STUCOM

OUR LAST NEWSLETTER COVERING:
THE RETREAT
STUCOLUMN FROM JOOST
THE GREAT CSDB CROSSWORD PUZZLE
ALUMNA INTERVIEW
AND WAY MORE!

NEWSLETTER
OCTOBER 2021

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GOODBYE FROM US

Hello readers!

In this edition - all in the theme of PRIDE! - we will go through the amazing alternative and covid-proof retreat in june, the recent summer (more like autumn) StuBBQ, provide you with an article on the Rainbow Road that is now shining at the heart of the Uithof, an interesting piece on a recent scientific topic, PRIDE recipes, an extra large Meet the StuCom interview, an interview with an alumnus, and much more...!

This is at the same time our good-bye note from the StuCom '21-'22. We are amazingly happy that we got the chance to be the StuCom of last year: through better (retreat and online games!) and through worse (covid that made all real-life activities impossible), we tried to make this year as fun as we could for every one of you. We would like to thank all of you for showing how versatile us CSND students can be! It was amazing to see your enthusiastic pixel faces during our Among Us session, StuCom seminars, the awkward but hilarious Sinter-kerst-and-nieuw gift unwrapping evening, the hybrid retreat with gathertown presentations that required some late-night working hours from Ireen and adaptiveness from you who participated, and in June, finally our get-together!

GOODBYE FROM US

We loved arranging every one bit of our events and will never forget how picky Alberto can be when eating the Stratenum-delivered food. And of course, all the uncontrollable laughs Rosanne had, the strange remarks or actions from Remco, Franka and Farid, the cleverness from Laura and Ireen and the always in-control Tessa and Nadine who knew exactyl when we had to do what. Together, we are proud of what we have achieved the past year and wish all the best to the new StuCom '21-'22!

The new StuCom will introduce themselves soon...!

Lots of hybrid love,

THE STUCOM '20-'21

STUCOLUMN WITH JOOST

As you all may know, our beloved Joost has decided to stop his work as a coordinator of CSDB this summer, and he is enjoying an early retirement. Joost has been there for students from the beginning to end, and we will miss him when he will leave! To show our appreciation for Joost as a coordinator, we asked him to write a column for the StuCom Newsletter. This is the last column of the series!

In this episode I will try to relate my shift to teaching, without attempting to untangle the various timelines. I was fortunate to be involved in 3 different curricula: the Biomedical Science (BMW) and Medical undergraduate programs and the Master's programs of the Graduate School of Life Sciences. I was always interested in incorporating IT tools in my teaching, so I will also tell you a little bit about this. Finally, I will relate some of the tracks and courses I took myself in order to become a qualified teacher.

COURSES TAUGHT

Besides supervising internship students and one PhD student, my first teaching experience consisted of organizing a short wet-lab in our lab, as part of the BMW course "Developmental Biology". This included some lectures, but mostly supervising small groups of students doing in situ hybridizations, western and northern blots, Q-PCR, radio-immunoassays and the like. In 2001 I was asked to supervise a group of students in a project "Research Design", part of the course "Analytical Methods" (now Research Methods). This prospect scared me so much that I wrote back that I didn't think I was qualified to teach this course. The person called me back and persuaded me to do it anyway. So this became my first experience teaching a group of about 10 students. The topic they studied was 'growth disturbances' The students had to prepare a proposal for how to measure various growth factors and hormones, and present it during a symposium. I discovered that this was actually lots of fun to do, and the students evaluated my supervision with a 4.4 out of 5 (this was the first time my teaching was evaluated).

In the following years I designed and taught 3 new courses, together with colleagues from the Metabolic and Endocrine Diseases department. The first

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2 were "Metabolic and Endocrine Disorders of Development" and "Metabolic Disorders", for the Master's programs "Developmental Biology and Biomedical Genetics" (DBBG), one of the predecessors of our CSDB program, and for Biology of Disease, respectively.

Picture left: Early days of lecturing for the Metabolic Disorders course. Lectures about lipoprotein metabolism, islet amyloid, central (neuronal) regulation of glucose metabolism, etc were later replaced by cancer metabolism, oxygen metabolism and metabolomics.

Picture right: The Metabolic Disorders course (now Metabolic Pathways) always concludes with poster presentations.

The third course was "Hormones and Homeostasis" (H&H), for the 2nd year BMW program. Furthermore, for a few years I participated in the BMW "Project 2" course, where I supervised a group of students in creating a report, a poster and a presentation about a growth disturbance of their choice (like osteogenesis imperfecta, or Turner syndrome). For many years I did the same thing in "Project 1" ("Tumors and Metastases"), a course that I also coordinated for 6 years. For me, 2 things about Project 1 were particularly nice. One, the teacher was also the tutor of that group of BMW students for the duration of their studies. You may have seen the pictures of these groups on the wall of my office. Because you taught them for 10 weeks, you really got to know the students, which was very helpful for being their tutor in the following 3 years.

Two, this project was concluded with a parent's day. The parents came for presentations (talks and posters), tours, demonstrations, lunch and they always had a great time. Organizing this, together with the Mebiose board and the First Year Committee, was a lot of fun.

STUCOLUMN WITH JOOST

Picture: Joost's tutor groups

Picture: Parents isolating their own DNA

I was involved in several other BMW courses (Academic English for the Sciences, Metabolism, Research Project), and I taught a course at the TU/e in Eindhoven for a few years. But my 'big' course was "Metabolism 1" for the first year medical students.

I coordinated this course from 2006-2019. This is a sprawling course that covers the gastrointestinal tract (anatomy, histology, digestion) and metabolism and pharmacology (absorption, biotransformation). When I first started teaching the tutorials in this course, it was all quite daunting and I struggled to keep ahead of the students. It was fun and rewarding, though, to see how over the years I got 'on top' of the material and became more self-confident, to the point that I supervised 6th-year medical students who were doing teaching internships in my course.

When I became the CSDB Master's coordinator in 2014, I gave up coordinating the BMW Bachelor courses, but I kept on acting as a teacher. And I got to design one

Picture: I always took 2 pictures of the tutorial groups. One with their name board, and one without, so I could quickly memorize their names. That would be 'my homework'.

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final course, which was the 2-week introduction course for you, the new Master's students in September. We started this course in 2016, and I think it has contributed greatly to the sense of community for the students and the connection between students and the CS&D institutes and researchers.

