StuCom

Newsletter

December 2020

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Introduction

Dear CSDB students,

Welcome to our first newsletter! We hope you are doing well and are looking forward to the holidays and the New Year. We hope this newsletter brings you something fun to read during this third lockdown, so check out our different sections:

Get to know Joost in our Winter themed Newsletter

We were all shaken to hear our dear Program Coordinator Joost Koedam is leaving us next year! StuCom '20-'21 is paying a tribute to Joost by featuring him in our seasonal StuCom Newsletter, read his StuColumn with Joost on page 6 to find out more!

Coping with the COVID-19 pandemic

Nearing the beginning of the christmas holiday and the end of the year, we are still struggling with the current COVID-19 pandemic hence find out about the latest research (page 16), how other students have coped with this (page 10) and more tips that will help you during lockdown!

Embrace the holiday season for a great start of 2021

Therefore , let the joy of the holidays fill your life with this winter edition of the StuCom Newsletter with winter recipes, puzzles and more stories about our previous activities!

Of course, the newsletter is packed with more content for you to enjoy during your holiday, read further to find what it is all about! Keep safe, stay in touch with your loved ones and enjoy reading the Winter edition of StuCom Newsletter.

All the best wishes for the upcoming year,

StuCom 20'-21' (Alberto, Farid, Franka, Ireen, Laura, Nadine, Remco, Rosanne and Tessa)

Meet the StuCom

To make it possible for you to get to know our StuCom members a bit better, we will sit down with a couple of them for every newsletter and ask them some questions. Have fun reading the short interview with Alberto and Rosanne below!

Hey! Who are you?
Alberto: Hi! I'm Alberto Griffa, and I'm from Italy.
Rosanne: I'm Rosanne Oskam. I was born in Utrecht, but my parents have always lived in IJsselstein. Since 2018 I live in Utrecht with two roommates and our Christmas cactus (which was there before we even had a couch)

What is your StuCom function? And why did you choose this?
Alberto: I'm the Chair of the StuCom. As such, I'm responsible for scheduling and chairing our meetings. I'm also a member of the Activities committee, which organizes social events for all CSDB students.
Rosanne: I am part of the Activities and Retreat committee. I chose these, because I thought it would be nice to organize smaller things throughout the year, as well as one big event.

What brought you to the CSDB Master?
Alberto: I was finishing up my Bachelor's in Biotechnology in Turin and I had decided to do my Master's abroad. After some googling, I found this amazing program, applied and was accepted (thanks Joost 😉).
Rosanne: I studied the Bachelor Biomedical Sciences in Utrecht, and after following several courses in cancer biology and developmental biology, this seemed to be the best fit. I also didn't really have a second choice, so I am glad I got in.

Would you like to play a game? Let's play would you rather!
Alberto: Uh, okay...
Rosanne: As long as it is not Parcheesi.

Would you rather always be 10 minutes late or always be 20 minutes early?
Alberto: 20 minutes early, of course.
Rosanne: I would love to always be 20 minutes early. There's so many little

Alberto & Rosanne

things you could do then, like drink tea, keep up your Duolingo streak, reading, or just listening to music. In reality, I will probably snooze though. Maybe I will give it a try.

Would you rather have the morning (6-14h) or evening (14-22h) lab shift?
Alberto: I'd rather have the evening shift.
Rosanne: I would go for the early lab shift, although I am not sure whether my brain functions at 6 o'clock. I am definitely not a morning person, but I appreciate having dinner with friends a lot more. I think you would get used to it. And otherwise, there are afternoons for powernaps.

Would you rather go back to age 5 with everything you know now or already know everything your future self will learn?
Alberto: I'm not sure which is worse: a 5 years old know-it-all or a prematurely grumpy man who has seen everything already. Maybe the 5 years old, as he still has a future full of wonders ahead of him.
Rosanne: Wow, this is weird to think about. With option 1, what could I apply this knowledge to? I think I played outside all day back then. I would go for the second option.

So, we are in yet another lockdown. What will you be doing to amuse yourself during this strange winter? (Any tips for the readers?)
Alberto: I will spend time with my family and continue video calling my friends. My advice to anyone is to keep in contact with your friends and stay busy. Time flies when you are not staring at a clock. And with this fortune cookie wisdom, bye! Stay safe and Enjoy the holidays!
Rosanne: I'm glad I could go to Lelystad for a weekend getaway. For the rest I will make DIY macrame plant hangers. I guess after this holiday, my house and those of my friends, will be filled by them. Happy holidays everyone!

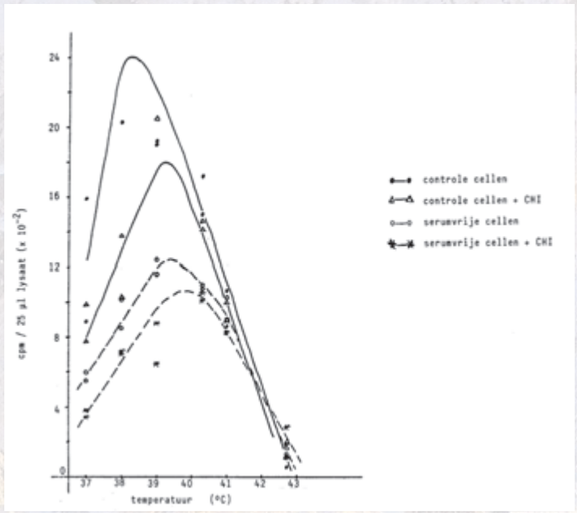
What would you rather-questions would you like to have answered by the StuCom next? Let us know!

