Onze missie is het verbeteren van de kwaliteit van leven van miljoenen mensen wereldwijd. Dit doen wij door het ontwikkelen van unieke concepten en innovatieve oplossingen voor de groeiende behoefte aan medicijnen op maat.

Vanuit onze positie als marktleider handelen we lokaal en denken we internationaal. We zijn voortdurend op zoek naar de beste mensen om onze leiderspositie verder uit te bouwen.

Lees meer op fagron.com en ga de uitdaging aan!

Activities



Fagron Workshop

By: Ellen Kok & Naomi Hekkert

The Fagron workshop took place on October 23. The theme of the evening was 'Together we create the future of personalized medicine'. During the workshop, we took a look into the company Fagron. Fagron is a leading, worldwide company specialized in pharmaceutical preparations. Their goal is to provide customized medication for hospitals, pharmacists and patients.

After a delicious buffet, the workshop started with an opening by Sjoerd van Olffen and Mayke Paap. Sjoerd van Olffen works as an innovation manager and Mayke Paap as product innovation specialist by Fagron. The evening consisted of several parts. They started enthusiastically with an introduction about themselves and the company. We learned, for example, that Fagron is active in 34 countries with 8 locations in the Netherlands. They have 2000 employees, including more than 200 pharmacists. In the following part we discussed some cases with questions which we could answer with a yes or a no sign. After this we carried out a group assignment. In five groups we brainstormed about a possible new DNA test. Every idea was presented and discussed with the entire group. This assignment followed in response to the new test Fagron will introduce in 2020. This DNA-test will contribute to more effective treatments for people with hair loss. After the group assignment, two different suspensions were made to test which component would sink faster. While the suspensions were sinking, a lot of possible internships and jobs within Fagron were discussed. They were very enthusiastic about the internships they provide for us as pharmacy students, which is very nice to know ;)

Altogether, it was a very interesting and educational evening!

Yours truly,
Ellen and Naomi



Asc Workshop

By: Menno Broekman

On Thursday October the 3rd it was time for the very first workshop of this academic year: the ASC Academics workshop on 'Market Access and Health Economics in the Netherlands'. This workshop had a beautiful setting, because it took place in the Van Swinderen Huys, right across of Mr. Mofongo (for whom may not know this building).

The workshop consisted of three different sessions in which was told about the reimbursement system in the Netherlands from different sides.

Firstly, a Pharmacotherapy Advisor and a Pharmacoeconomics Advisor working at Dutch health technology assessment (HTA) agency: the Zorginstituut. They have told about their job of (indirectly) advising the ministry of health (Volksgezondheid, Welzijn & Sport) whether or not a drug needs to be funded and what the maximum price should be.

Secondly, a Market Access Manager of MSD in Haarlem told about the hurdles they have to take to get a drug funded and still make enough money to gain their investments back.

And last but not least Evgeni Dvortsin told about how ASC Academics is playing on the middle ground between the Pharmaceutical companies and the government, ASC Academics can help both. The pharmaco-economic models ASC Academics makes are an economic basis for the decisions made by both the Pharmaceutical companies as well as the government. This talk was ended by a couple of tips for when you want to start your own company in the future.

After these three interesting sessions we have had a moment where we could have a chat with all the speakers while enjoying a nice drink.

It was a very interesting workshop where we have had a look in a field of Pharmacy where you do not hear much about!

Match report V40



Pharmacy is a study that has a lot of activities, committees and things to do for people who want to be active or more in the background. There are various groups of friends who do things together! One of them is the V40 football team at Drs. Vijfje. This team consists of 12 fanatic and less fanatical football-playing Pharmacy students. We have watched a match with this fun team.

On the 4th of October, it was a match day for V40. At 8 pm the match should have started but unfortunately, there was a little delay. At 10 past 8, fifty minutes of match-time started. During the first half, the spectacular team had support from none other than Jan Willem Meints.