INTRODUCING IT TOOLS

For several years, I was involved in a (friendly) competition with Harold van Rijen about introducing new technology in our teaching. Harold, who as you know is now the GSLS director, was the coordinator of 2 physiology courses in the BMW program. I think he clearly won this 'competition', because he became Professor of Innovation in Biomedical Education. I mostly used the Hormones and Homeostasis and Metabolism 1 courses for my 'innovations'. I started with stuff like lecture recordings (very new in 2008!), digital exams and student response systems, called 'clickers'. Before students had smartphones or laptops, I used these clickers to make lectures more responsive. The UMC had bought 200 of them, and they needed to be handed out before the lecture (see picture). The communication with the PC in the lecture hall was clunky, as was the software.

Picture: A 'clicker', or stemkastje

Over the ensuing years, the UU started supporting various online systems, such as Socrative, PresentersWall and now Mentimeter. Although it can consume a bit of time, at the expense of the amount of information you can convey during a lecture, I think it has been very useful in engaging the audience, and testing their knowledge and expectations beforehand, and understanding afterwards. I became quite the expert in these things, and was asked to give workshops at several education conferences and symposia.

My other 'specialties' became digital microscopy and e-modules, which I first developed for the H&H course. All microscopy slides were scanned and made accessible through programs like SlideBox and PathXL. Microscopy labs now involved both a microscope and a laptop. After a while, we abandoned the microscopes altogether. The lab manual was replaced by e-modules that I created, first in Blackboard and later in a tool called Xerte. I even presented

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this work in a teaching conference in Birmingham. I also designed e-modules for 2 tutorials, which lead the students through research papers that illustrate hormones from the liver (IGF-I) and adipose tissue (adiponectin). These were created before Xerte became available, and needed technical help from the UMC Education Center. Because this involved 'educationalists', storyboard makers, programmers and project managers, this became a long and tedious process. It was a big relief when I could create the subsequent microscopy modules myself. Over the years, we also designed and created 4 modules for the Metabolism 1 course. Here, I was assisted by the teaching interns, the 6th-year students who were working on a teaching certificate of their own.

TEACH THE TEACHER

I am running out of space, so here I just want to recount that I got my Basic and Senior Teaching Qualifications in 2006 and 2010, respectively. In between, I participated in a 2-year program by the UU about Educational Leadership.

Picture: Ceremony at the end of my 2-year program "Center of Exellence in University Teaching" (CEUT)

All these tracks included courses, peer feedback, reflections, portfolios and projects. I was always interested in trying out new things, and never had very deep thoughts about the theoretical educational underpinning. But I still enjoyed the interaction with all these educators from many different backgrounds and with different expertise. Together with serving on all kinds of committees and project groups, these teacher's qualification tracks have added to my own network, expertise and work pleasure. Looking back at my teaching career, I had the most fun when coaching individual BMW students and the Medical teaching interns and, last but not least, serving as your program coordinator. During the final year and a half of corona-teaching, the personal contacts have been limited, but the interactions with over 300 CSDB students have been extremely rewarding. I will always remember you with gratitude and affection and admiration. Fare well!

JOOST

Written by dr. Joost Koedam

RAINBOW BIKE PATH

Since the 11th of June students can bike on the new rainbow bike path at UU. Just in time for international pride month celebrated in June and the dutch pride week celebrated in the first week of August. The bike path runs right through the heart of the university campus as a positive symbol for diversity and inclusion. You can find it next to the main campus library!

Extending 570 meters long, the new rainbow bike path starts with an 8 meter long progress pride flag, followed by the usual six rainbow colours of pride flag but also the added black and brown bands. The colours in this road represent the LGTBQI+, community members of color, community members lost to HIV/AIDS and those currently living with HIV/AIDS.

The new rainbow bike path makes Utrecht a great city for cycling, with the largest bicycle parking garage in the world and now the world's longest rainbow bike path. The previous title holder was a rainbow path in Auckland, New Zealand, near a university campus, which is 70 metres shorter than UU's rainbow bike path.

Elias van Mourik (22) studies at the Utrecht University of Applied Sciences and came up with the idea last January. Elias asked the University for "A colourful symbol in the Utrecht Science Park to show their endorsement of diversity and inclusion".The university was on board with Elias' idea since they saw this as an opportunity to show the world that at Utrecht University you can be whoever you want to be!

Source: https://bicycledutch.wordpress.com/2021/06/16/the-worlds-longest-rainbow-cycle-path/

EQUALITY DIVERSITY INCLUSION AT UU

At Utrecht University you can be whoever you want to be, that's why at the Equality, Diversity & Inclusion (EDI) office you are encouraged to share your ideas for a positive change. Take as an example Elias van Mourik and his idea of the rainbow bike path that later became reality. The EDI Office has a Stimulation Fund for financial support of initiatives that promote diversity and inclusion with and for the university community. Thus, if you have an idea, or see opportunities for improvement that UU is missing, send an email to: edi.office@uu.nl.

Besides this, the EDI office, Utrecht University is also working on specific actions over the next five years to make sure inclusion of students and staff part of LGBTQI+ community is ensured:

- At least one all-gender restroom in every university building;
- Allowing students and staff to choose how their gender is recorded and what pronouns they are addressed with;
- Agreements on transition leave;
- Appoint a diversity network coordinator by 2021;
- Explore the need for safe space meetings and a training offer on sexual safety.

On another matter, racism and ethnic discrimination have remained a topic of debate in the past two years. To open up the dialogue on racism in the workplace of the University Corporate Offices (UBD), the EDI office has organised the series 'BLM @UBD: Discrimination affects us all'. In this light, the EDI office launched activities that will have an impact on UU students and staff.

Source: https://www.uu.nl/en/organisation/equality-diversity-inclusion/current-affairs/rainbow-bike-path

ALUMNA SPEAKING

FROM CSND TO ASTRAZENECA

Hi everyone,
I am happy to share my experiences during my study and in my journey towards working in a pharmaceutical company, AstraZeneca. And, more importantly, to show you what is possible besides pursuing a career in academia. The Stucom asked me to write about the choices I made towards the job I am currently doing. To be completely honest: it took me to a place I did not expect!

In 2013 I applied for the veterinary medicine bachelor, but was not selected. After that, Biology caught my eye and I must say: I am very happy it did! I enjoyed the Biology bachelor a lot because of the diversity of courses that were offered. In my third year I decided to focus more on the molecular and cellular biology and to apply for the CSnD master program. And luckily I got in!

