DOI (Day Of Immunology) YI_DGFI Campaign 2022

Why Science (Immunology) Communication matters and what are some challenges?

Science disengagement amongst our societies remains a global challenge. Particularly during the current political and COVID pandemic climate, the combination of public discussion of scientific controversies and the opinion that researchers in publicly funded systems should be obligated to contribute into public engagement has created a perceived need as well as requirement for immunology researchers to engage with the overall public in a relatable method. However, eloquent and purposeful engagement with the public is often hampered by the public perception of a scientist and who they/we are; we are often seen as separate from the wider community, creating a barrier.

How we YI_DGFI plan to initiate a global effort to promote the benefits of immunology research during the International Day (& week) of Immunology (DoI)

To mark not only the Day, DOI (#Dayoflmmunology), but also the week (#weekofimmunology) of Immunology 2022 this year we, the young immunology DGFI board, have been developing a three-path-target (TPT) building up both creative and scientific material to help our team create a successful awareness campaign. Our goal has been to not only reach the general public but also other colleagues and immunologists who can help us sustainably not just in the day/week of immunology but in the long race of immunology and vaccine awareness needed more than ever. To achieve this our three-path-target (TPT) consists of:

- 1. Immunology memory card game (public & scientific community)
- 2. April seminar (scientific community)
- 3. Social media post, #ImmunologyIs (public & scientific community)

1) Some of the benefits of learning through play not just during childhood but also adulthood include fostering effective communication. The exposure to additional vocabulary enriches our own variety of words that we can then incorporate into our language and also develop familiarity with specific immunology terms. Play can foster science word learning from pre-schoolers to adulthood, especially to those from disadvantaged backgrounds. Play can help develop social skills, cognitive, critical thinking and motor skills, confidence in children and most importantly inspires creativity. We want to put "Play First" for its benefits for active, engaged, meaningful, and socially interactive learning. Thus, we developed an immunology memory card game that was published on our social media, website and distributed in a limited edition. We have developed a 48-card memory game in cooperation with Dr. Agnes Giniewski and have designed the cards using the "Immunology for Everyone" templates from the DGFI.

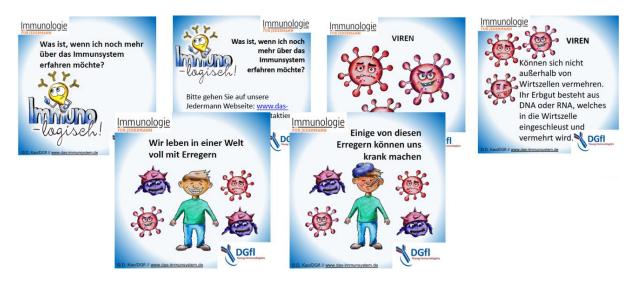


Figure 1: Immunology memory card game (German) prototype.

2) In January 2022 we, the newly elected young immunologist DGFI board, have initiated an immunology online seminar series. We have placed our April seminar specifically prior to DOI during the week of immunology on 26/04/22. Our online public monthly seminar is targeting the immunological scientific community thus including them in a scientific public dialogue. Our seminar has a very effective and successful momentum with more than 150 active participants each time from Germany and abroad. For this seminar we partnered with Prof. Fabian Theis who uses artificial intelligence to unlock the secrets of human cells. We aimed to join the two inspiring momentums of our seminar to the international week and day of immunology engaging

here our scientific peers in an effort to not only further educate us immunologically in latest findings and technologies but also use this as a chance to raise awareness for awareness mobilizing the immunology community.

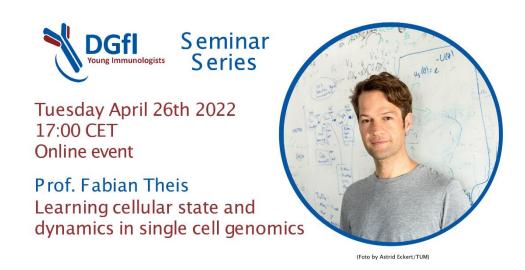


Figure 2: Immunology seminar series ad in YI_DGFI social media & newsletter.