StuColumn with Joost

As you all may know, our beloved Joost has decided to stop his work as a coordinator of CSDB as of next summer, and he will enjoy 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. In the column he will give you insights of his career as a scientist, teacher, and coordinator.

The StuCom gave me my own personal column! In this first contribution I thought I would give you a flavor of what doing science looked like 40 years ago, when I got into this business. Of course, this will also give you an impression of my career. Then, in later installments, I can give you some insight into the winding road that led to my current position.

I studied Biology here in Utrecht, and in 1980 I started the first of 3 internships. Yes, in those day the equivalent of what is now the Master's consisted of 3 internships, plus a literature review. Since I had chosen a specialty that was somewhat parallel with the Medical School, I was allowed to do 2 of those internships in the academic hospital. That hospital was called AZU at the time, and was located on the Catharijnesingel. I did my first internship in the Kruyt building (it was called Transitorium 3 then) and I studied the regulation of translation of an enzyme called tyrosine aminotransferase (TAT) in Reuber H35 rat hepatoma cells.



Picture: Hand-drawn figures! The report was written in Dutch and typed on my Dad's electric typewriter.

Joost's Early Days

I specifically looked at the effects of hyperthermia. Heat shock proteins had just been discovered and I analyzed them with a new technique, 2D electrophoresis (isoelectric focussing, followed by SDS-PAGE and silver staining). But first, I had to learn basic lab techniques like pipetting (!), cell culture and the Lowry protein assay. Then I had to master more 'advanced' procedures like 3H-leucine incorporation in proteins and liquid scintillation counting, enzyme assays, immunoprecipitation and ultracentrifugation with sucrose gradient to obtain polyribosome profiles. It is amazing how much I have worked with radioactivity during those years. Luckily that has been mostly replaced by less dangerous methods and reagents.

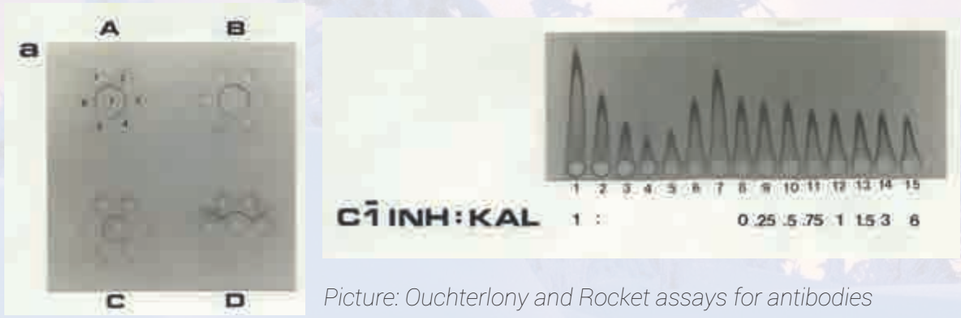
This first internship was quite a hardship for me. The results were so-so, the atmosphere in the research group was less than pleasant and supervision was largely non-existent. So when I received lots of comments on my (hand-written!) first draft of my report, I kind of lost courage. I had already started my second internship and this unfinished business hung over me like a black cloud for 2 years. During my third internship I received a job offer for a PhD position, so I had to graduate quickly. The PhD student who had supervised me had defended her thesis in the meantime and had left, so I had to find someone else in the Kruyt building who could help me out (I also had to take an oral theoretical exam) and grade my internship. And you know what? Once I took that first step, people were very friendly and helpful, and it all went very smoothly.

Picture: Second internship Hematology, 1981, dialysis vats, gel filtration column and fraction collector.

StuColumn with Joost

So in my current work as your Master Program Coordinator, my advice is always: keep communicating (much easier now, with email!) and if you get into a dip (which can happen to anybody) get back in touch and seek help. Usually, the hurdles are not as big as they seem.

The second internship, at the department of Hematology in the 'old AZU' was much more fun. I really felt part of the research group there, and eventually I was asked to be one of the 'paranymphs' at the PhD thesis defense of my supervisor. I also became a co-author on 3 papers. This was a purely protein-biochemistry project. I studied interactions between proteins at the junction between the intrinsic coagulation and complement cascades, specifically, the "inhibition of kallikrein by C1-esterase inhibitor". The techniques I used involved protein purifications from plasma, lots of gel electrophoresis and (again) radiolabeling of proteins (with 125I), enzyme assays, production of antibodies and now-outdated methods like Ouchterlony double diffusion and Rocket immunoelectrophoresis.



