

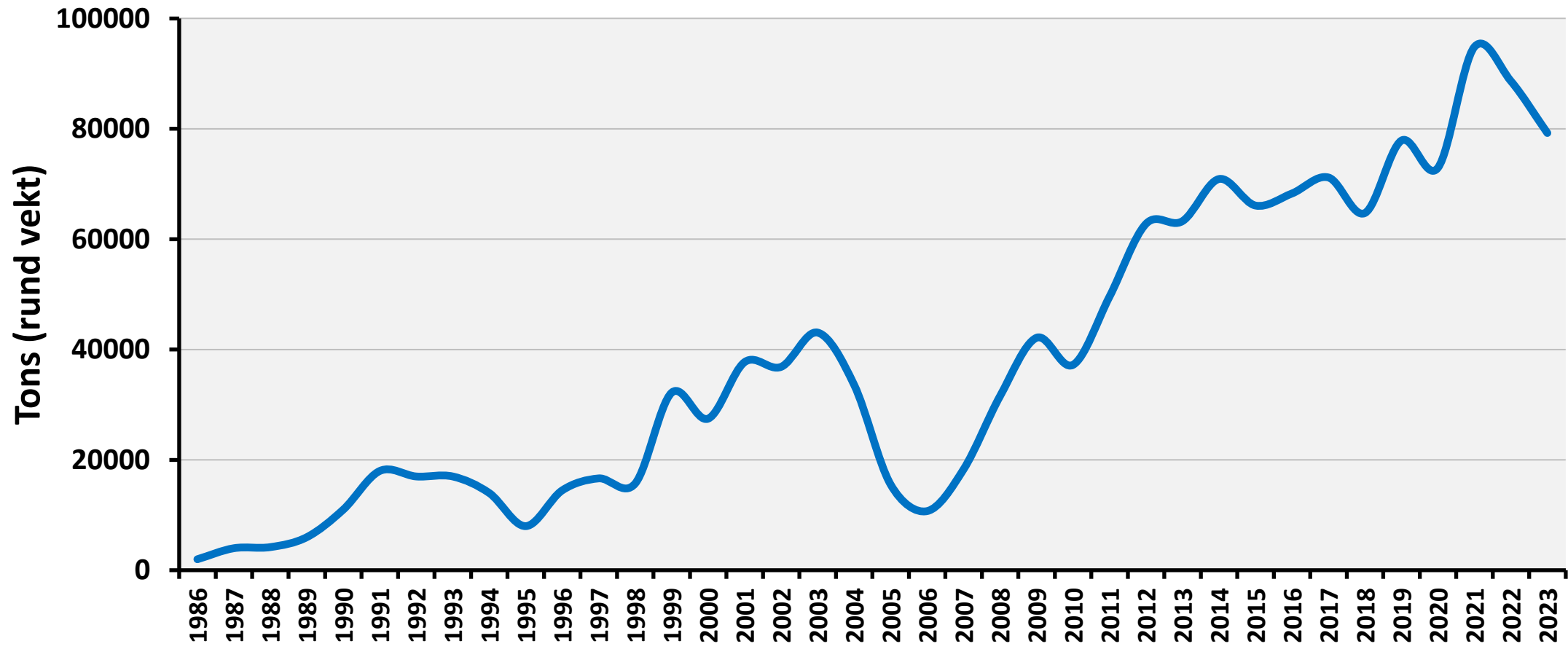


Fiksaheilsubarometrið 2023

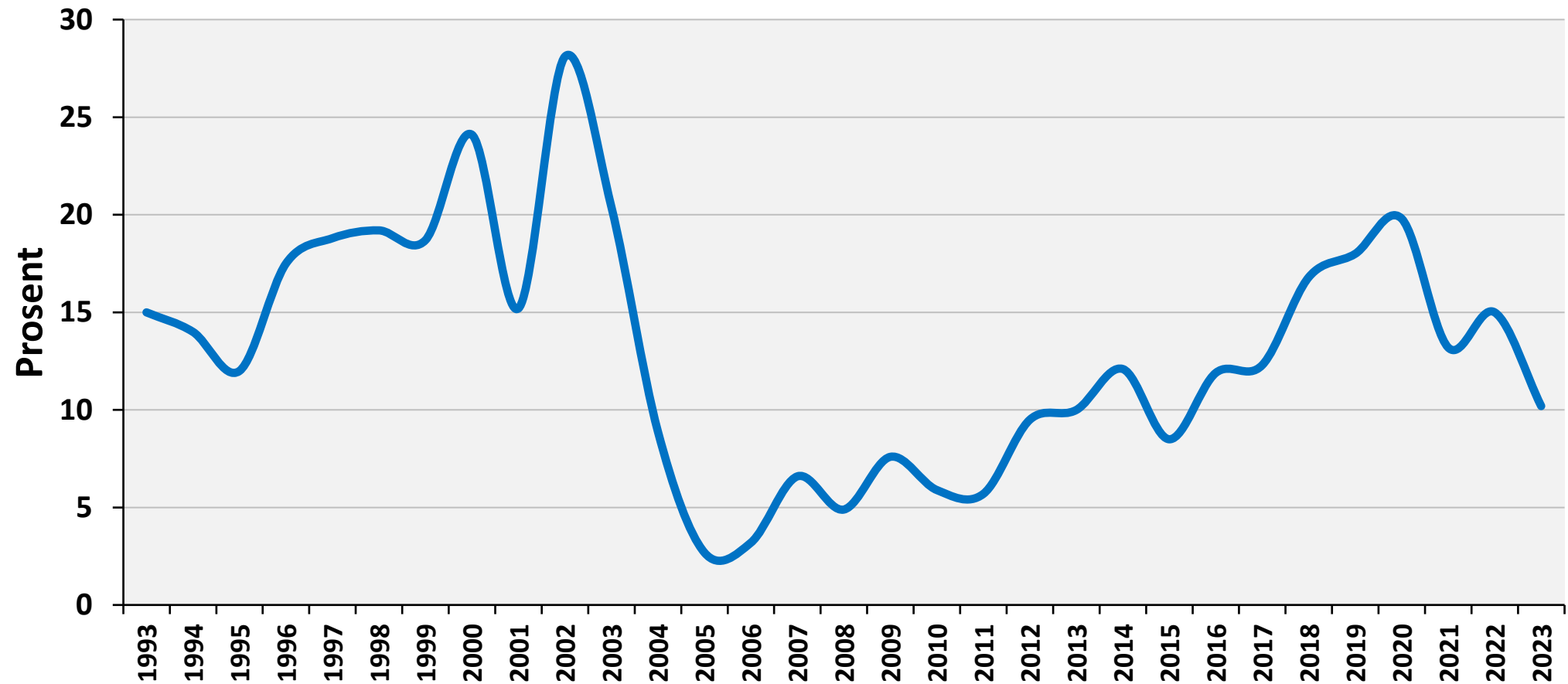
fokus á Táknuheilsu og eitt sindur um hjartaklovning