3) In parallel, in order to create a relatable and personal content, we have shaped a social media campaign that was published on the DOI (#DayofImmunology). Being personal often helps create relatable content, especially when we communicate in a language and vernacular that resonates. Our YI_DGFI board consists of a unique variety of 7 young immunologists coming from Germany, Israel, Brazil, Greece and Norway. Thus, we are using our own international variety in a social media campaign/dialogue of what Immunology is (#ImmunologyIs) for us in English and our native languages and then asking the public to engage e.g.:

"Today we celebrate the day of immunology, for us Immunology is:

- Perfect combination of complexity and logic / die perfekte Kombination aus Komplexität und Logik
- Effort for Balance / Προσπάθεια για Ισορροπία
- Life, Resilience, Survival / Vida, Resiliência, Sobrevivência
- My favourite childhood series I grew up on "Once upon a time... Life" / ""החיים סדרת הילדות עליה גדלתי

- Immunology is defense, protection and vitality / Immunologie ist
 Verteidigung, Schutz und Vitalität
- Immunology is our best weapon against pandemics / Immunologie ist unsere beste Waffe gegen Pandemien.

What is immunology for you?"



Figure 3: The DGfl International Young Immunologists board.

In conclusion, we wish with all the above to open an interactive dialogue targeting both the public and the scientific community with online and physical tools. In this current period under such pandemic and political circumstances, connection worldwide and in Europe is more important than ever. Thus, together with the previous YI_DGFI board members, we have worked on and successfully published our article "From local to international: how Young Immunologists are connecting across Europe" which was highlighted in our social media on the DOI thus hoping to motivate other immunologists especially during the unprecedented upheaval caused by the Corona pandemic.

1. Immunology memory card game (public & scientific community)

With the exceptional lead of our YI_DGFI spokesperson Sabrina <u>@sbennstein</u> we prepared a memory game (Figures 1 & 4-7) that was published on all our social media platforms covering <u>Facebook</u>, <u>Linkedin</u> and <u>Twitter</u>, newsletter, website and distributed freely here https://bit.ly/3OKOUN6.





Figure 4: Representative figure, Playing the @YI_dgfi prototype memory game learning German & Immunology with 3–5-year-olds at the beach (Location Athens).

Click here for one of our representative public Twitter posts

"Athens - Berlin. Playing the <u>@YI_dqfi</u> memory game learning German & Immunology with 3-year-olds at the beach. Never too young to start learning about Immune cells. <u>#ImmunologyIs</u> entertaining.

We have created a memory card immunology game, free downloadable here https://bit.ly/30KOUN6

36 Greek & international children (ages 3-5) play tested our prototype with the guidance of Christos Nikolaou from our YI_DGFI board, @nikolaouch at a beach in Athens, Greece (during the day of immunology, DOI).

*Many thanks to D. Kao for the amazing illustrations, Agnes and Diana from the DGfl, as well as the GRK 2599 from Erlangen for their support.





Figure 5: Playing the @YI_dgfi prototype memory game with Laila Kulsvehagen @lakulsvehagen from our YI_DGFI board (Location Basel).



















Figure 6: Representative memory cards from the @YI_dgfi prototype immunology game. Click here https://bit.ly/30KOUN6 to access freely the full version.

The 2022 theme of DOI was 'VACCINES.' Therefore, we developed a plethora of cards covering specifically not only the variations of vaccines available but also their functionality as well as major immune cells that are vital for immune responses (Figures 1 & 6).

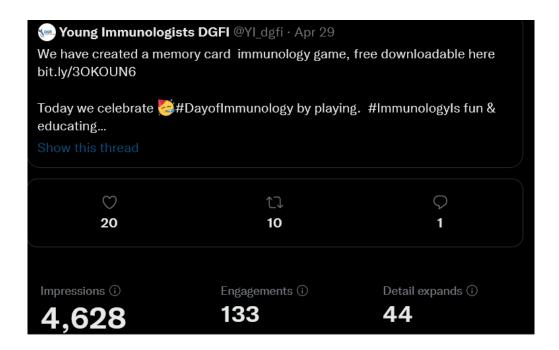


Figure 7: Representative Tweet Analytics from the YI_DGfl memory card immunology game post on Twitter.