I performed my major internship in the lab of Prof. Alain de Bruin of the department of Veterinary Science (combo!) doing fundamental research focusing on the role of E2F transcription factors on the cell cycle. Although I enjoyed my time in this lab, I noticed that I wanted to do more translational research. In my search for a minor internship, I focused on finding a project in which I could do in vivo experiments with mouse models. A possibility arose in the lab of Rune Toftgård at the Karolinska Institutet in Stockholm, Sweden (you can read more about my experience abroad in the CSND newsletter from June 2018). Under the supervision of Marco Gerling I studied the tumor microenvironment and developed a mouse model to study stroma cells of pancreatic liver metastasis. I really enjoyed this internship as it combined my interest in molecular and cellular processes with more practical and translational research. As this was my second internship, I had to start thinking about what I would like to do after my graduation. The big question: to PhD or not to PhD? In the Netherlands, I felt that everything was stimulating me to pursue a career in academia. However, in Stockholm my supervisor Marco showed me that a PhD is not the only possibility for Biomedical Sciences students. This left me with even more questions… what else is possible besides a PhD? What are my options?

But before I had to make a decision, the writing assignment was waiting for me back home. As I really enjoyed my research project in Stockholm, I decided to use this opportunity to explore the same research area, the tumor microenvironment, in the Netherlands. I performed my writing assignment under the supervision of CSND alumni Dieuwke Marvin in the lab of Dr. Laila Ritsma. I enjoyed learning about this topic and got energized by working together with Laila and Dieuwke. So, at the end of my writing assignment, I asked Laila about PhD possibilities in her lab. Unfortunately, she did not have any possibilities at that time.

And now? I was approaching my graduation but I was not really sure what I wanted to do next.

ROSAN HEIJBOER

I would like to do a PhD, but only if I really liked the subject, the lab and the supervisor. After graduating, I decided to start a temporary job at the UMC Utrecht and at the same time try to find a PhD that suited me. During this time, I talked with different PIs about possibilities and I responded to different PhD positions. However, I could not find anything that suited me. In the meantime, I had grown to the role of project administrator/leader at the UMC. This made me think back to Marco (the Swedisch supervisor): I can do so much more than stay in academia with my master degree.

At this time I decided to set aside my search for a PhD position and instead focus on exploring the business opportunities for biomedical science students. Quite fast, I explored the possibilities of clinical research. Then it all went very fast: I contacted some of my classmates from CSND who had started working outside of academia and one of them told me about a vacancy at AstraZeneca on the clinical research department. I contacted the recruiter working for AstraZeneca, I had an interview a week later and was offered the job as a Clinical Study Assistant the same day!

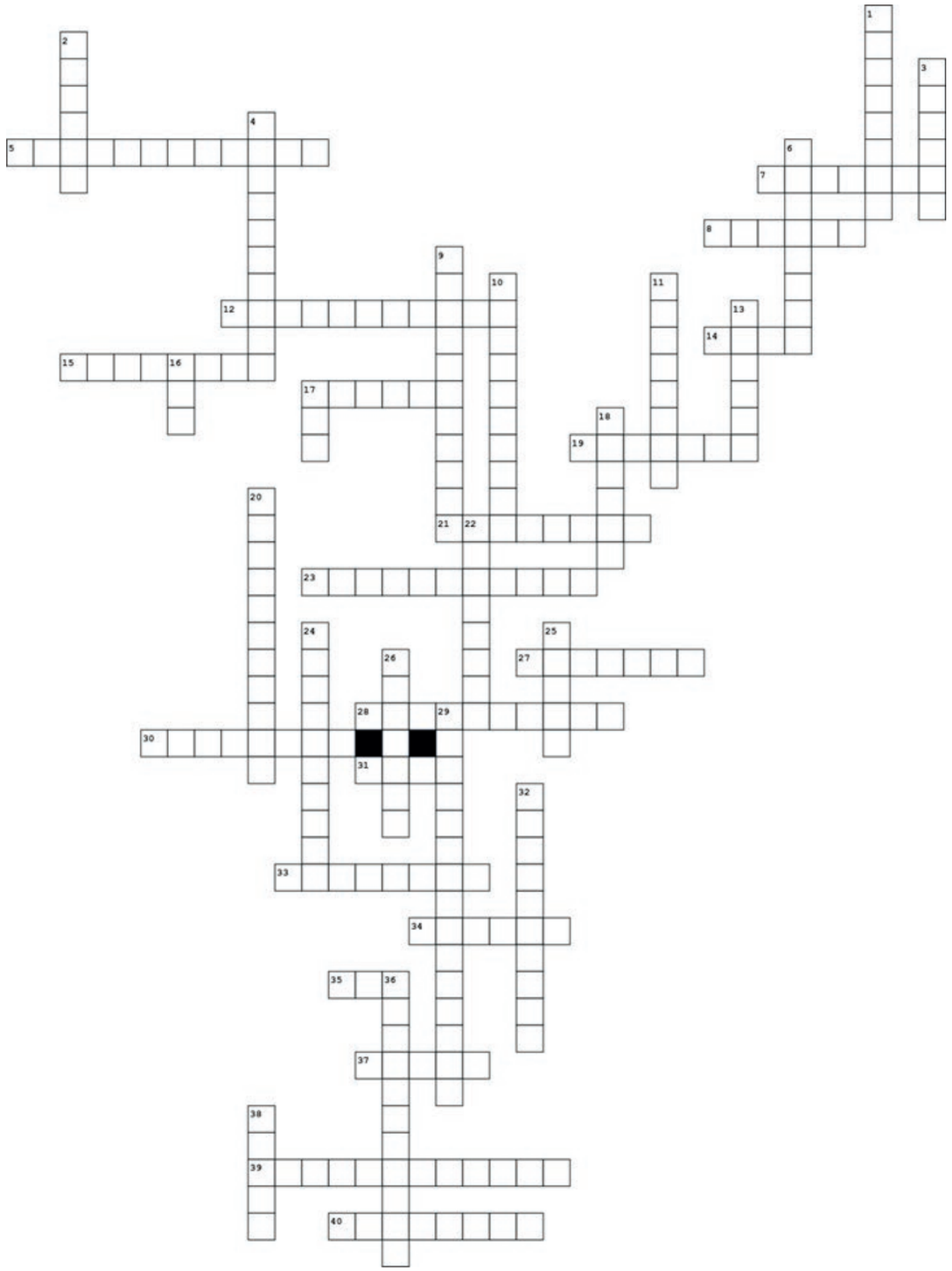
My first job was a fact! Since February 2020 I am working as a Clinical Study Assistant for AstraZeneca. Together with a local study manager and a clinical research associate, we are responsible for getting approval for clinical trials, setting up clinical trials in the hospitals and monitoring the study progress. AstraZeneca has several new medicines in development, for which we need a lot of clinical data.