Debes Hammershaimb Christiansen
Deildarleiðari og Granskari

Tøka av laks

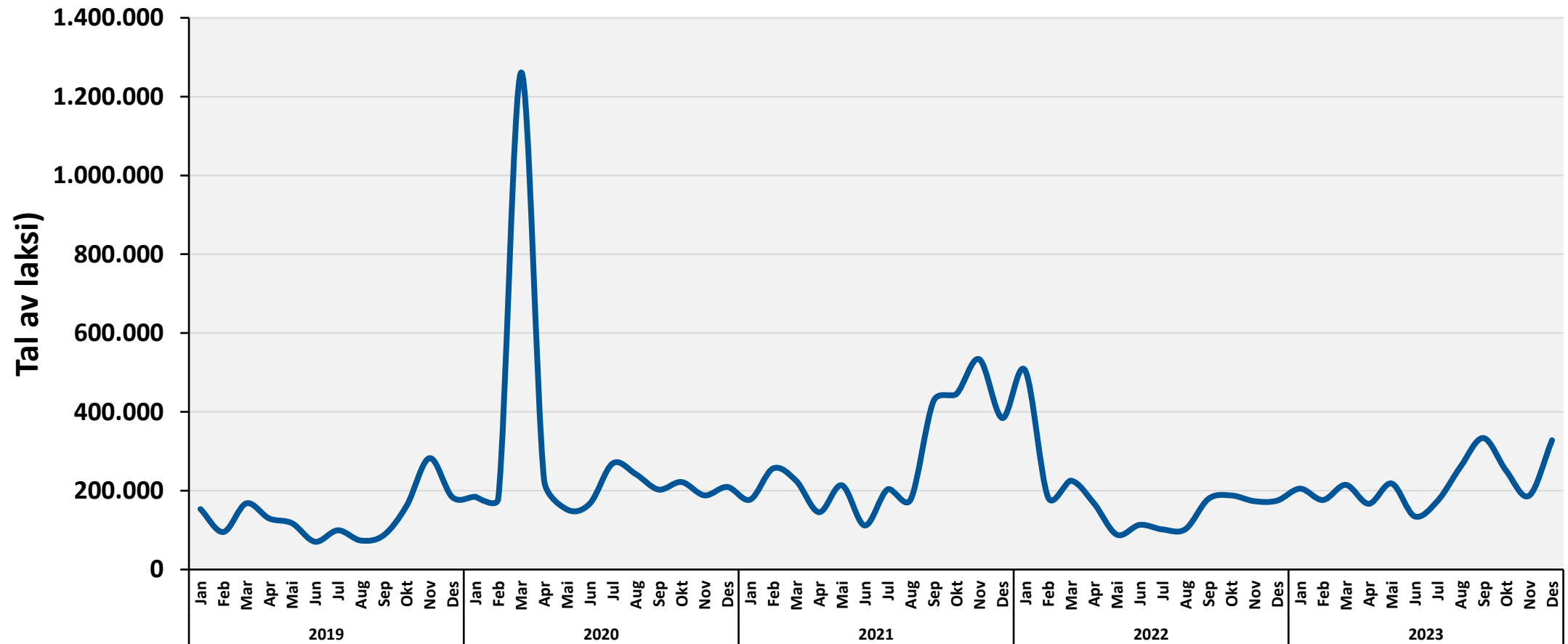


Felli á sjónum