Picture: Ouchterlony and Rocket assays for antibodies

During this internship, I got in touch with a researcher one floor below our lab, in the pulmonology lab. There I did my third internship, which concerned the identification of leukotrienes by white blood cells, in particular eosinophilic granulocytes. Like prostaglandins, leukotrienes are formed from arachidonic acid, and some of them are mediators in inflammatory and allergic reactions. Hence the interest of their role in asthma. This internship involved the isolation of eosinophils and other granulocytes from peripheral blood. I used so much blood from the blood bank that I became a blood donor myself. The leukotrienes were analyzed using RP (reversed phase) HPLC. This was done in collaboration with the laboratory of Bio-Organic Chemistry, in a building on the Croesestraat

Joost's Early Days

in Utrecht that no longer exists. The pulmonology lab was a tiny group, but I had fun and this also ended in a co-authorship. The manuscript was first sent to Nature, haha, and quickly rejected.

All in all, this 'doctorate' portion of my Biology studies took 3 years, and I graduated in 1983, during a ceremony in the Aula of the Academy Building. Despite a poor start with that first internship, it ended with a nice 'Cum Laude'. I received a very kind speech from the PI of my second internship (who had in the meantime hired me for my PhD position), and I think back to this whenever I give a Laudatio speech there myself. Looking back, I also realize how much has improved since then. There was no communication with the Biology department, the education was an anonymous, face-less entity. No Graduate School, coordinator, mentor or any other kind of community or personal attention. Of course no internet or email, either, so you were pretty much on your own and had to figure things out by reading the Universiteitsblad or information you received in the mail. So, just that you know that things have much improved since then!

Picture: Graduation, November 1983

In upcoming issues of the StuCom Newsletter: stories about my PhD and postdoc, and then my transition to teaching.

Written by dr. Joost Koedam

Coping with Covid

The Covid-19 crisis is not news to us right now, however we're still dealing with everything that comes with it. We've been in an intelligent lockdown, we've been out of that, and back in again. We haven't been able to see a lot of friends and family in 2020, and instead we have been stuck behind laptops at home. The fact that we are sitting at home is not beneficial to how we are feeling: it robs away our motivation and focus, or it makes us feel sad or helpless. In this section, we would like to cover some parts about the mental impacts of the Covid-19 crisis. We did a small poll on Instagram, asking you how you were doing, we asked Simone Schut (trainer, coach, counselor) for some input, and we asked a CSDB student how she felt during the past few months. We also added some tips on how to Cope with Covid-19. Just remember: everyone is dealing with this crisis in some way, and we hope we can help each other through it all!

Instagram Poll

A few weeks ago, we performed a small poll on our Instagram-page (@stucom_CSDB). We got some great responses we want to share with you!

Simone Schut

How are you doing?

We ask that question several times a day. " How are you doing?" "Fine. And you?" Often, we don't really listen to the question or even the answer. Very human and nothing wrong with that. But, of course, it's good to listen to that question a little better and think about your answer. Unfortunately, since Covid, we hear that question less and less. And when that question is asked online, you can read even less in the good old ' oh, just fine'.

More than ever, it's a good idea to ask that question and to take your time to answer it. In conversation with your parents, with your friends, and sometimes with someone a little further away. Because, sometimes, or even more than sometimes, things don't go so well. If so, then nothing is wrong with you. There's no need to do anything to get back to normal. This situation, as it is so beautifully called, belongs to all the tastes of life. Lowpoints are inevitable in life. (!!)

However, it can be that you move too far away from what you actually think is important to do or to achieve. Or maybe you don't know what that is for you, and then it's hard to steer out of a valley like that. What you might need, is more air and space. A little more relaxation so you can enter the next period with more confidence. I don't mean the confidence in staying away from another valley (because that's inevitable :)). Trust that the next valley has less impact on you, that you stay better or more pleasantly upright.

Why this vague story? I think it's important that you give those feelings and thoughts honest attention. That you take them seriously. A small selection of what might bother you: feeling a bit tense, sleeping less, being irritable, being lonely at home, restlessness, and jealousy - towards students who have already planned their entire careers, or towards those students who seem to be able to let go of that. If you feel this sometimes and can talk to someone around you: great! If that doesn't help enough, or you wish you could let go of things a little more, know that we have people for that. We have coaches and advisors who can listen to you, teach you some techniques or give you some experiments to do at home. No obligations, no costs. To help you find your energy and help you start doing (small) things differently. Or, to help you accept that you can relax knowing that there's nothing wrong with feeling bad. Look for them on the website.

Besides, if you think: 'this stressful period is only for a while, then it will probably get better', or: 'it's just me, that's how it works for me', know that often that's not true at all. And even if it's true.....why not take a step towards something better?

Warm greeting,
Simone Schut (Coach - trainer)

Written by Simone Schut

Ioanna Papadionysiou

Hey! Could you tell us about yourself and what you're doing right now?

I am Ioanna and I am from Greece. I really enjoy walking around the city centre with friends, travelling and going to the gym. I have been doing some courses and I have also started my internship in the UMCU, in the department of Molecular Cancer. Unfortunately, because of the pandemic, every contact between people became more difficult and travelling was prohibited for a long period.

Did you have to rearrange your internship/courses due to the lockdowns?