Our prototype will stay freely available online so more people can access it and play it beyond the week and day of Immunology. The game is planned to be translated in other languages (starting from our board members' native languages, see page 3) soon and be distributed too.

2. April seminars (scientific community)

Our April seminar during the week of immunology, 26/4/22 reached **5,883** impressions on twitter. We hosted Prof. Fabian Theis @fabian_theis (Figure 2 & 8) an outstanding computational biologist from Helmholtz, Munich and TU- Munich. Fabian Theis is a dad of 4 and mountain lover who gave an inspiring talk during our seminar breaking down & explaining concepts and methods of single cell analysis and AI to our community.

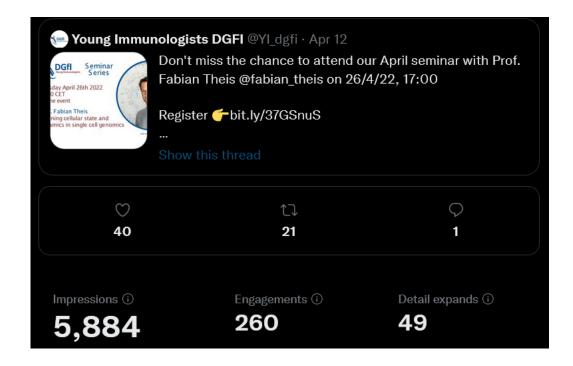
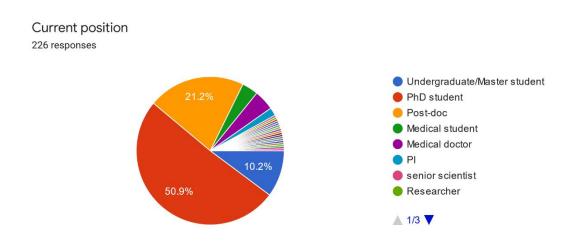


Figure 8: Representative Tweet Analytics from the YI_DGfI April seminar with Prof. Fabian Theis.

More than 220 people actively registered to and participated in our online public seminar comprising mostly of young researchers PhD students, post docs outside of our direct DGFI network which is what we were hoping and aiming for (**Figure 9**).



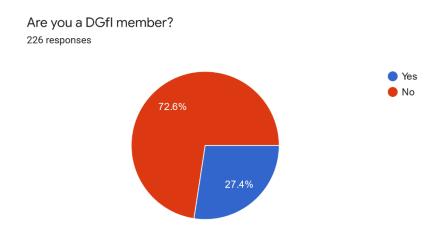


Figure 8: Charts from Registration form- YI_DGfl April seminar with Prof. Fabian Theis.

Our <u>second April seminar</u> during the week of immunology, 27/4/22 reached 1,888 impressions on twitter. We continued celebrating our #Weekoflmmunology with a great talk by Ulrike Köhl from Leipzig, part of our excellent women in Immunology series (**Figure 8**). In this series of lectures, the DGfl Commission on Gender Equality and Career Development provides a forum for excellent female immunologists. The invited scientists share their exciting research, but also talk about their experiences in forming a career as women in STEM (=MINT). More than 250 people actively registered to and participated in this online public event.

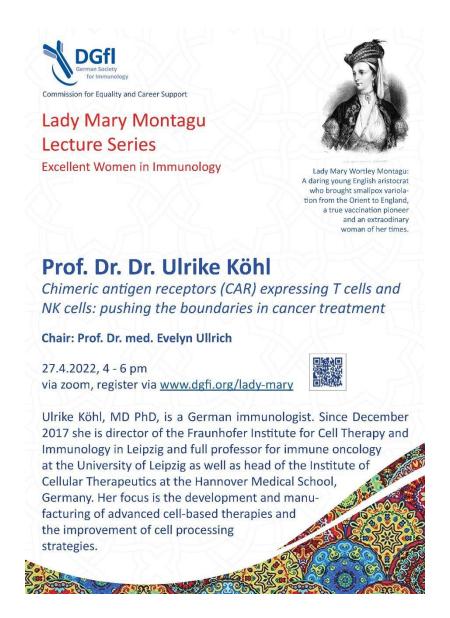


Figure 8: Poster ad for DGFI lecture series event embracing excellent women in Immunology with Prof. Dr. Ulrike Köhl.