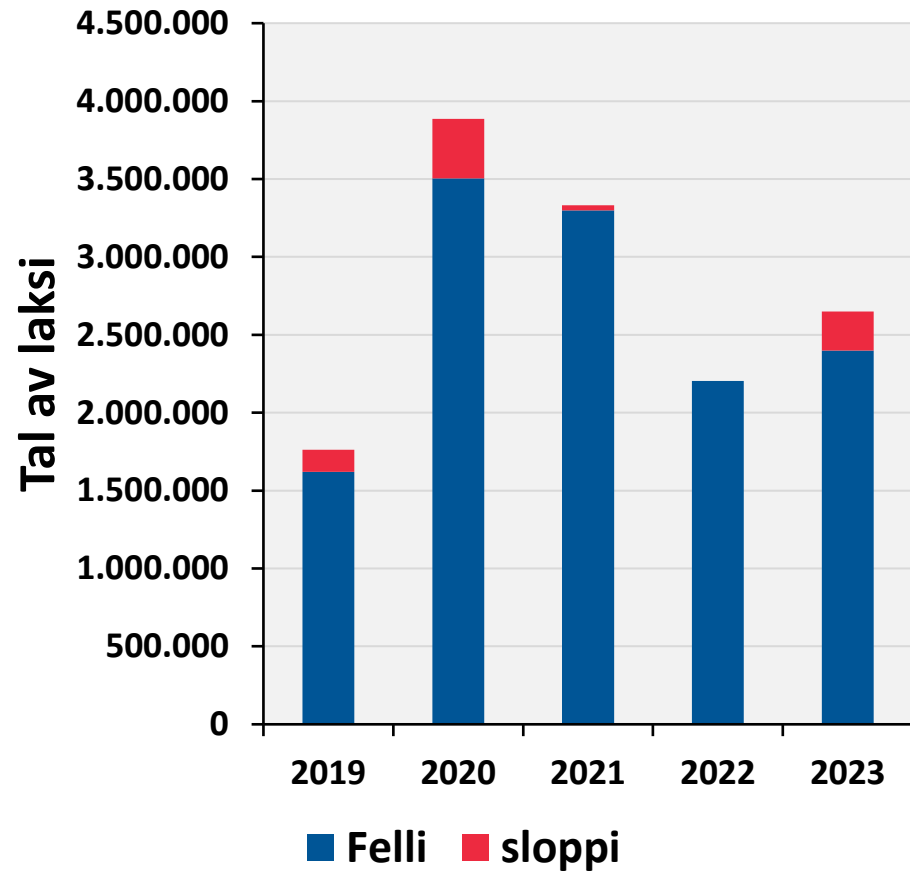


Rúni: AVRIK

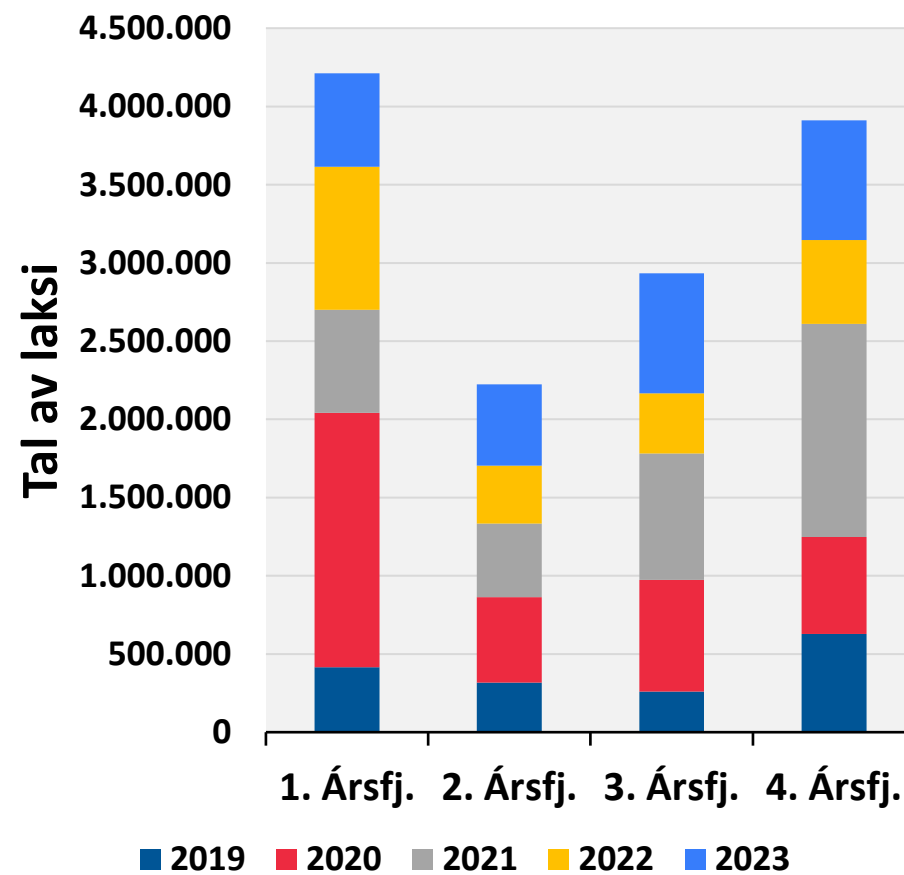
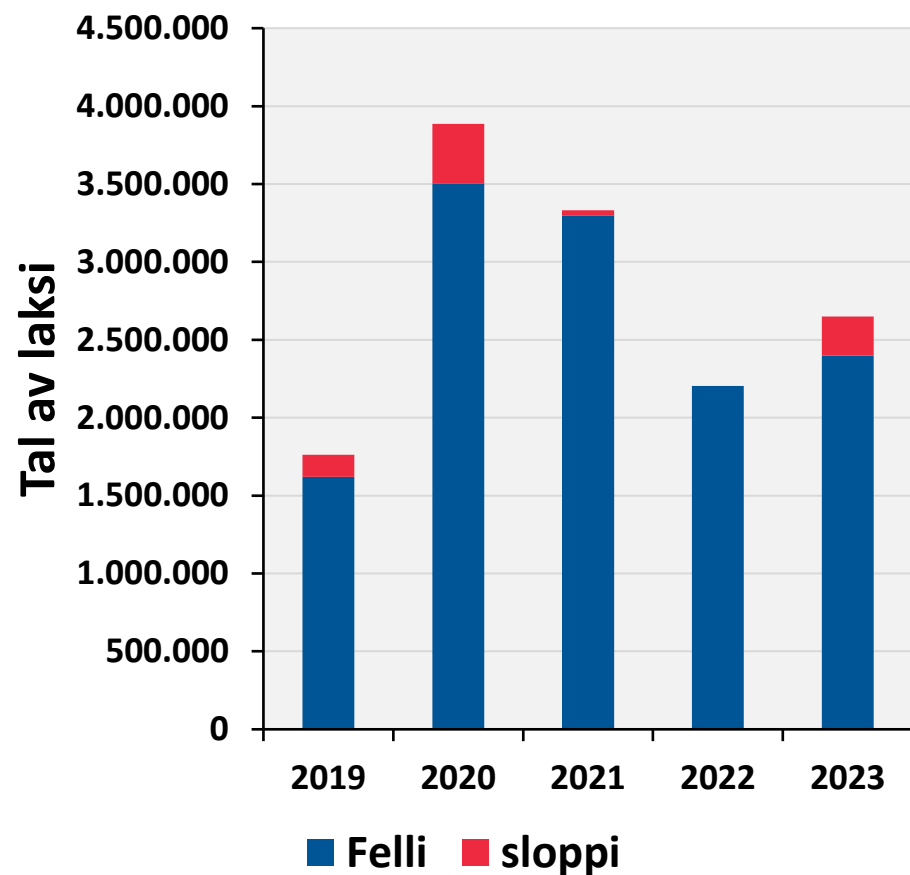
Felli per mánað á sjónum



