Swedish Society for Virology (SSV) Newsletter, October 2024

Words from the Chairman of SSV and the Pandemifonden´s Secretary General

Dear Members of SSV,

Autumn is finally here. It has been a challenging time, among others, the recent developments in infectious diseases. First, Mpox shook Central Africa as a more aggressive and transmissible strain, prompting actions from the WHO due to the risk of it spreading worldwide. Sweden was among the first countries in Europe to report a case. With limited vaccine availability in Africa, not only does the risk of resurgence remain significant, but more importantly, it severely impacts the endemic countries. This also serves as a reminder of the need for more vaccines and antivirals, particularly in regions where these diseases are endemic. More recently, an outbreak of the Marburg virus in Rwanda, along with a few suspected cases in Europe, reminds us that we cannot afford to relax. It is through your research and expertise that we contribute to the society's preparedness in both the short and long term. **So move on—what you are working on truly makes a difference!**

I (Ali) recently visited Umeå, where I had the opportunity to meet colleagues and hear about all the exciting work happening there. It was very impressive and inspiring.

We have an exciting autumn ahead. Soon, decisions from the Swedish Research Council (VR) will be announced for various medical research programs, as well as for the Graduate School for Viruses and Pandemics. We want to take this opportunity to thank the review panels for their work (what you do is essential for ensuring quality research in our country) and to remind you that it is time to nominate candidates for the upcoming review panels. We also have opened the call for nominations for young, outstanding researchers to the Pandemifonden Awards. More we are very happy that Pandemifonden now announces its first call that target research related to virus-caused diseases in children! See below and attached for more information on the Award nominations and the grant call.

Important!/Note: Pandemifonden's three-year support from Knut & Alice Wallenberg's Foundation ends this year, which means that the upcoming months will determine next year's efforts. As these efforts also aim to support our members and your efforts, we appreciate very much your support and help to e.g. share Pandemifonden's messages, in e.g. social media but also via other channels, contacts, and networks.

With that, we wish you all a successful autumn and hope to see you soon.

Ali Mirazimi and Niklas Arnberg,
on behalf of the Board

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1) **Nominations for Awards:**

- The board welcomes nominations of candidates to the **Pandemifonden Awards, The Sigvards Olofsson Prize and the Pandemifonden Fenyö Prize**, which will be given by Virus- och pandemifonden – Svenska Sällskapet för Virologi, to two junior, talented virologists working at Swedish universities or hospitals, for the purpose of promoting virus research. For 2024, the award will be 100 000 SEK given to each

awardee. See attached pdf for details on the eligibility of candidates and nominations, to be **submitted latest Nov 15, 2024**, to info@pandemifonden.se

- Academy Science Funds of the Royal Netherlands Academy of Arts and Sciences (**KNAW**) calls for nominations to the **M.W. Beijerinck Virology Prize,** see information in the **link**. **Contact** wetenschapsfondsen@knaw.nl latest by October 31st, 2024.

2) **Call for proposal:**

- Virus- och pandemifonden" – in collaboration other actors – have organized a fundraising campaign for research on virus-caused infections in children. The campaign collected 137 000 SEK. "Virus- och pandemifonden" raises another 67 000 SEK and is now announcing **A one-year research grant of 200,000 SEK for research on virus-caused infections in children**. See attached pdf for details on the grant call and instructions for the application, to be **submitted latest Nov 15, 2024**, to info@pandemifonden.se

3) **Meetings:**

- **34th Annual Meeting of the German-speaking Society for Virology (GfV),** Hamburg **March 4-7, 2025,** including plenary sessions on: Innate Immunity, Structural Virology, Virus–Host Interactions, Viral Data Science and Emerging Viruses/ Zoonoses, and many parallel workshops. For more information, registration and **Abstract deadline December 1, see** link. **Note!** When you login for registration you should tick, under "Membership", that you are member of SSV. This since the registration fee, both for students and more senior virologists, will be reduced to the same level as for **GfV** members, as part of the aim to strengthen the cooperation between SSV and GfV.

- **"Virusdagen 2024"at Statens Serum Institut,** Copenhagen will take place Thursday the November 21, 2024. Young scientists are encouraged to submit abstracts. Abstract template is attached and **Abstract deadline is the October 21, 2024**. Submit by email to ratr@ssi.dk

- **Save the date! World Society for Virology Conference WSV2025** in Kuala Lumpur **May 6-8, 2025**. See link.

- **Save the date!** Next year's **Smögen Summer Symposium on Virology** will be held **August 21-23, 2025.**

4) **Recent virology highlights from two Pandemifonden Awardees:**

From Max Renner (Pandemifonden Awardee 2023) on
Structure of the N-RNA/P interface indicates mode of L/P recruitment to the nucleocapsid of human metapneumovirus.
Jack D. Whitehead, Hortense Decool, Cédric Leyrat, Loic Carrique, Jenna Fix, Jean-François Eléouët, Marie Galloux and **Max Renner**
Nature Communications volume 14, Article number: 7627 (2023)
https://www.nature.com/articles/s41467-023-43434-5

In short:
Human metapneumovirus (HMPV) is a respiratory virus that causes symptoms similar to a common cold, however, can be more severe for very young children or for the immunocompromised. In the study led by Jack Whitehead and supervised by Max Renner (Pandemifonden Awardee 2023) and Marie Galloux, the authors employed electron microscopy imaging to investigate how the viral polymerase is steered to where it is required to replicate the viral genetic material in infected cells. Renner and colleagues found a small portion of the viral polymerase complex that attaches to the packaged form of the viral RNA, the nucleocapsid, and imaged this interaction at high resolution. The authors could construct an atomic model of this molecular interplay, which is essential for the virus and may therefore be a vulnerability that can be exploited with future therapeutics.