Thankfully, I didn't have to rearrange any of my courses or my internship, so far. However, due to the previous lockdown, the former students have been delayed and as a result, the available positions for the first-year students were limited.

How are you feeling in this third lockdown?

The worst feeling during every lockdown is uncertainty. You don't really know what new measures will be announced the following day and how your plans will be affected (if you have anything planned!). But especially during the third lockdown, before Christmas, I was really afraid that I won't manage to go home for Christmas, something that was very important for me.

What has been the biggest struggle this year?

Moving to a new country in the middle of a pandemic is definitely not the easiest and best thing to do. It is way harder to get to know not only new people but also the country.

What has been your biggest achievement during Covid?

Despite the Covid, I managed to finish my Erasmus internship at the end of March (before the first lockdown), while many students had to cancel or rearrange it and the most important thing is that I was able to start the Master program that I have chosen.

What did you do to make yourself feel better when you were feeling down?

Whenever I am feeling down, I have video calls with my family, boyfriend, or my friends. Also, I try to do something creative. Recently I ordered a diamond painting, which is like a puzzle, and you create an image with tiny, colourful plastic pieces (=diamonds). I highly recommend it!

Do you have some bright and hopeful wishes for 2021?

I really hope that during 2021 things will start being normal again and human relationships will become direct once more!

Coping with Covid

Tips

- Follow @labshenanigans on Instagram for some interesting lablife and science jokes
- Or follow some animal pages, a great mood lifter!
- Also, follow @stucom_CSND to stay updated with us, and maybe even enjoy some other posts and stories.
- Keep a structure in your day: if you're sitting at home for a longer amount of time, make sure you get up around the same time everyday. Act like it would be a regular day where you would go out. After a good breakfast, go for a walk, or a bike ride. Make a to-do list or planning of the day/week and take regular breaks to get up from that chair! Set an end-time for yourself, don't overwork and keep your free time as you regularly would. Lastly, go to bed around the same time everyday, and still make sure you get sufficient sleep.
- Watch Netflix: there are so many binge worthy series!
- Get yourself a goldfish, it is also inside (the bowl) all the time
- Keep your desk organized and try to separate your work space and 'chill' space.
- Talk with friends and family! We can still see them online or through the phone. Try to keep up to date with their stories, and ask them how they are coping with Covid! Be a little more tolerant to each other, and give each other the space they need.
- Send Christmas cards! Maybe you will get some in return :)
- To keep your eyes healthy, look 20 seconds away from your screen after 20 minutes of screentime.

Where's Joost Koedam?

Should you get vaccinated?

The development of COVID-19 vaccines: Scientific evidence addressing public concerns – Should you get vaccinated?

Unprecedented efforts from several research institutions and life sciences companies around the globe near the commercial distribution of some of the recently developed COVID-19 vaccines. One of them is Tozinameran, more commonly known as the Pfizer–BioNTech COVID-19 vaccine. Tozinameran is the first licensed mRNA vaccine in history. Previously developed mRNA vaccines against other infectious diseases have obtained poor results in terms of efficacy and side effects. What evidence is there on the safety and efficacy of this and other COVID-19 vaccines? Perhaps you are concerned about the development of COVID-19 vaccines yourself or you sometimes struggle with relatives or friends that oppose vaccination. As students of the graduate school of life sciences you are in the best position to battle misinformation and keep your friends and family informed of the latest scientific research. The StuCom has prepared the following article to inform you about the latest research regarding COVID-19 vaccine developments and how you can stay up to date in the future.

Should you get vaccinated?

Development of current COVID-19 vaccines, their safety and efficacy debunked

The RIVM (dutch National Institute for Public Health and the Environment) recently announced that we will have access to three different vaccines in 2021 in the Netherlands. Two of them are RNA vaccines produced by Moderna and Pfizer, and a vector vaccine produced by AstraZeneca, more information can be found in rivm.nl. Out of these vaccines, the RNA vaccine from Pfizer is already an authorized vaccine for COVID-19.

The most recent results of the RNA vaccine from Pfizer were published on December 10, 2020 by Polack et al. in the NEJB (DOI: 10.1056/NEJMoa2034577). The authors featured the results of an ongoing clinical trial for the BNT162b2 RNA vaccine, a.k.a. Tozinameran or the Pfizer–BioNTech COVID-19 vaccine. The study consisted of a total of 43,548 participants of whom 43,448 received injections: 21,720 with BNT162b2 and 21,728 with placebo. The results published on December 10 showed that the vaccine was 90-100% efficient for preventing COVID-19 after 2 month follow-up. Regarding the safety profile of BNT162b2, it was characterized by short-term, mild-to-moderate pain at the injection site, fatigue, and headache. The incidence of serious adverse events was low and was similar in the vaccine and placebo groups. Meaning that safety over a median of 2 months was similar to that of other viral vaccines.

However, this report does not address the prevention of Covid-19 in other populations, such as younger adolescents, children, and pregnant women. In addition, assessment of long-term safety and efficacy for this vaccine has yet to occur, with only a 2 month follow-up so far. Therefore, the results of the ongoing trial show that the vaccine is efficient and that it meets short term safety standards, already outweighing the possible long term risks as claimed by the author. We would advise that, unless you are part of the population that has not been tested for prevention of COVID-19, you should consider getting vaccinated, always consult your medical professional for health advice.