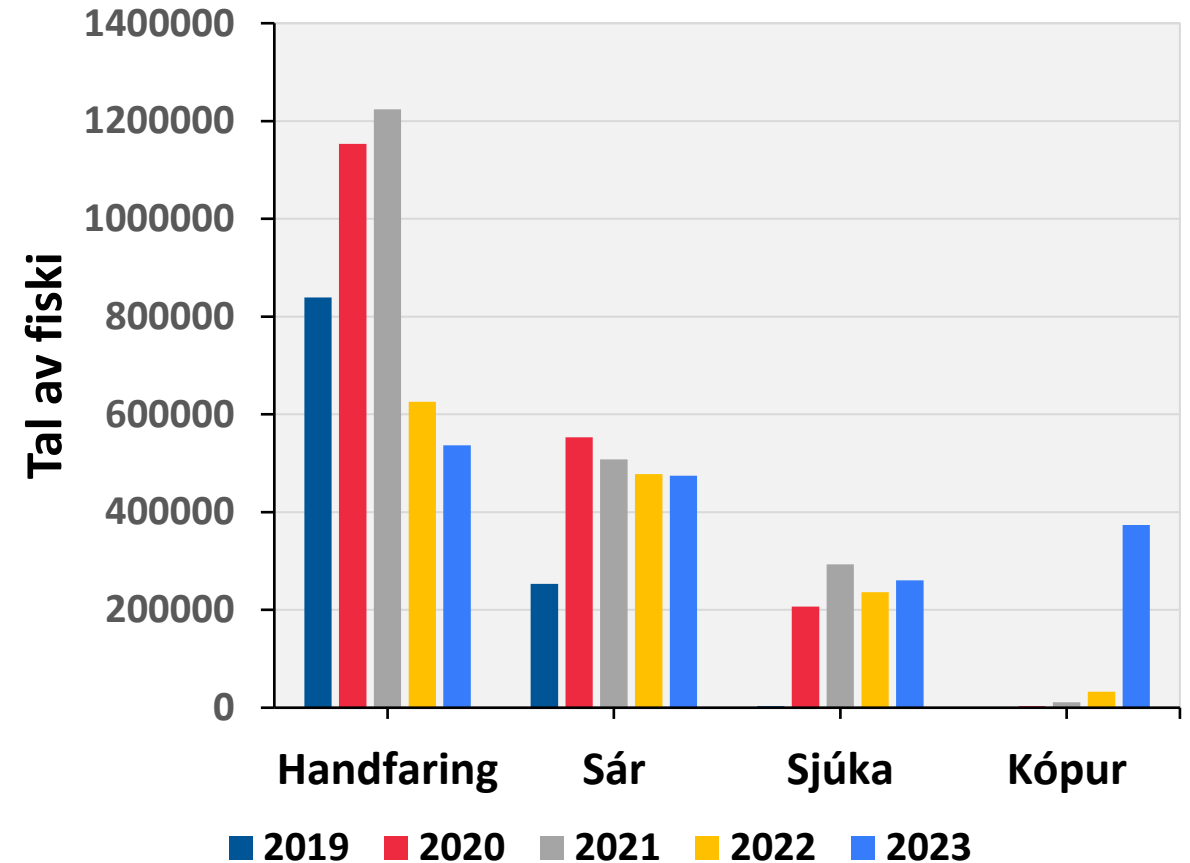
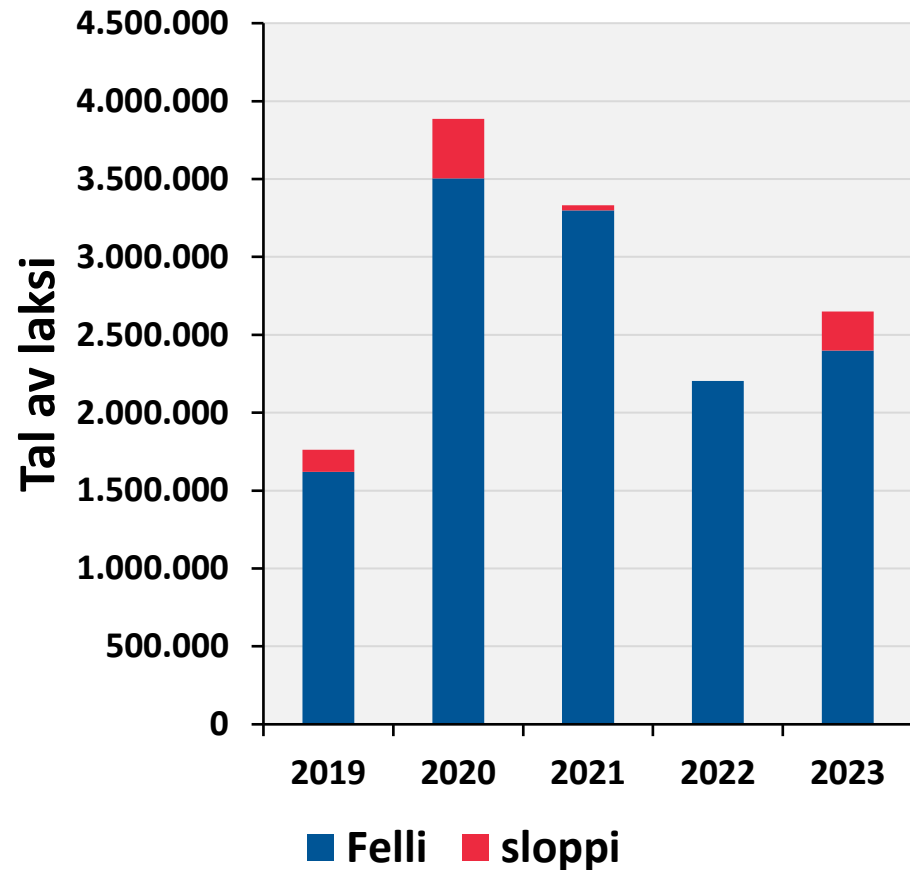
Felli og sloppi per ár