As a Clinical Study Assistant I am mostly responsible for the administrative part of the clinical study. Although that might seem far from the fundamental science, it is a great opportunity to start as a recently graduated biomedical sciences student in clinical research. It gives a great perspective of what clinical research actually is and gives me an insight into the pharmaceutical world. Working here also showed me that there are many possibilities within a pharmaceutical company for biomedical sciences students, within clinical research and in other departments like for example patient safety or medical affairs. It could be a jumpstart to a career in the pharmaceutical world.

What I like about this job is that I am contributing to getting the right medicines to the patients. As I mentioned in the beginning of this story, I realized that I like translational research. Instead of studying cell processes, here we are taking the research to the patients and making a difference for them in their daily life. Although I did not plan to end up in clinical research at a pharmaceutical company, I am very happy that I did and I hope to grow in clinical research for many years!

I want to wish you all the best of luck in making your career choices. I hope my story shows a different perspective of what is possible outside of academia. And I would advise all of you to explore these options already during your masters. Feel free to contact me if you have any questions.

Written by Rosan Heijboer



THE GREAT CSDB CROSSWORD PUZZLE

Across

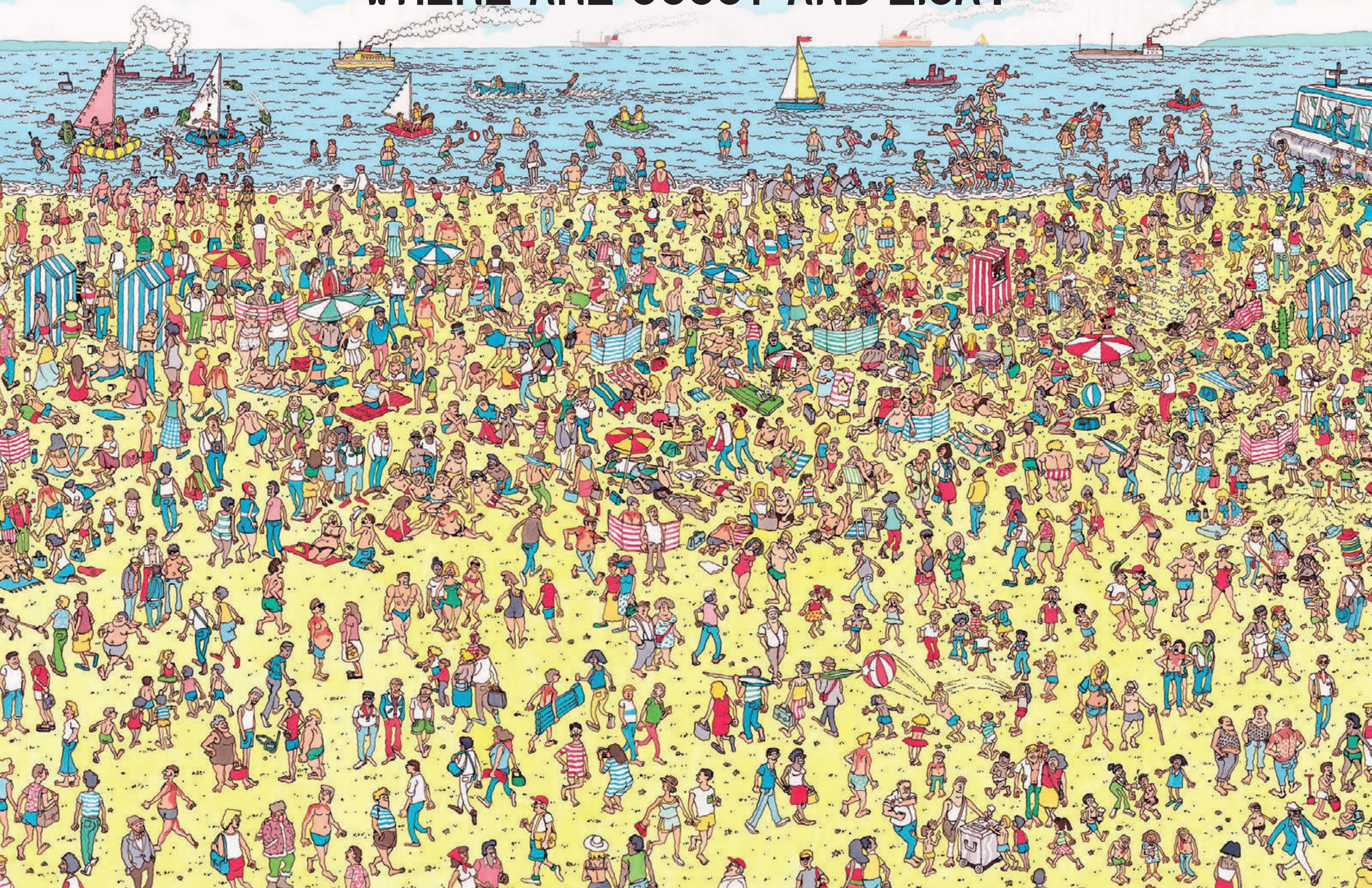
5. The process of artificially introducing nucleic acids into cells
7. A substance used to stimulate the production of antibodies and provide immunity against one or several diseases
8. The name of the best student's committee of all the GSLS masters
12. A broad-spectrum antibiotic that is commonly used for an inducible gene expression system
14. A technique to study specific cell populations based on phenotypes detected by flow cytometry
15. Method to separate proteins based on their molecular weight
17. A programming language used for data analytics
19. A regulatory substance produced in an organism and transported in tissue fluids such as blood to stimulate specific cells or tissues into action
21. A process in which introns are removed from the pre-mRNA transcript
23. The branch of medicine dealing with the skin
27. A slender tube attached to or incorporating a bulb, for transferring small quantities of liquid
28. A machine with a rapidly rotating container that applies centrifugal force to its contents, typically to separate fluids of different densities
30. A gelatinous protein mixture used to culture organoids
31. The first name of our new master coordinator
33. Cell from which all other cells with specialized functions are generated
34. A segment of a DNA or RNA molecule which does not code for proteins and interrupts the sequence of genes
35. Epidermal growth factor
37. The portion of the digestive tract that is posterior to the stomach and extends to the rectum
39. The powerhouse of the cell
40. A substance used to embed tissue