The first half started quite well. In a few seconds, the first shot on goal was shot by Daan Boellen. After that, there was a counter from ONT/CHZ 6 Drachten But luckily for V40, Ruud Stapel was paying attention, and preventing the ball from ending up in the net. During the first 25 minutes, V40 was in the winning mood. Daan his powerful shot was blocked by the keeper. Fortunately, Martijn Hagedoorn was attentive and pushed the ball into the goal with the keeper! 1-0!

Unfortunately for Tijn Joritsma, his long-shot ended up on the post. From this moment on the team started to fiddle a bit and the 1-1 was unavoidable. The opponents also scored the 1-2 from a counter corner.

After that, the first half continues with a lot of goal attempts from Bram Kottink, Akkad Issa and Niek Berends. In the meantime, Ruud was enjoying himself with some back and forth walking. Teamwork remains important in football. The 2-2 was made by the strong triangle ratio Bram, Martijn, and Daan!

Then was the gate of the dam (Louis van Gaal-style). And quickly the 3-2 followed by Joost Mulder. After that, Niek follows with a beautiful long-distance shot into the goal. But unfortunately for him, Tijn claims that he has still touched the ball. 4-2! From this moment on the misery started. The players got tired.

The communication got worse and Akkad was briefly reminded that he had to look around more. He answered this with: "I look at the defender and the ball, the ball is also very important, as you know!"

Frank Pierik also received constructive comments from Ruud: "The ball must go between the posts, isn't it?"

Unfortunately, all the tips didn't help. The 4-3 and 4-4 fell quickly one after the other. Making the final phase of the competition very exciting.

Fortunately, Daan still had a tiny bit of energy left and he scored 5-4 just before the last whistle signal! Against all odds, V40 won this match and are second in the rankings. We wish V40 every success in the coming matches.

Hopefully, they can hold this position.

By: the Editorial Committee



Man of the Match!
Daan Boellen

Did you know that the Netherlands is an excellent country for drug design? This is because the Netherlands has many universities and other research institutes in relation to its small surface area, all of which do research into dosage forms, development methods and synthesis routes.

The scientists at the technical university of Eindhoven have made an artificial leaf that can produce medicines under the influence of sunlight.



Did you know that our Faculty has a department called Drug Design? Alexander Dömling is the head of this group. They even have their own website:

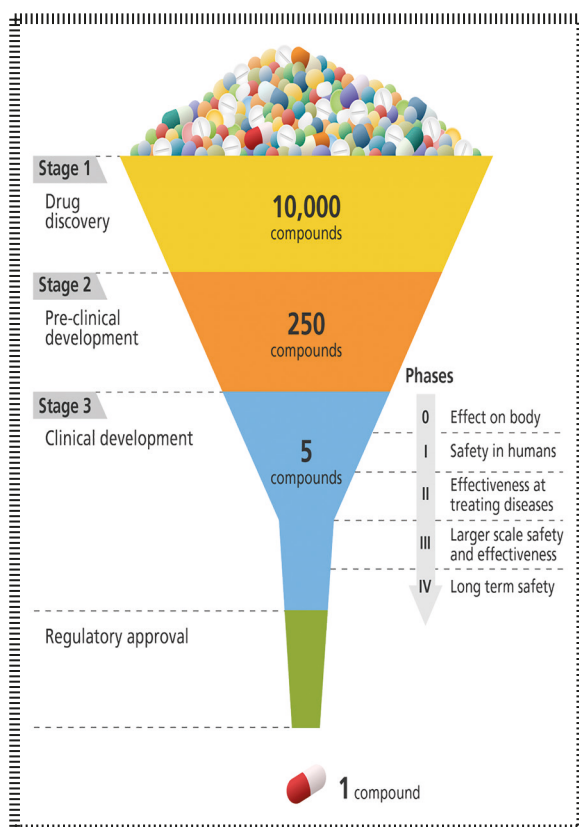
www.drugdesign.nl.

You can find more information here.



Facts & Fun

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Developing a drug costs a pharmaceutical company at least 4 billion dollars and can rise up to 11 billion dollars.







Having dinner with... the 138th Dies Committee



Because the Dies Natalis is approaching, we decided to have a nice evening with the 138th Dies Committee. We met at Martijn's place. The 5-head Dies Committee was already waiting for us! It was a really nice evening which ended up in "t Vaatje".