Felli er størst vetrarhálvuna



Nakrar av týðandi orsøkum til felli



Flestu smittur finnast í øllum londum við laksaaling

Sjúkuelvandi smitta	Sjúka/syndrom	Fiskaslag	Útbreiðsla
<i>Paramoeba perurans</i>	Amoebic gill disease (AGD)	Laksur og Rognkelsi	Australia, Norra, Chile, Skotland, Írland, USA, Kanada og Føroyum
<i>Costia (Ichthyobodo sp.)</i>	Ichthyobodosis	Laksur	Norra, Skotland, Írland og Føroyum
<i>Branchiomonas cysticola</i>	Epitheliocystis	Laksur	Norra, Skotland, Írland og Føroyum
<i>Pisciclamydia salmonis</i>	Epitheliocystis	Laksur	Norra, Skotland, Írland og Føroyum
<i>Parvicapsula salmonis</i>	Epitheliocystis	Laksur	Norra, Skotland, Írland og Føroyum
<i>Desmozon lepeophtherii</i>	Kompleks táknusjúka	Laksur	Norra, Skotland og Írland. Ongantið ávíst í Føroyum
<i>Paramyxovirus (ASPV)</i>	Kompleks táknusjúka	laksur	Norra, Skotland og Írland. Ikki kannað í Føroyum
<i>Salmon gill poxvirus (SGPV)</i>	Kompleks táknusjúka	Laksur	Norra, Skotland, Írland og Føroyum
<i>Tenacibaculum</i>	Tenacibaculosis	Laksur og Rognkelsi	Australia, Norra, Chile, Skotland, Írland, USA, Kanada og Føroyum
Algur, manetir, hvalspíggi	Táknuskaðar	Laksur	Australia, Norra, Chile, Skotland, Írland, USA, Kanada og Føroyum

Táknusjúkur eru ofta eitt fjøltáttað samspæl millum fleiri smittur og umhvørvið

- Ofta eru fleiri ymiskar smittur í táknunun samstundis
 - *Hvat er primera orsøkin til kompleksu táknusjúkuna?*
 - *Hvat eru sekunderar (opportunistiskar) smittur?*
 - Í summum førum kann smitta A vera primer og B, C og D sekunderar
 - Í øðrum førum er C primer og hinar sekunderar

Kompleksar táknusjúkur kunnu m.a. viðføra

- Niðursetta iltupptøku
- Niðursettan fóðurfaktor (reduced food conversion rate)
- Seinkaðan vøkstur (reduced growth rates)
- Vánaligan trivnað
- Økt felli

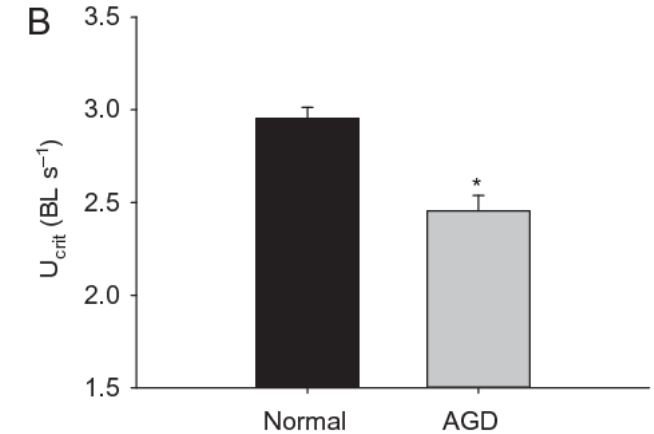
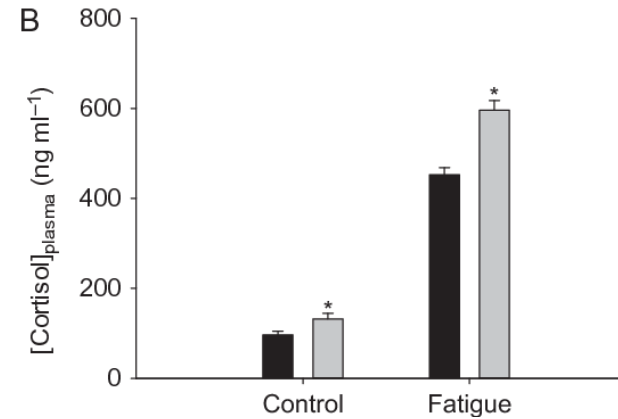
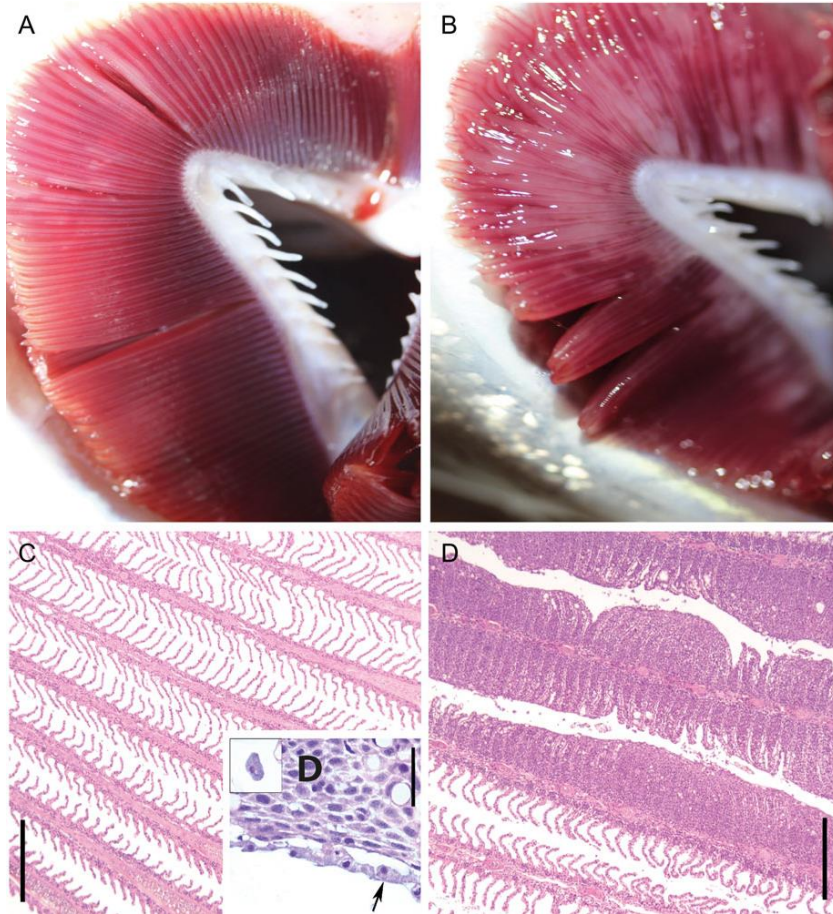
Viðgerðir fyri táknusjúkur

- Tilseta Oxygen ella ilt
- Viðgerðir í feskvatni (AGD)
- Skjúrt at verja ímóti algum og hvalspýggjum
- Serligt heilsugott fóður
- Fóður við Antibiotika (bakteriur)