Down

1. A 3D multicellular in vitro tissue construct that mimics its corresponding in vivo organ
2. The surname of our former master coordinator
3. A free search engine accessing primarily the database of references and abstracts on life sciences and biomedical topics
4. An optical instrument used for viewing very small objects
6. A large gland behind the stomach which secretes digestive enzymes into the duodenum
9. The study of changes in organisms caused by modification of gene expression rather than alteration of the genetic code itself
10. A type of white blood cell that helps fighting infection by ingesting microorganisms and releasing enzymes that kill the microorganisms
11. A cell organelle that contains digestive enzymes
13. The world's leading multidisciplinary science journal
16. The guardian of the genome
17. A laboratory technique used to make multiple copies of a segment of DNA
18. Surname of one of the leading scientists who discovered the CRISPR/Cas9 system
20. A lightly packed form of chromatin that is enriched in genes
22. DNA sequence that defines where transcription of a gene by RNA polymerase begins
24. The addition or deletion of one or more nucleotides in a strand of DNA, which shifts the codon triplets of the genetic code
25. An infective agent that typically consists of a nucleic acid molecule in a protein coat
26. Surname of the discoverer of penicillin
29. A surgical procedure in which tissue or an organ is transferred from one person to the other
32. A threadlike structure of nucleic acids and protein found in the nucleus of most living cells, carrying genetic information in the form of genes
36. A protein or chemical compound that can re-emit light upon light excitation
38. A colourless fluid containing white blood cells, which bathes the tissues and drains back into the bloodstream

Made by Remco Sleiderink

WHERE ARE JOOST AND LISA?



SEMINAR DR. PUTKER

The third StuCom seminar took place on Monday May 3th, with Dr. Marrit Putker as our speaker. Her story was titled 'From academia to industry; Advancing preclinical oncology drug development using patient-derived organoids'. During the seminar she first told us about her academic career starting with a PhD in the lab of Boudewijn Burgering. Her PhD taught her that once a technique works: more papers will follow, so persistence is key. She also told us that she spent less time on her PhD thesis, and more on a fellowship for her future career. In this way, you can bring money to the lab of your choice.

Her choice was to do a postdoc on circadian cyles in Cambridge. During a journal club in her PhD, she came across the concept of circadian redox cycles, which she found super interesting. A circadian cycle is a natural, internal process that regulates the sleep–wake cycle and repeats roughly every 24 hours. This also occurs on the cellular level. The Cambridge lab was nice, small (4 people), very productive, and full of good collaborations (which gets you a lot of papers). However, it took several years to get the publication on circadian cycles, as not everyone is also happy with it's message.

She continued with circadian timekeeping, but then in cancer in her second postdoc in the lab of Hans Clevers. Here she established adrenal and pituitary gland organoid systems, and saw that CRC organoids do not exhibit canonical timekeeping. The mechanism behind this needs further investigation, but Marrit choose to leave this up to someone else.

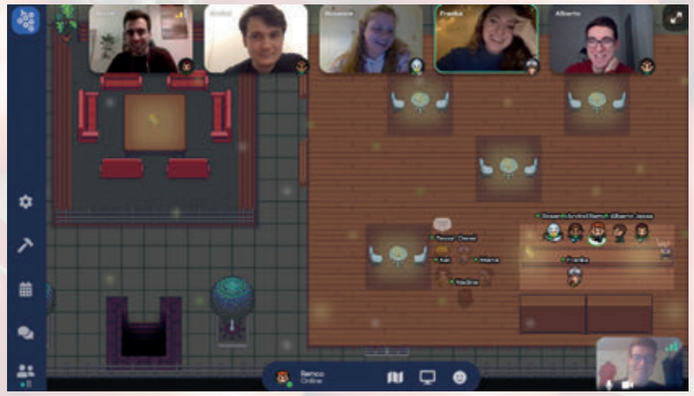
She got the opportunity to set up a new organoid lab in Utrecht for Crown Bioscience. The purpose of this organoid lab is to help in bridging the gap between the lab and the clinic, via patient-derived models to improve translatability of preclinical research (by doing drug screens on organoids). At this stage, Marrit is an (senior) organoid scientist being a janitor and director in one. She is developing novel organoid technology, designing and running commercial studies, and helping with marketing and sales. She likes the different way of doing research, which is a lot quicker and very exciting.

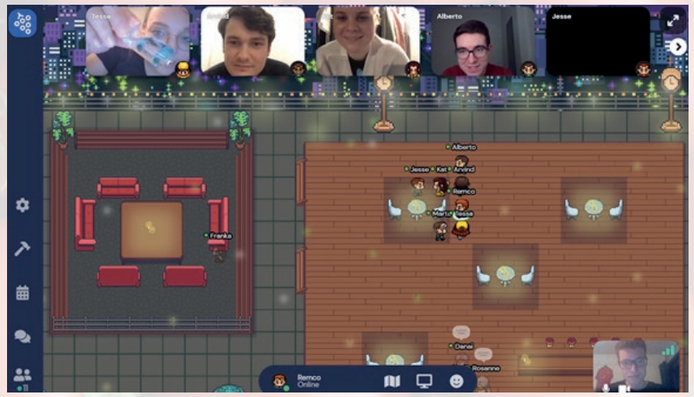
We want to thank Marrit for her interesting seminar!

Written by Ireen Kal

ONLINE BORREL

On Thursday, the 8th of April, it was time for the very first Borrel organized by this year's StuCom. Starting from 9 PM, CSDB students were free to join the Borrel via GatherTown. GatherTown turned out to be a very nice platform, where everyone could design their own character, walk around in a room with fellow CSDB students and walk up to each other in order to see and talk to each other. Not so different as a real life borrel after all! It was great to see that many people participated in the borrel, including our master coordinator Joost and our future master coordinator Lisa, to have an evening of fun, drinks and schmooze with fellow CSDB master students. We would like to thank everyone for joining us on this wonderful evening and we hope to see you for the next Social Activity!





Written by Remco Sleiderink

RETREAT

Past June, the yearly CSDB retreat took place again! Usually this trip takes place to another city, or even country, where we visit some companies, have the poster presentations, and a lot of fun! However due to the Covid restrictions, we first decided to plan the retreat to Maastricht. Unfortunately, even the restrictions at that time didn't allow for us to go, so we planned a hybrid restreat! We met up in real life for seminars, workshop, and dinner. The next day we had online poster presentations, a city game, and a goodbye dinner and borrel for Joost!