On Monday the 30th of September it was time for our first mix after the holidays. We had planned a mix together with the Dies Committee. We were supposed to meet at half past 7, but at that time we were still shopping for beer, wine and some ICE's. There was some doubt about how much ICE we should get, because Wies wanted to get more than we wanted. Finally, we came to a reasonable amount that we should buy. Once we had arrived at our mix, we were, as usual, more than a quarter of an hour late. This should not ruin the fun, because we were looking forward to a great evening!

24 When we arrived, dinner was, luckily for us, not ready yet. We had to wait a few more minutes before we could eat, but we could enjoy some beer in the meantime. The first ICE's were already found and drank before dinner. Then it was time for us to eat. They had made a very delicious lasagna, one with meat and a vegetarian one. In the end there was no lasagna left anymore and our bellies were filled, but there was still some place left for deserts.

Martijn: "Lasagna with Bagamel sauce"

After we ate it was time for us to play our Editorial boardgame again. There was not really a battle going on for the first place, because Martijn and Nienke lay pretty much ahead on all of us. Evelien and Manon had a hard time playing the game. After a very short game, it was no surprise that Martijn had won Flip this time. While we were playing the game, Morgan went to the fridge for wine three times, not knowing that we hid an ICE over there. After three times she still did not notice it, so we had said this to her and she still had to drink it.

Evelien: "It is really a Monday today"

Manon: "I'll just go feed the fish"

When the game was finished, we played some other games. When they were finished and when there was not any beer left, it was time for us to go to "t Vaatje". Outside the house, when we stood by our bikes, a cat was noticed. Almost everyone liked the cat, except for Emma, she had to mention that she does not like cats.

Emma: "When the cat sits for longer than one minute on my shoulder, I can't handle it anymore"

Unfortunately not everyone went to "t Vaatje". When we had arrived it was not busy yet, because we were quite early. Later on it became more busy and we went on partying till it was really late, or early in the morning.

We want to thank the Dies Committee for the very nice mix we had and we hope more amazing mixes will follow!



Having dinner with... the 34th Almanac Committee

On Monday the 14th of October it was time for our mix with the Almanac Committee. They almost have to reveal their Almanac, so they could not be missing in our issue. Most of us have had their exams the week before, so it was time for all of us to make some fun. Janna would join us this evening as well. It promised to be a great evening again!



This time we really did our best to be on time, so we bought the beer, mixed drinks and soft drinks already before our meeting. Still it did not work out as we planned and we arrived again later at Daan's place. Not everyone agreed on how clean his house was, but that was forgotten soon. They were already waiting for us with wraps, so we did not have to wait any longer. The wraps were really delicious but unfortunately there was not much chicken left for a second wrap, so most of us had to eat a wrap with lots of tomatoes, lettuce and cucumber instead of chicken. A positive point is that it was really healthy.

Myrthe: "It is laughable when a horse gets run over by a tractor"

This Monday all the farmers protested in Groningen and this first had to be discussed and some movies were shown to each other. Whereas most of us found some movies quite shocking, Myrthe did not seem the care a lot. Then it was time for us to play our boardgame again and according to Daan he would win it. The game went on longer than the previous mix and it was again really exciting who would win Flip this time. There was some delay when some of us (Sybrand) did not know and understand how "Juffen" worked. Emma had to leave before there was a winner, because she had to go to social drink of her swimming club. She would join us again in the Negende Cirkel.