Fyrst og fremst lýsa triggjar av táknusjúkunum í Føroysku alivinnuni

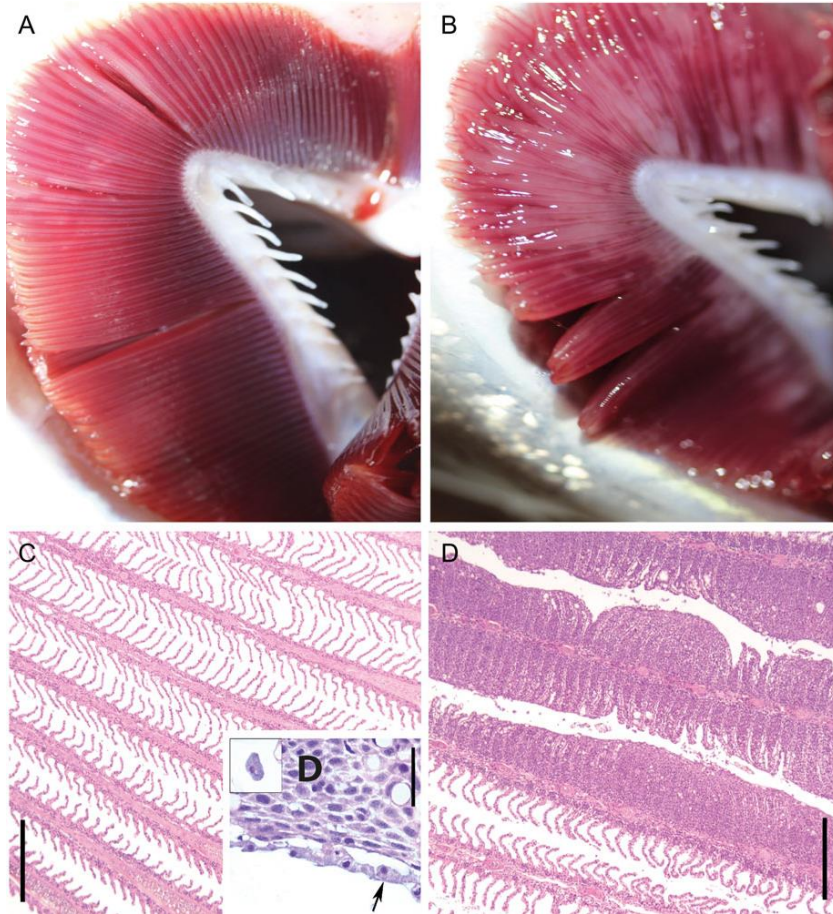
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Laksur við AGD er kronisk strongdur og hevur vánaliga kondi



Hvas *et al.* 2017
Conservation Physiology

Paramoeba perurans - AGD



- **Risikofaktorar**

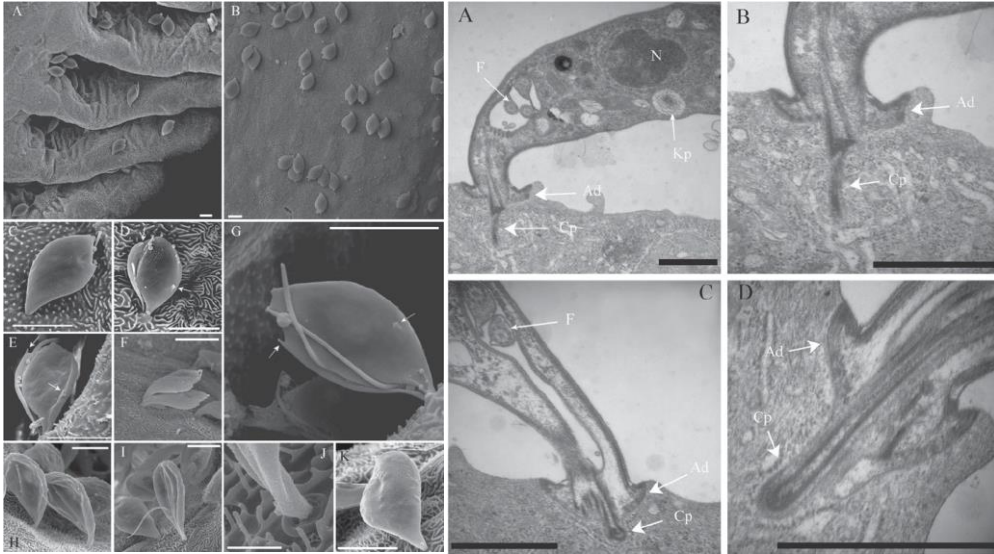
- $> 15^{\circ}\text{C}$. Seinnu árin ávíst AGD við lægri og lægri hita
- Høgt saltinnihald $> 3,2 \%$
- Vøkstur á nótunum (Biofouling)?
- Gósðka/stødd á smolt?
- Aliðki/umhvørvið?
- Tætt við alibrúk við AGD
- Aðrar sjúkur t.d. PD ella hjartaklovning