Shouldyougetvaccinated?

How to stay up to date with the latest scientific research on COVID-19 vaccines

Reading through scientific literature is perhaps not feasible for everyone wanting to stay up to date with the latest news of COVID-19. If this is your case, we recommend you the youtube channel "MedCram - Medical Lectures Explained CLEARLY" from Dr. Roger Seheult and Kyle Allred. Nearing 900K subscribers, MedCram offers a fun and engaging way to learn and review medical topics. With more than 115 weekly COVID-19 updates, that in their latest installments explain the "basic" biological concepts involved in different COVID-19 vaccines (e.g. Moderna, Pfizer, Astrazeneca) and other COVID-19 treatments such as Vitamin D administration and convalescent plasma. In addition, expert professors across the globe are invited regularly to review recent COVID-19 related research.

On the other hand, raps.org the Regulatory Affairs Professionals Society (RAPS) is a non-lobbying nonprofit organization, and the largest global organization of and for those involved with the regulation of healthcare and related products. In their "RAPS COVID-19 Resource center", updated as often as daily, where the "COVID-19 Vaccine Tracker" lists the major vaccine candidates in development for prevention of COVID-19 with links to primary data. For example, featuring information and links to primary data from 7 different authorized/approved vaccines and 55 vaccine candidates in development.

Illustration retrieved from labblog.uofmhealth.org/rounds/top-5-covid-19-vaccine-candidates-explained

CRISPR technology

Will CRISPR technology revolutionize life sciences again? CRISPR beyond genome editing

CRISPR/Cas9 genome editing has been a revolutionary technology since its development in 2012. Since then, this tool has contributed to countless discoveries in basic research, crop engineering and medicine, with new cancer therapies and potential cures for inherited diseases, just to name a few. Acknowledging such contribution to life sciences research, on 7 October of 2020 the Nobel Prize in Chemistry 2020 was awarded to Emmanuelle Charpentier and Jennifer A. Doudna for the development of a method for genome editing. However, in recent years, the versatility of the CRISPR technology beyond genome editing has surprised life sciences research. On top of genome editing applications, CRISPR/Cas systems have also been used as biosensors, regulators of gene expression (for example with CRISPRi or CRISPRa) and novel functionalizations of the Cas proteins that can alter cell signal transduction. What are the latest emerging CRISPR technologies that might be useful in your future research?

You can further read about this in the Adli covered 2018 Nature Communications paper 'The CRISPR tool kit for genome editing and beyond'. https://doi.org/10.1038/s41467-018-04252-2

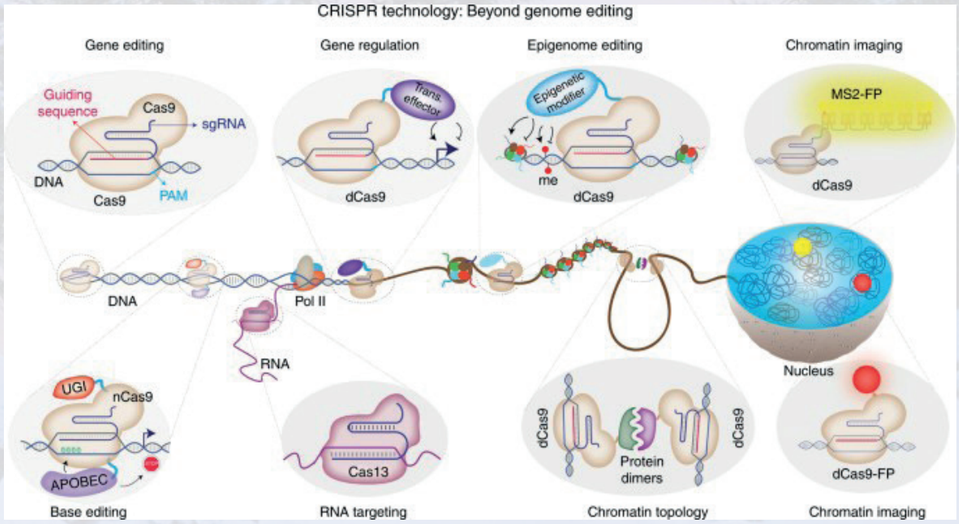


Illustration retrieved from Aldi (2008) Nat Comm

Previous events

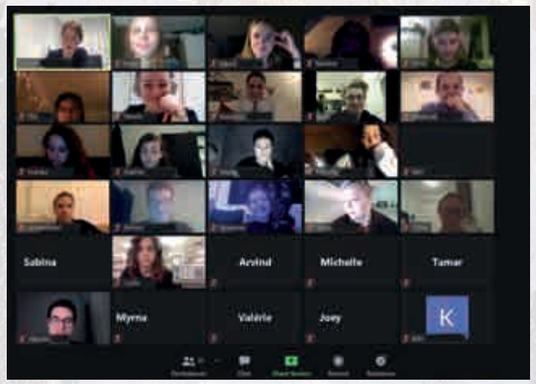
Seminar

On Wednesday November 25th, we were very happy to have dr. Mirjam Belderbos as the speaker of the first seminar of StuCom 20-21. Sadly, we had to decide to kick off with an all-online seminar, nevertheless it was a very informative and interactive hour!