THURSDAY 10 JUNE 2021

On Thursday, we could finally see each other in real life again. During an interactive lecture by Janneke Dubbelboer we were all faced with the facts: maybe she did not yawn after all, and Dutch humour is not funny. Her talk included a video and lots of opportunities to shout what comes to mind. Things like "Pineapple pizza" were definitely answers she could work with. Besides 'My Big Fat Greek Wedding (Perhaps enthusiastically interpreted as my Big Fat American Gypsy Weddings, thank you TLC), she managed to combine anecdotes with serious explanations of generalization vs. stereotyping, and many more spot-on examples. Including an interesting view on the topography of the Netherlands and the Bible Belt, where no one can blame you if you guessed The Hague where Katwijk was meant to be. After all, a very nice get-together in the Blue Lecture Hall. Then, we could all get some chips and drinks, of which some were opened super, duper smoothly during the next scientific talk. This was an interesting talk by Prof. Anna Alemany, in which she talked about unveiling cell fate commitment with molecular recorders. She was very enthusiastic about talking about her approaches, and more than happy to answer our remaining questions. In the process of setting up her own lab, we wish her the best, and hope that there will be more people to accompany her after these corona times. Last, but not least, we listened to Prof. Karin de Visser, who talked

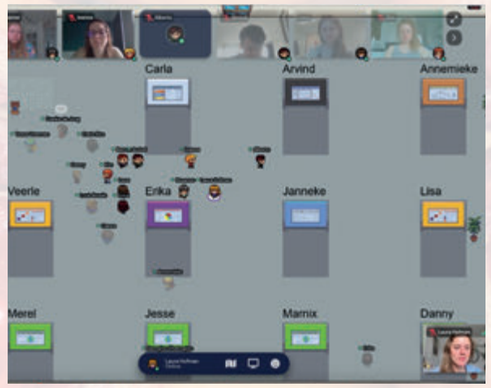
Written by Rosanne Oskam

RETREAT

about the complexity of metastatic breast cancer. She spoke about mouse models, histology and a more clinical perspective for tailored immune intervention. We were honoured to have her there. Then, it was time to leave for dinner at the Lik. We enjoyed our burgers, and happily drank beers and wine, while enjoying the nice weather. We want to thank you all for being there and hope you enjoyed it too!

FRIDAY 11 JUNE 2021

Friday, we started bright and early with the presentations of our graphical abstracts in Gathertown. The highlights of the morning were the presentations of Carla, Erika and Jesse. Gathertown worked better than we could have ever hoped, you could walk past all the graphical abstracts and choose with whom you wanted to speak about their work. Everybody was very interested in each other's work, so the 30 minutes per round were way to short to catch up with all the other students.



After lunch everybody was ready for the first physical activity of the year: Who is the Sneak? also known as the Dutch television game 'Wie is de Mol'. We started in smaller groups from Park Lepelenburg with a short riddle. For some groups, the riddle was harder to solve then others, but in the end, everybody solved the riddle and started taking photographs in the city. Some sneaks started right away with sneaking around, because in Park Lepelenburg already some pages, with pictures that needed to be taken, were thrown away. Another Sneak came up with a plan to send all the photographs to her mother instead of to the StuCom, by changing her mothers name and photograph on WhatsApp. In the end all groups arrived at Nijntje Square and, after a questionnaire and a puzzle to solve, the groups took off to either Neude or Janskerkhof. There they translated a few sentences and took off to Dom Square. For the fourth game, the groups needed to spread a gossip about a technician, who stole PBS to make sure that she

Written by Nadine Aafjes

RETREAT

could take a great picture for the StuCom newsletter. Of course, great stories came out of it, but all had a different story line. Thereafter, the easiest game to earn money was to simply take the die, that was in the goodie bag all groups had, and throw it. If only the die was still in the bag, some were spread at Nijntje Square and another one was found in Alberto's bag, oops no money for those groups. The last task was to take a group picture in which everybody looked at the camera, if one person looked away no money was earned. The last moment for the Sneak to limit the money earned. After the big reveal of all Sneaks on Dom Square, we headed to Beatrix Park to have an Indian dinner of Taj Mahal and have a drink together.

After dinner it was time to say goodbye to Joost. We started with a song 'Our dear Joost is retiring' and, thereafter, there was a speech of Laura and Remco and lots of presents. We got a CSDB vest for Joost and Lisa, three bottles of wine, a photography book, a gift card for new camera equipment, a disposable camera with photographs of the retreat and, the icing of the cake, an album with stories of students from the last nine years. It was an evening to remember, and we hope Joost is enjoying his well deserved retirement.

We, as StuCom, want to thank you for the enthusiasm and good vibe we had during our retreat! We enjoyed seeing all of you face to face again and hope to have many more activities upcoming year. We enjoyed every part of it and hope you did too!

If you want to see the photobook we made for Joost, including all of the contributions of students and alumni, here is the link:
https://www.albelli.nl/onlinefotoboek-bekijken?widgetId=dee7f28e-f17c-4164-af03-4d186f44e3c1

JOOST'S GOODBYE

OUR DEAR JOOST IS RETIRING

Melody of Twinke Twinkle Little Star

Our dear Joost is retiring
After nine years of helping
With a smile and a tear
Leaving us with a beer
Our dear Joost is retiring
After nine years of helping

You were there for everyone
Now the small talks will be gone
Your new life will begin
No e-mails coming in
You were there for everyone
Now the small talks will be gone

Enjoy your life with Cathy
And don't forget your doggy
Take a lot of photographs
Of the place where you laugh
Enjoy your life with Cathy
And don't forget your doggy

You are leaving with a grin
Because Lisa will begin
Still there for some questions
Maybe give suggestions
You are leaving with a grin
Because Lisa will begin

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Written by Nadine Aafjes

OUR LAST ACTIVITY: BBQ

Last September 30th, we organised our last activity: a fun, cold and windy BBQ. It was not the best summer weather, but we were very lucky, as the rest of the week it was pouring rain. We invited every CSDB student, the old and the new. 40 students decided to join us at the Cambridgefields on Utrecht Science Park.