Daan: "I am always really good at 'ganzenbord'"

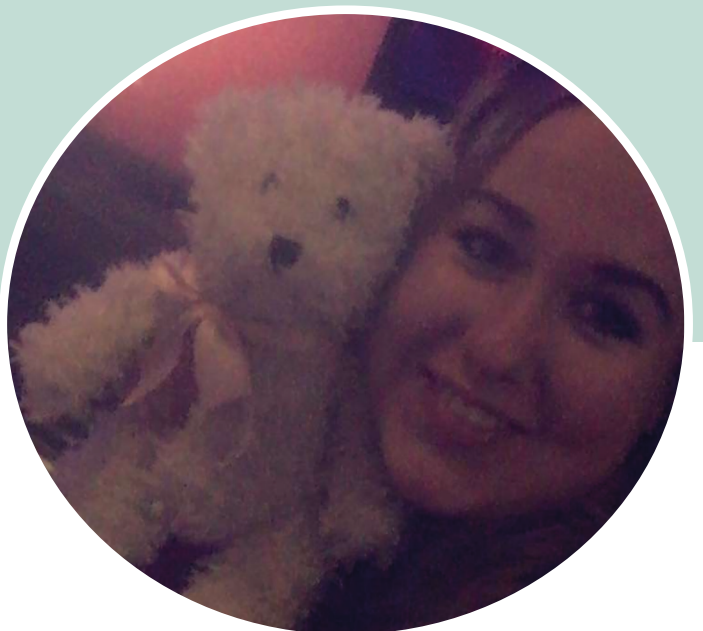
Unfortunately for Daan, he did not win the game, but Myrthe had won this time. After this we played some "vier op een rij" by function and we just chilled the rest of the evening. Sharon had to drink

a "Riedadt" and she got very clear instruction on how to do this. Some time later, when all the drinks were finished it was time for us to leave and continue to party in the 'Negende Cirkel'. Flip also went with us, of course.

**Myrthe: *Riedadt from Sharon*
"suck swallow suck swallow suck swallow"**

Once we arrived and Emma and Mirthe had joined us, we drank enough beer and shots. When sufficient dances were made it was time to go home and go to get some sleep.

Dear Almanac, thank you for the great mix and good luck with the revelation of the Almanac at the AIDi-party!



Getting to know...

Quaestor of the 138th P.S.-board

On a rainy Friday morning we decided to ask our quaestor, Bjorn van der Weide, a few questions and dilemmas to get to know him a bit better.

Quaestor

Name: Bjorn van der Weide

Age: 24

Place of birth: Hardenberg

Previous P.S.-committees: JAK '14-'15, Lusco '15-'17, Almanac '17-'18,

Editorial Committee '18-'19

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

"I liked the idea of doing a board year for P.S. since I started studying Pharmacy, but I had a girlfriend in Utrecht so it was difficult to combine this with a board year. But when my relation ended, the idea of a board year popped up again in my head and so I applied for the board and here we are now."

How does a normal workday look like for you?

"Every day is different, and it depends on the circumstances what I do on a day. If we have a General Members' Meeting(ALV) I am very busy with making all the budgets of the different committees right. Next to that, I make the accountancy for P.S. right every week. The most fun part is to visit some companies with Jan for sponsoring, this is very nice

especially if the sponsor is new and we can discuss what the opportunities are."

What is the biggest learning moment for you in your board year?

"I often forget a lot of things, I learned to check and double check if things are really done, and if it isn't done twice. But luckily, I have a secretary that helps me with my agenda."

What was the best thing you have done this board year?

"The K.N.P.S.V. congress was very nice, it was fun and we had a great time."

Why is function 3 better than the other functions?

"It is the only function that is really important and where you actually do something, that is very nice. "No, kidding aside", Bjorn says with a smile, "it is very interesting to see all the financials in a study association. It is also very nice to work with big pharmaceutical companies that are truly interested in working together with P.S., especially if they approach us for a deal."

Name 2 funny qualities of each other board member.

"Joeri: He is very qualified in making coffee and he has trouble with writing a text without spelling mistakes, which I think is very funny.

Anniek: With the acquaintance of the new committees she has the exact same story and intonates every sentence exactly the same.

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Robin: She has a funny contagious laugh; she also has beautiful red hair.

Jan: He can be jauntily laud; this causes amusing situations. He is also a sober Fries, sometimes a bit crude but not too much."

What are you still looking forward to this year?

"Not something very specific but mostly being together with a lot of people and doing amazing things as a board, but I am also very excited for the Foreign Trip which I haven't done before and of course the Dies week is a nice week to look forward to."