3. Social media post, #Immunologyls (public & scientific community)

For our relatable and personal content described above (pages 3-4), we shaped a social media campaign which was published on the DOI (#Dayoflmmunology) throughout the day. For this we partnered with Vinzenz Schechner a costume designer and visual communicator from HfBK Dresden who assisted us to create a visual template of immune cells in order to share our social media campaign/dialogue of what Immunology is (#ImmunologyIs) in English and our native languages and then asked the public to engage as described above (page 3). We published those posts in our

website and all our social media platforms covering <u>Facebook</u>, <u>Linkedin</u> and <u>Twitter</u> (**Figure 9**).



Figure 9: Social media campaign/dialogue posts of what Immunology is (#ImmunologyIs) in English and our 5 native (board) languages: German, Greek, Hebrew, Danish, Brazilian.

Our <u>original post</u> from our #ImmunologyIs Twitter thread reached an outstanding amount of 23,764 impressions (**Figure 10**). Many other EU, international immunology organizations and private users joined our online dialogue tweeting & replying '*What is immunology for you?*".

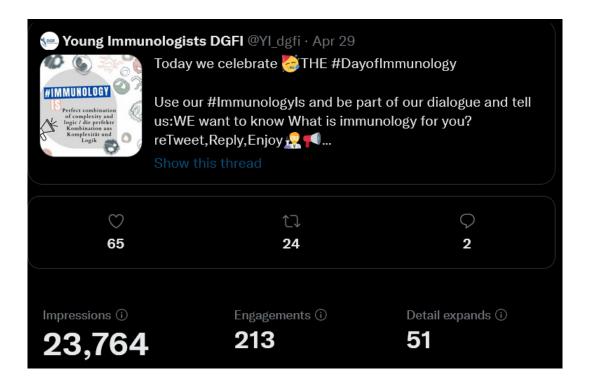


Figure 10: Representative Tweet Analytics from the YI_DGfI April DOI #ImmunologyIs Twitter campaign.

Overall, in April we managed to earn 44.300 impressions just on Twitter over a 30 period of time from a total of 23 tweets (12 were on the DOI) with the most significant peak as expected throughout the celebratory week and day of Immunology!





Figure 11: Tweet activity metrics from the YI_DGfl April week & DOI #ImmunologyIs Twitter campaign.

In conclusion, we wish with all the above to open an interactive dialogue targeting both the public and the scientific community with online and physical tools. In this current period under such pandemic and political circumstances, connection worldwide and in Europe is more important than ever. Thus, together with the previous YI_DGFI board members we have worked on and successfully published our article "From local to international: how Young Immunologists are connecting across Europe" which was highlighted in our newsletter and social media on the DOI thus hoping to motivate other immunologists especially during the unprecedented upheaval caused by the Corona pandemic.

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Combining the power of all our newsletters, website & all 3 major social media

platforms and physical tools developed by the YI_DGFI, we estimate we have publicly

reached more than 80,000 individuals. The goal of this campaign expanding the DOI

to a week was to not stop on the particular day but rather take advantage and use it in

order to build a momentum with creative & modern tools that we will be using

throughout the year and our YI board mandate 2021-2023.

Christos Nikolaou

on behalf of the YI_DGFI board

YI Board: Sabrina B. Bennstein (Speaker, Postdoc, Düsseldorf), Tal Pecht (Vice-

speaker, Postdoc, Bonn), Katharina Bomans (Postdoc, Heidelberg), Christos Nikolaou

(Senior Research Scientist, Berlin), Laila Kulsvehagen (PhD student, Basel), Lorenz

Kretschmer (Physician Scientist, München)

YOUNG IMMUNOLOGISTS of the DGfI

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