Mirjam Belderbos is a clinical scientist: she has her own research group in the Princess Máxima Center ánd works as a paediatric oncologist. During the seminar she told us mostly about her postdoc in Groningen on hematopoietic stem cells and genetic barcoding. One of her research questions during this project was 'how is blood regenerated after hematopoietic stem cell transplantation?' She used genetic barcoding of transplanted hematopoietic stem cells in mice to be able to follow the stem cells and their daughter cells. It was a very interesting story, and Mirjam answered our questions very clearly. Maybe even more interesting were some of the career take home messages Mirjam shared with us:

- Negotiate your plans before you get a grant
- Look for good mentors that care about you
- Think outside of the box and make unexpected choices
- Dare to fail
- And most of all, have fun!

All in all, Mirjam gave an amazing talk which made the first StuCom seminar a great success! We look forward to seeing you at our next seminar!



Written by Ireen Kal

Previous events

Sinterkerst and Nieuw Activity

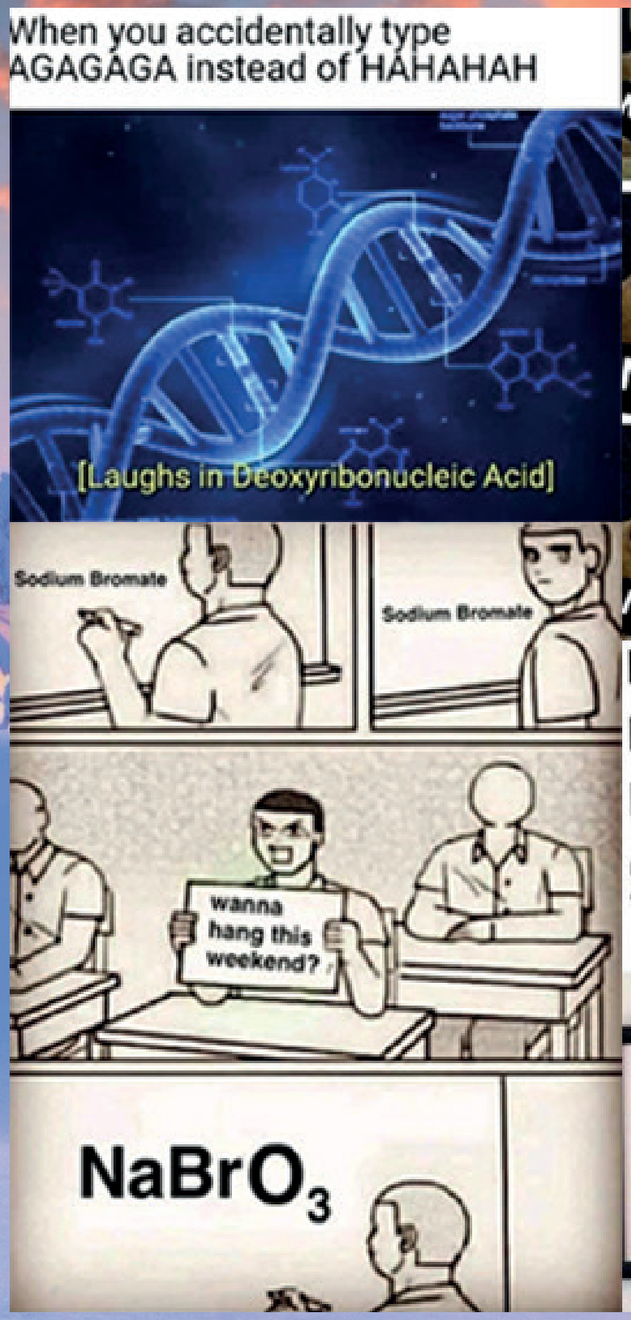
Ho-ho-ho! On Thursday, the 10th of December, it was time for the very first Social Activity organized by this year's StuCom. For the December activity, the Social Activities Committee combined the Dutch tradition of Sinterklaas with Christmas and New Year into one big night full of celebrations. Due to the COVID-19 measures, the committee organized an online event via Teams, which worked out perfectly fine!

The activity itself included an online game night with an exciting twist, as the participants prepared two gifts for each other, which were delivered to the participants by the StuCom members dressed up as the one and only Santa Claus! It was really nice to catch up with our fellow CSDB students and we had a lot of fun playing Skribble, Among Us and an online quiz prepared by the Activities Committee. It turned out that customized biomedical words are rather hard to draw with Skribble (and even harder to guess!), while we had a lot of fun playing Among Us once everyone got a grasp of its difficult concept ;).

In the end, everyone managed to perform well enough during the games to gain the right to open their gifts and we were very happy to see all the efforts people had put in the gift exchange. We would like to thank each and every participant for joining us on this wonderful night and we hope to see you for the next Social Activity!