Paying with card or in cash?

"I think I prefer paying with a card because everything is very organized and clear. On the other hand, is it a nice feeling if you pay a large amount of money in cash, it gives me a feeling like I am very rich."

Coins or bills?

"Definitely bills, they have a higher value and coins are kind of difficult."

Committee (Editorial/Lusco) or board?

"Both are very nice to do, it is very intensive but I prefer the board because you work together with all 5 very closely and I see them every day."

"That one was very easy", Bjorn says. "If you asked me Editorial or Almanac that would be very tough."

Editorial Committee or Almanac Committee?

"This is indeed very tough, but I think I prefer the Editorial Committee because the workload and stress are spread out over the whole year this is very nice. For the Almanac Committee there is a lot of stress before the deadline due to the enormous workload."

Negende Cirkel' or 't Vaatje?

"'t Vaatje' is very nice because there are only people that are active in P.S., so you know everyone and that is very cozy and fun. 'Negende Cirkel' is also nice but it is often too busy."

Groningen or Dedemsvaart?

"Definitely Groningen, I never had a close bond with Dedemsvaart because I went to high school in Zwolle



and so all my friends lived there too. In Groningen I really have my own place and I like the city very much."

Have you rather your own money messed up or the associations money?

"I have rather my own money messed up, I strive to have both money matters correct but for my own money matters only I have problems with it. If the money of P.S. is messed up due to me a lot of people are in trouble."

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Tess with 'stupid' or Taylor swift with 'Love Story'?

"I think I'd choose 'stupid' because you can sing along."

Never get fat from eating or never having to go to the bathroom?

"I choose to never have to go to the bathroom anymore because gaining some "board pounds" are part of a board year."

Youngboy or tongueboy (2 nicknames of Bjorn)?

"I like youngboy the most, it reminds me off the good old times. Sadly enough isn't it still used in P.S. because the younger generations don't know my nicknames."

Blue or yellow?

"Blue."

Puzzle Page

E	P	H	D	E	S	I	G	N	O
D	H	I	O	T	O	W	R	P	G
I	A	L	A	S	R	L	G	C	C
O	R	M	A	A	P	E	M	U	M
C	M	A	P	S	L	I	R	I	U
Y	A	S	B	O	A	A	T	T	T
P	C	E	S	U	C	G	E	A	P
R	I	T	A	A	R	N	N	O	L
U	S	R	O	A	M	A	I	A	X
S	T	E	N	I	C	I	D	E	M

ARUBA
CURACAO
CYPRUS
DESIGN
HOSPITAL
LASAGNA
MEDICINE
OPGELOST
PHARMACIST
UMCG
WRAPS

Solution:

Colophon

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List of activities

December 3rd
December 9th
December 10th
December 11th
December 12th
December 13th

P.S.-Social Drink
Pharmaline Lunch Lecture
Hospital Pharmacy Evening
First-year Hooghoudt Excursion
AIDi-party
Bachelor Dinner

January 7th
January 9th
January 14th
January 21th

P.S.-Social Drink
Ouderejaarssymposium
SPITS Lunch Lecture and EJC-party
General Members' Meeting

February 4th

STOF-meeting + P.S.-Social Drink

February 5th

Dies Symposium, Reception and Opening party

February 6th

Dies Cultural Evening

February 8th

Outdoor day + Prom Dinner + Prom

February 10th

Committee Carousel

February 14th

First-year Parents' Day

February 18th

P.S.-VIP Pub Lecture

February 24th

GRIP on research

February 25th

LOS-sport evening

February 28th

Carreer day

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 31th

Pre-BEC drink



WERKEN BIJ BENU APOTHEEK

Als marktleider bieden wij ambitieuze apothekers aantrekkelijke carrièremogelijkheden.

- Ga aan de slag in een **BENU** Apotheek als beherend of tweede apotheker.
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- Of ga werken bij Brocacef Zorglogistiek, waar je ook terecht kunt met een farmaceutische opleiding.

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Nieuwsgierig naar de mogelijkheden?

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