From Annasara Lenman (Pandemifonden Awardee 2022) on
SARS-CoV-2 infection induces hyaluronan production in vitro and hyaluronan levels in COVID-19 patients relate to morbidity and long-term lung impairment: a prospective cohort study.
Urban Hellman, Ebba Rosendal, Joakim Lehrstrand, Johan Henriksson, Tove Björsell, Alfred Wennemo, Max Hahn, Björn Österberg, Luiza Dorofte, Emma Nilsson, Mattias N. E. Forsell, Anna Smed-Sörensen, Anna Lange, Mats G. Karlsson, Clas Ahlm, Anders Blomberg, Sara Cajander, Ulf Ahlgren, Alicia Lind, Johan Normark, Anna K. Överby, and **Annasara Lenman.**
mBio. 20:e0130324 (2024) https://journals.asm.org/doi/10.1128/mbio.01303-24

In short:
SARS-CoV-2 not only causes acute respiratory illness but also leads to long-term lung impairment in many patients. This study investigated the role of hyaluronan (HA) in COVID-19 severity and its association with long-term respiratory dysfunction. HA levels were significantly elevated in the lungs and blood plasma of patients, with higher levels correlating with more severe disease and reduced lung diffusion capacity during recovery. Using both patient material and an in vitro 3D-lung model, the study revealed that SARS-CoV-2 infection dysregulates HA metabolism by increasing HA synthase activity and decreasing hyaluronidase activity. Additionally, corticosteroid treatment reduced HA production and inflammation. Lenman and coworkers demonstrate that HA contributes to COVID-19 morbidity and that sustained elevated HA concentrations may lead to long-term respiratory impairment, making it a potential therapeutic target.

- Anyone that has suggestions on **virology publications** that should be **highlighted**, and are of interest for Swedish virologist, please send this information to Tomas.Bergstrom@microbio.gu.se

5) **Nominations of Swedish Research Council (VR) 2025 Review Panel members:**
It is now time to nominate members of the review panels for 2025 in the Swedish Research Council's Medicine and Health panels. For instructions and submissions (deadline November 30) please read information in the link.

6) **Travel Grants:**
- PhD students and postdocs are welcome to apply for **the SSV travel grants**. See how to apply on our website. Applications for travel grants from SSV are now accepted during the spring term, with **deadline March 1**, and during the autumn term, with

deadline October 1. Decisions on travel grants are then taken by the board. Each award amounts to a maximum of 10.000 SEK. If you have further questions, contact ake.lundkvist@imbim.uu.se

7) **Opportunities with the German Society of Virology (GfV):**

- Opportunity to join and interact with the **Young Investigators of GfV (JGfV),** including events, virtual seminar series, and much more, see their webpage Upcoming virtual seminar include topics on

Thus, events organized by JGfV include:

- Virology Lecture Series
- Online Education circle of the working group: clinical virology
- How to… Methods lecture series
- Additional workshops (partly in german)
- Online "discussion Round" format on career related topics.

8) **Pandemifonden activities:**
For those of you that are active at **social media**, it would also be a great help to increase awareness – and donations – if you follow/share Pandemifondens messages. If you feel comfortable, recommend your network to follow Pandemifonden:

- Instagram: https://www.instagram.com/pandemifonden/
- Facebook: https://www.facebook.com/Pandemifonden
- LinkedIn: https://www.linkedin.com/company/pandemifonden/

9) **Reminder!** We kindly ask you to post, in your neighborhood, the attached Pandemifonden poster, with information on activities and how to donate money, including QR code.

10) Information on Virus- och Pandemifonden – **Swedish Society for Virology membership:** Attending the Smögen Summer Symposium on Virology will make you, free of charge, member of SSV for the coming three years. If you want to opt out of the membership, do not want to receive Newsletters or have **suggestions for the Newsletter or the webpage, please contact** marianne.jansson@med.lu.se

Greetings to all members (n=311) from SSV

Creating Possible.

Gilead is a research-based biopharmaceutical company that discovers, develops and delivers innovative therapeutics for people with life-threatening diseases.

At Gilead, we set and achieve bold ambitions in our fight against the world's most devastating diseases. We are driven by our purpose of making the world a healthier place for all people. That means delivering innovative therapies that offer new hope for patients. Our ambitions have led us to a cure for hepatitis C and to transforming the treatment and prevention of HIV. Our innovation is helping people with diseases and conditions that include cancer, viral hepatitis, HIV and COVID-19.

By investing in world-class science, driving access to our medicines, addressing societal barriers to care and building a culture where our employees can make a real impact, we will continue to confront the biggest public health challenges of our day for the benefit of generations to come.

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