Written by Remco Sleiderink

StuCoMemes



StuCoMemes

Dutch Cuisine

The Dutch aren't exactly known for their cuisine, as one of the national dishes include mashed potatoes with kale and sausage thrown in. However, when it comes to desserts, they know what they're doing. We have stroopwafels, which are caramel waffle cookies that are - if I may say so myself - quite amazing. There are also poffertjes, little pancakes that are covered in powdered sugar, syrup and often some butter. However, when you look at the holiday season, Dutch cuisine offers another great treat: stewed pears. Soaked in red wine and spiced with typical Christmas flavours, a big batch of these stewed pears is often made and eaten together with dinner, dessert, breakfast… really, whenever they want!

You can get your special pear-stewing pears around November in the Dutch supermarkets (called "stoofperen"), but these might take a bit longer to make as they are harder than regular pears. To make the perfect stewed pears, let them sit overnight to make them really absorb the colour and flavours. If you do not have the time to wait a bit longer, you can use slightly under-ripe Conference pears as well for this recipe.

When combining these delicious stewed pears with a typical French baking technique, the Tarte Tatin, you can make a mouth-watering spectacle for on the Christmas table (or any other day).

Tip: you can save the stewed pears up to two days in the fridge. They are also incredible on their own!
Tip: you can make the Tarte Tatin up until one day in advance - just keep it covered (uncooked) in the fridge. When you want to bake it, wait till it is at room temperature and bake it for 20 min in the oven.

Stewed Pears Tarte Tatin

Ingredients for 1 kg stewed pears:

1 kg 'stoofperen' (or slightly under-ripe Conference pears)
1 lemon
750 ml smooth red wine (if you can't decide, use Merlot)
150 g 'Van Vliet perenrood' sugar (which is pink-reddish sugar specifically made for stewed pears)
1 to 2 cinnamon sticks
4 whole cloves
6 cardamom pods
Ingredients for the dough:
150 g flour
125 g unsalted butter (at room temperature)
135 g white caster sugar ('basterdsuiker')
1 egg

±30 min. preparation - 50 min. waiting - 25 min. baking

The stewed pears. Peel the pears - but leave the stalk on. Add the pears to a big pan. Scrub the lemon clean and peel the zest (yellow part) of the lemon off with a vegetable peeler. Bring the wine with the pears, lemon zest, pear red (sugar), cinnamon sticks, clove and cardamom pods to a boil. Lowen the heat and let it cook for 45 min. in a closed pan. Let them cool a bit (to fasten this, put them in the fridge). In the meantime, start working on the dough:

The dough. Sieve the flour and add 100 g of butter, a pinch of salt, 50 g sugar and the egg. Knead with cold hands or use a mixer/ KitchenAid to create a firm dough. Wrap the dough in cling film and let it rest in the fridge for at least 45 minutes.

The Tarte-Tatin building. Preheat the oven at 200 °C. Cut the pears in half (or wedges). Make the caramel by melting the remaining butter with the rest of the sugar (do not stir too much). Pour the caramel into the baking pan and add the pear (with the flat sides facing you and the small side pointing towards the centre). Roll out the dough till it is about 1 to 2 mm thick and a bit bigger than the size of the baking pan. Cover the pears with the dough and push the border of the dough in nicely.

The baking. Bake the Tarte Tatin about 25 min in the oven. Let it cool for a couple of minutes (be careful it will not cool too much as this will make it stick to the bottom of the baking pan). Place a plate over the Tarte Tatin and flip it over.

The tasting. You could add a scoop of ice cream or make a vanilla sauce to add to the Tarte Tatin.

Enjoy!

Simple Student Crafting

You must all know the feeling: you had a long and exhausting day at the lab, all fun things are closed because of the covid lockdown, it is cold and rainy outside because we do not know anything else in the Netherlands, and you are hungry. To sum it all up: you are in desperate need of some comfort food. However, the supermarket is stuffed and there are people standing in line outside to also get their hands on some groceries during these pandemic days. What should you do to get yourself some amazing brownies without getting outside?!
Have Nutella and a couple of eggs? Then you are good! With the following easy dish, you will bake yourself some sweet miracle 2-ingredient brownies in no-time. Seriously, is there anything Nutella can not do? It is basically the most amazing substance known to mankind and now, apparently, it is also possible to mix it with just some eggs to make a batch of chewy, fudgy brownies. It is gluten-free, incredibly easy and perfect when you need to quickly whip up an amazing dessert, snack or breakfast (if that is your thing). Here is exactly how you can make these magical two-ingredient brownies for yourself!

2-Ingredient Brownies

Ingredients:
1 cup of Nutella (slightly less than one jar)
4 eggs

±10 min. preparation - 30 min. baking

Protocol:
The eggs.
Preheat the oven to 180 °C. Line the baking pan (20 x 20 cm) with parchment paper and coat with oil/ cooking spray (to prevent it from sticking after baking). Wish the eggs starting at a low speed and gradually increasing to medium-high for 6 to 8 minutes.

The Nutella.
Warm the Nutella in a microwave on high for 1 minute and stir every 15 seconds, making the Nutella loose and creamy.