With loads of meat and vegetarian meat, beers, and drinks, we sat together and talked loads. Some people are finishing their internships and starting their second internships, while the first years are just now starting with their first internship. Even Joost came by for a quick chat, while he just returned from Paris in the morning! After the BBQ, we went to the infamous Cambridgebar. If you've never been: go! They sell their drinks for the cheapest prices you can find especially the Long Island Ice Teas :-) We found it really fun to see and talk to you all again!

SCIENCE: MACHINE LEARNING

MACHINE LEARNING HERALDS A NEW CHAPTER FOR STRUCTURAL BIOLOGY

For decades, biomedical research has been bottlenecked by the incapacity of correctly predicting a protein 3D structure. This is now starting to change thanks to machine learning.
Until recently, structures could only be guessed by comparing them to their homologues, or though the long and painstaking process of X-ray crystallography. Alternative methods, like cryo-EM, only partially alleviating the problem. Thankfully, biology is parsimonious, so the structure of a protein could be modelled once that of one of its homologues was known. But changes of even individual ammino acids (like from KRAS to $KRAS^{G12C}$), can have an outsized influence on an organism, and are not necessarily easy to model.
If the structure isn't good enough, it's impossible to tailor a drug to that specific protein, and our only choice left for finding new ones is to perform massive screens, with risible success rates. A workaround is to derive the structure experimentally, which requires moths or even years of work, but can yield success: the first inhibitor of mutated KRAS, an oncogene considered -until then- pretty much undruggable, was derived from crystallography.
Now, machine learning is stepping in. In the last week, not one, but two very promising algorithms have gone public. DeepMind's AlphaFold, which made headlines at last year CASP (the premier competition for protein structure modeling), has now released its code publicly, and roseTTaFold has made available a server for scientist to obtain predictions of structures from.
These two instruments are both neural networks, that is, they are structured like a developing neural circuit. Just like a neural circuit builds and then prunes connections until it settles in an optimal configuration, a neural network build and prunes connection between nodes, eventually settling in the configuration that produces the most satisfactory results.
The main limitation of these kinds of algorithms are that, just like biological circuitry, they require lots of data to train on, but unlike our brains, they lack the flexibility to adapt to unfamiliar environments, making them a one-job tool. On the other hand, this specificity permits them to become extremely good and fast, thus returning a structure in mere hours or even minutes rather than months or years.
These algorithms - and their successors - will help immensely drug research. How long it takes for these advances to translate into drugs though depend on how fast the know-how required to use these tools to the fullest is transferred. And on this front things are looking bright: the code has been made publicly available, roseTTafold has set up a public server and Deepmind has started a collaboration with the Drugs for Neglected Diseases Initiative to accelerate drug development for common life-threatening, yet understudied diseases such as Chagas'.
While it's too early to tell exactly how drug discovery and the field of structural biology will shape up in the next few years, it's clear that machine learning will play a clear and growing role in their advance.

Written by Alberto Griffa

MEET THE STUCOM XL

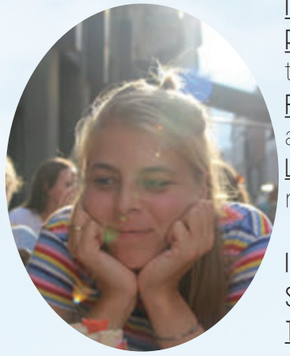
Although you have had the chance to get to know us during the retreat and other activities, there is only one way to truly get to know someone: random questions!
In this extra long "meet the StuCom" edition, we will be asking Remco, Laura, Ireen, Tessa and Franka what their opinion is on a few interesting topics… Next edition, it will be up to the new StuCom '21-'22 to introduce themselves!

IF YOU HAD ONLY ONE SENTENCE TO DESCRIBE YOURSEL, DO IT NOW:

TESSA: I am probably one of the first to laugh, I make stupid jokes, like to organise activities and create stuff, and always willing to help (I will probably drop my report writing to do so, even when that means I need to work till after midnight)
IREEN: I do not really know how to describe myself in just one sentence – that is probably not enough for me (kidding, she did not know what to say so we filled this in for her)
REMCO: Hi! I would describe myself as a proud Zwollenaar who enjoys life by combining a passion for travelling, football and science.
FRANKA: Hey! I am an embryology enthusiast that loves animals, the colour black, going out for dinner and (obviously) spends way too much time procrastinating by answering questionnaires.
LAURA: Hi! My name is Laura, I am in the middle of my quarter life crisis - working on that bucket list - and aim to be versatile: scientist, photographer, activist, rower, (Ro)cyclist and whiskey lover.

DO YOU THINK IT IS WEIRD TO ADD PINEAPPLE TO YOUR PIZZA?

TESSA: I wonder if the person that tried it first is just like me, thinking: if pineapple is nice, and pizza is nice, why not add it together? However I don't like pineapple.



IREEN: Haha nope #teampizzahawaii
REMCO: Not at all! Everyone can decide for themselves what they want to add to their pizza, right?
FRANKA: No, if that is what you are into… I would still think it is a bit weird sorry
LAURA: No, thinking outside of the box is the way to live (sorry not sorry Alberto).

IMAGINE THAT THE WORLD WAS GOING TO END TOMORROW, HOW WOULD YOU SPEND YOUR LAST DAY?

TESSA: Depressing thought this one… I would organize a huge student gala party with everyone that I care about with a festival vibe and end with fireworks at the beach

OUR LAST MOMENT OF FAME

IREEN: I would do some sports in the morning, then chilling in a park with friends and family and eating lots of snacks in the afternoon, and go to a party with them in the evening.
REMCO: I would spend my last day doing a road-trip across the United States, something that has been on my bucket list for a very long time!
FRANKA: I would take my dogs for a swim, party with my friends, go see my family and buy the most hideously expensive stuff.
LAURA: I would fly to Southern Africa and go diving, paragliding, skydiving, bungeejumping and dancing.

WOULD YOU RATHER GET STUCK IN A ROLLERCOASTER OR HORRIBLY LOST IN A HUGE THEME PARK?

TESSA: I guess lost in a huge theme park, then I'm not stuck in one place and I can even hop on more rides
IREEN: I'd rather get lost in a theme park because then I can still enjoy all the attractions (on my own or make some new friends!)
REMCO: I would rather get lost in a huge theme park, as I would still have the ability to decide where I am going.
FRANKA: Can I still enjoy the theme park? Because then I would choose the theme park.
LAURA: The latter; getting lost can be a good thing sometimes.

WHAT IS SOMETHING YOU WANT TO LEARN OR WISH YOU WERE BETTER AT?