- **Felli:**

- Vanliga 10-20%
- Væl hægri ísv. aðrar sjúkur/smittur

Costia (Ichthyobodo spp.) og *Branchiomonas cysticola*

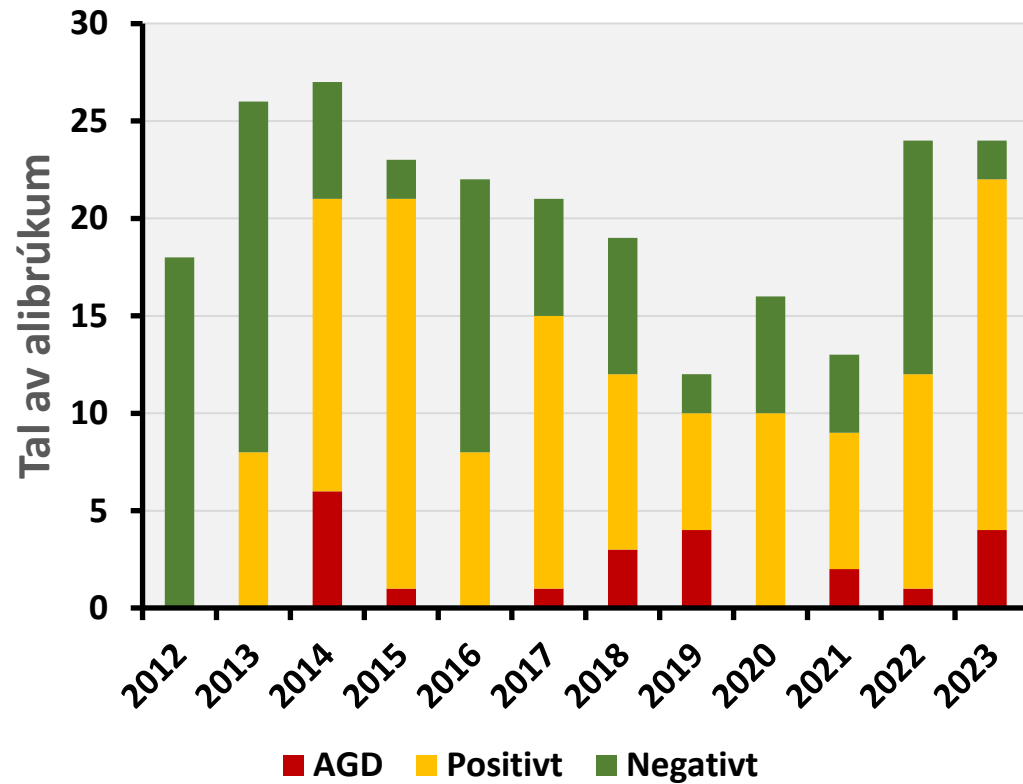
Isaksen *et al.* 2012 Paracitology Int.



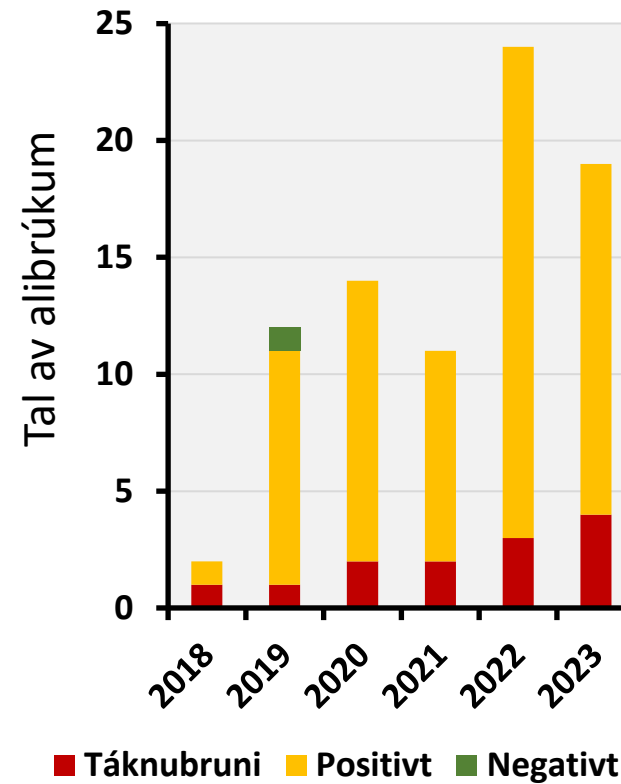
- *Ichthyobodosis* => Táknubruna
 - Stórar skaðar á táknurnar
 - Niðursett evni at flyta ilt og súrevni.
 - Vánaligan matarlyst og veksur seinni
 - Vánaligan trivnað og høgt felli
- *Epitheliocystis* => Táknubruna