Brownie-batter making.
With the mixer on low speed, slowly add the Nutella until all Nutella is combined with the eggs.

The baking.
Pour the Nutella mixture into a prepared baking pan and bake for 25 to 30 min in the oven. When it's done, let it cool as long as you can to prevent them from falling apart and remove the brownie from the baking pan when it's completely cooled.

The tasting.
Enjoy, you 2-ingredient scientist!

This may not seem a very scientific recipe, but do not worry, more scientific cooking will follow in the next edition of the newsletter!

Do you have the perfect - yet crazy - dish that you would like to share in the next newsletter? Let us know!

Puzzles

Trees and tents

In this puzzle, you need to place tents in the diagram. Every tree in the diagram is connected to a tent, directly adjacent, beneath or above. Tents never touch each other, also not diagonally. The numbers next to the diagram indicate the amount of tents placed in each row or column.

How to get started:
- Indicate the rows that will not have a tent.
- Whenever you place a tent, always cross off the cells directly adjacent and diagonally to the tent, so you don't place a tent there.

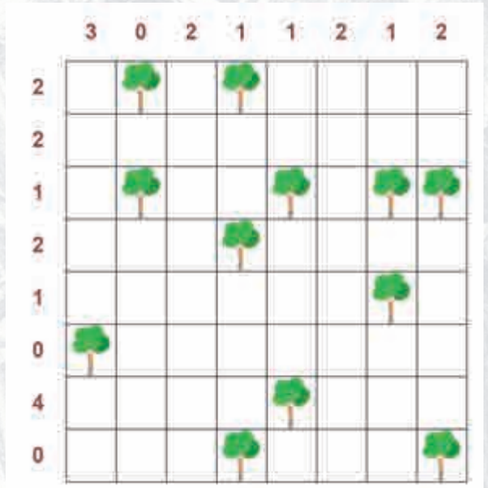
Killer Sudoku

Almost everyone knows the rules for solving a classic Sudoku. You have the numbers 1 to 9, which all need to appear in every row, column and nonet (3x3 cells, divided by bolder black lines) exclusively. Killer sudoku adds more creativity and difficulty to the mix. Throughout the grid, the cells have been grouped to form a cage, where numbers can only appear once. The cage has a number in the top left cell, which tells you the sum of the cage. The cages can pass the border of the nonets. Killer Sudokus are usually completely empty, and you must produce a unique solution. Luckily, this is (practically) always possible. Here are some hints to get you started:

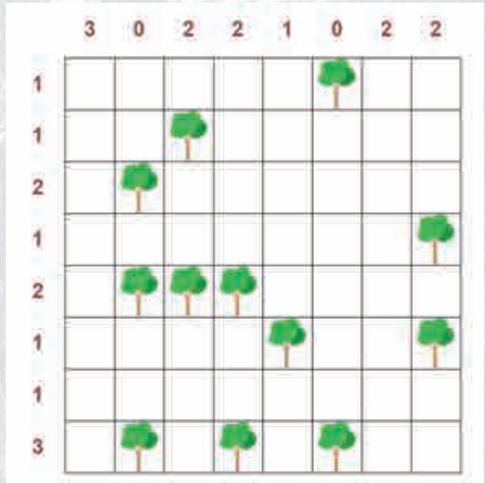
- A row, column or nonet will always house the numbers 1 to 9 once, meaning that the sum of these three components is always 45 (adding up 1-9).
- It can be that a nonet is filled with different cages, with only one cell crossing the border to another nonet. If you add up the sum of the cages, you can see how much you need to subtract (or add) so that you get the number 45, and this is the number for the single cell outside the nonet.
- Certain combinations may have one solution, for example a 2-cell cage with sum 17 can only be made with the numbers 8 and 9. Use this to ensure that the other cells are unable to use this number and restrict your options to solve the puzzle.

Enjoy!

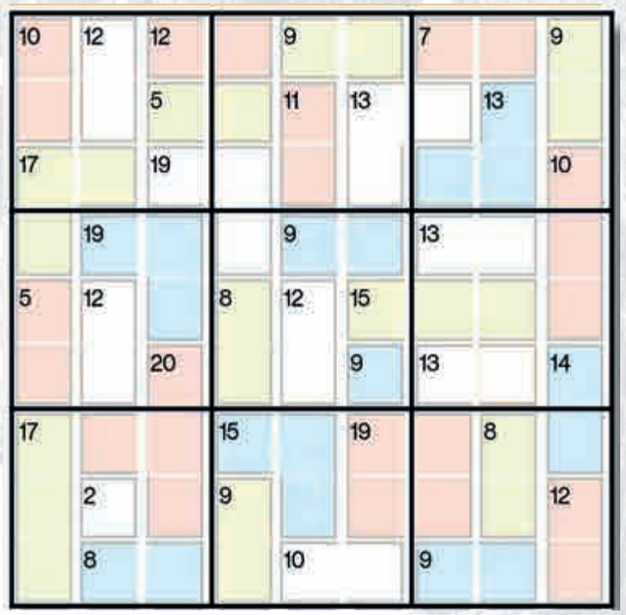
Puzzles



Easy



Hard



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