TESSA: It would be awesome to communicate in so many different languages
IREEN: To play an instrument (guitar probably)!
REMCO: I'd love to learn how to play the keyboard that has been in my room for over a year already.
FRANKA: Roller skating!
LAURA: Hmmm, I would like to learn more about stoicism and how to be resilient. And I would like to have a second career in storytelling photography.

WOULD YOU CRYOPRESERVE YOUR BODY RIGHT NOW, KNOWING THAT ONE DAY YOU WILL WAKE UP IN FUTURE?

TESSA: I'm not so sure the future will be better and I would be scared that I could not wake up and then I couldn't have lived a longer life.

MEET THE STUCOM XL

IREEN: No thanks. Then everyone I know would be gone
REMCO: Hahaha such a great question, but no thanks. I already feel bad for my organoids when I cryopreserve those.
FRANKA: No, I would rather be the person cryopreserving others – I like my life as it is now.
LAURA: Right now? I think I would rather have a time machine (- but my curiosity drives me towards saying yes)…

WOULD YOU RATHER HAVE UNLIMITED INTERNATIONAL FIRST CLASS TICKETS OR NEVER HAVE TO PAY FOR FOOD AT RESTAURANTS?
TESSA: Unlimited traveling!! And then imagine the amount of money you can spend on food with the money you saved from flying around the world.
IREEN: Never have to pay for food, because you could try out new restaurants ALL the time
REMCO: I will definitely go for unlimited international first-class tickets, although I would have to make more time free to actually benefit from that…
FRANKA: Never have to pay for food, obviously! That would both be better for my wallet and the environment haha (I think I would fly everywhere if I had unlimited tickets)
LAURA: Unlimited international first-class tickets, definitely (to be used sustainably of course ;-)).

LAST QUESTION: IF YOU WERE TO NAME ONE LAB SKILL THAT YOU ARE VERY GOOD AT, WHAT WOULD IT BE?
TESSA: Well, at least not the pretty Matrigel dots in organoid culture.
IREEN: MULTITASKING
REMCO: Difficult one… but I consider myself particularly gifted at removing the supernatant from a pellet.
FRANKA: If I may so so myself, I feel like my staining skills are quite on point now!
LAURA: That has to be getting creative with making imaging chambers with your everyday household tools. Oh, and reviving my organoids.

That was all you could get to know about the Stucom '20-'21 members for now! What would your answers to the questions be?!

RECIPE LGBTIRAMISU

This tiramisu might not be rainbow coloured, but it is Alberto's Italian recipe!

TIRAMISU PROTOCOL:
Mascarpone cheese 500g
4 Eggs
Sugar 100g
Ladyfinger biscuits ("Savoiardi") 300g
Coffee
Cocoa powder

Separate the white from the yolk of the eggs. Whisk the yolks together with half of the sugar, until it forms a clear soft cream. While continuing to whisk, gradually add the mascarpone, until the creams becomes dense. Clean the whisks well.
Whisk up the egg whites while adding the remaining sugar, until they are quite stiff (they shouldn't move if you tilt the bowl).
Add the whisked whites on top of the yolk-mascarpone cream, and slowly mix them together, by stirring the mixture with an upwards motion. The cream is now ready.
Spread a layer of cream on the bottom of a casserole dish.
Dip the ladyfinger briefly in the coffee for a few seconds, then arrange them in rows to form a continuous layer. Cover the first layer of ladyfingers with a layer of cream, and repeat.
Cover the final layer with cream and a dusting of cocoa powder.
Let rest in the fridge for at least a couple hours. Will keep in the fridge for up to 2 days
Enjoy!

RECIPE: RAINBOW

RAINBOW SPRING ROLLS WITH GINGER PEANUT SAUCE

Light, Fresh, Healthy, Crunchy, Loaded with veggies and fresh herbs. 30-minute spring rolls filled with a rainbow assortment of fruit, vegetables and fresh herbs. Served with a spicy-sweet ginger peanut sauce! https://minimalistbaker.com/

Mint – antioxidants + calms stomach
Cilantro – Vitamin C, A + antioxidants
Bell Pepper – vitamin C, carotenoids + fiber
Mango – vitamin C, A, fiber + antioxidants
Carrot – beta carotene + vitamin A
Beets – fiber + antioxidants

Spring Rolls Ingredients (8 spring rolls)

- 7-8 rice spring roll papers
- 1 medium beet (skin removed and finely grated)
- 1/2 yellow and red pepper (seeded // thinly sliced)
- 1 cup carrots (thinly sliced)
- 1 ripe mango (cubed*)
- 1 large bunch mint leaves
- 1 large bunch cilantro (cut from stems)
- 8 ounces extra-firm tofu or cooked vermicelli noodles (optional // or use 1 cup cooked quinoa in place of 8 ounces tofu or rice noodles)

Ginger Peanut Sauce Ingredients

- 1/2 cup salted natural peanut or almond butter
- 1 1/2 Tbsp soy sauce (tamari for gluten-free eaters)
- 2-3 Tbsp brown sugar or maple syrup (add to taste)
- 1/2 medium lime, juiced
- 1/2 tsp chili garlic sauce
- 1/2 tsp fresh grated ginger (optional)
- Hot water (to thin)

Instructions

Prep veggies and set aside for easy assembly.
Bring 3 cups water to a boil in a saucepan or kettle and set aside to cool slightly for cooking rice papers.
Prepare peanut sauce by adding all ingredients except water to a mixing bowl and whisking. Add hot water 1 Tbsp at a time and whisk until desired consistency is achieved (should be pourable but thick). Set aside.

SPRING ROLLS

Add hot water to a large shallow dish and submerge a rice paper to soften for about 10-20 seconds. If you let it go too long or if your water is too hot, they will get too fragile to work with.
Once soft, transfer to a clean, slightly damp surface (like a wooden cutting board), and gently smooth out into a circle.
Add carrots, peppers, mango, beets, and a healthy handful each cilantro and mint (and any other desired fillings). Fold bottom over the fillings, then gently roll over once and fold in the side to seal, then roll until completely sealed. Place on a serving plate and top with a room temperature damp towel to keep fresh.
Repeat process until all toppings are used – about 7 or 8 (amount as original recipe is written // adjust if altering batch size). Serve with dipping sauce and sriracha, if desired.
Store leftovers covered in the fridge for up to a couple days, though best when fresh.

STUCOLOPHON

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