Útbreiðsla av AGD og táknubruna

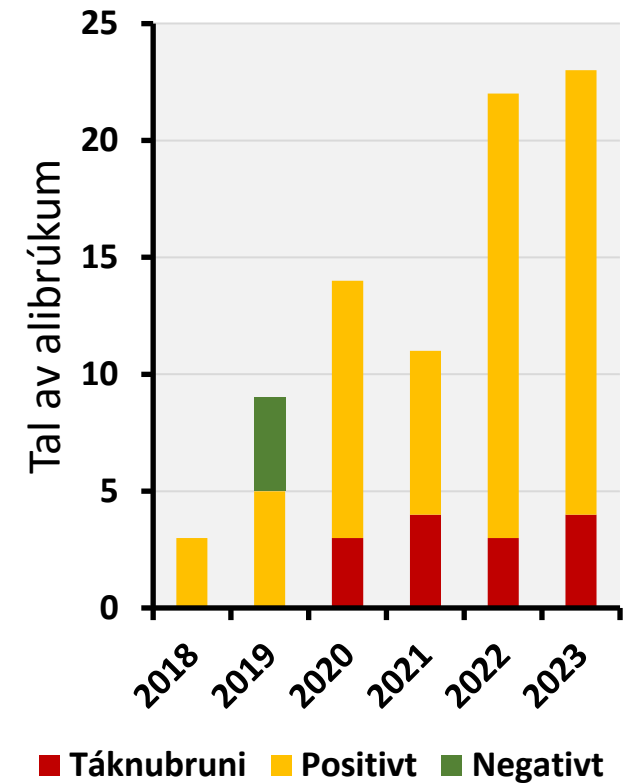
Paramoeba perurans



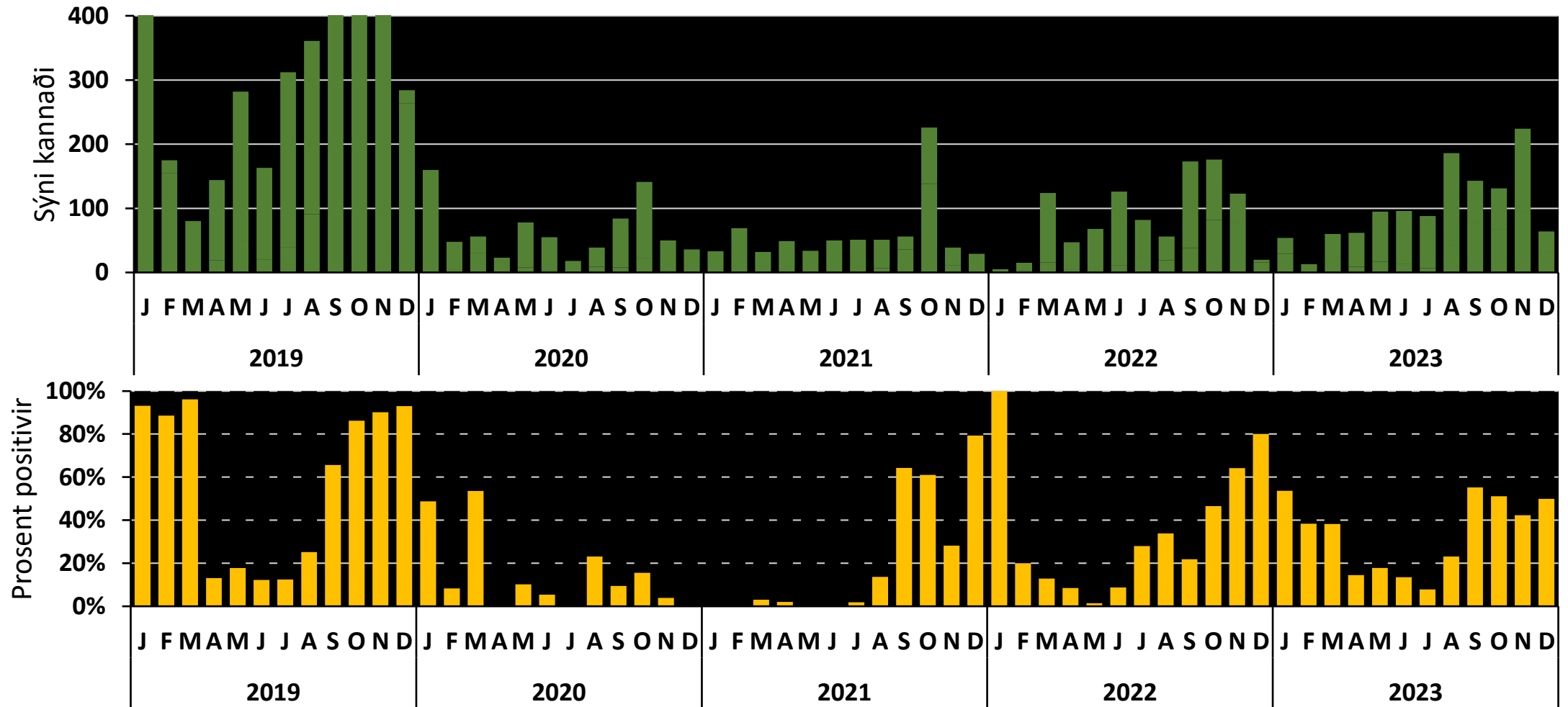
Costia



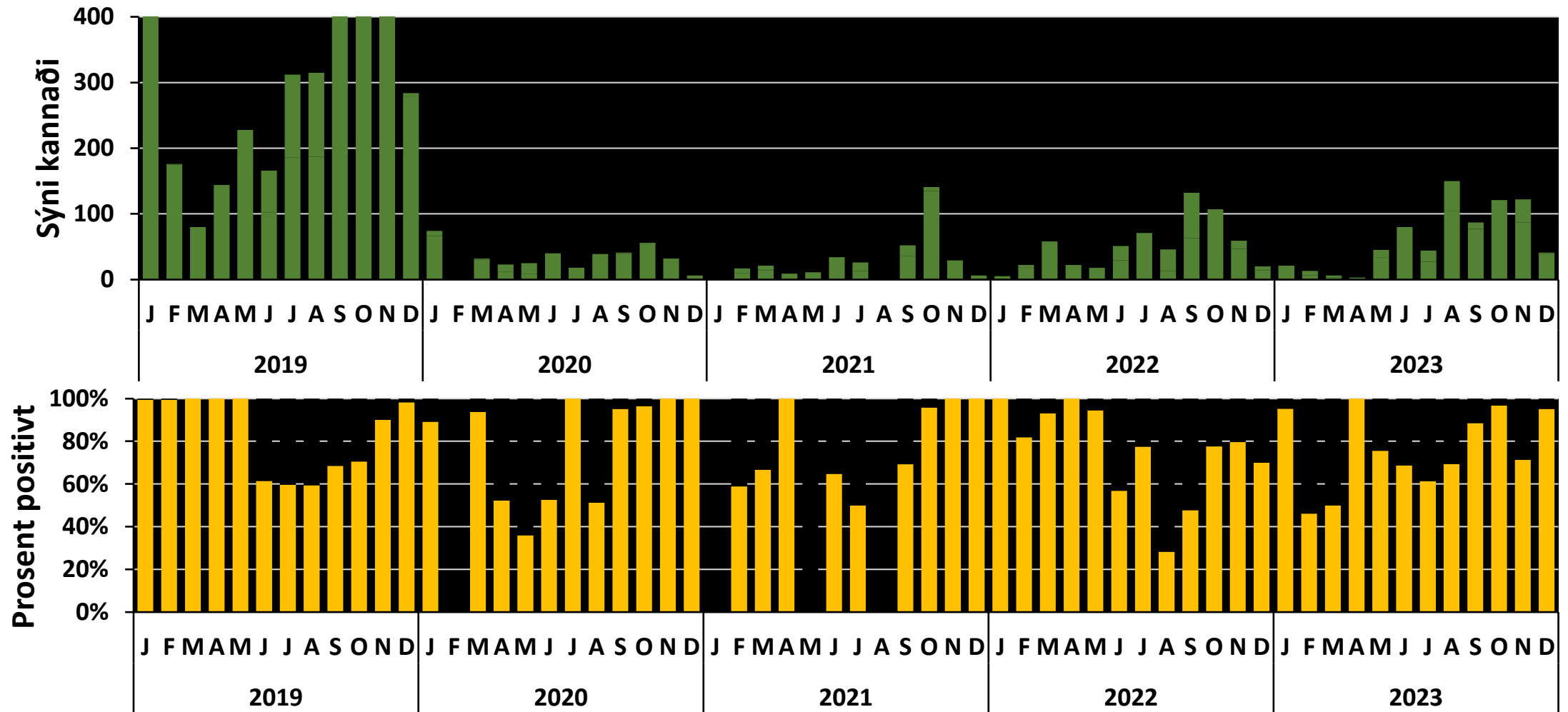
B. cysticola



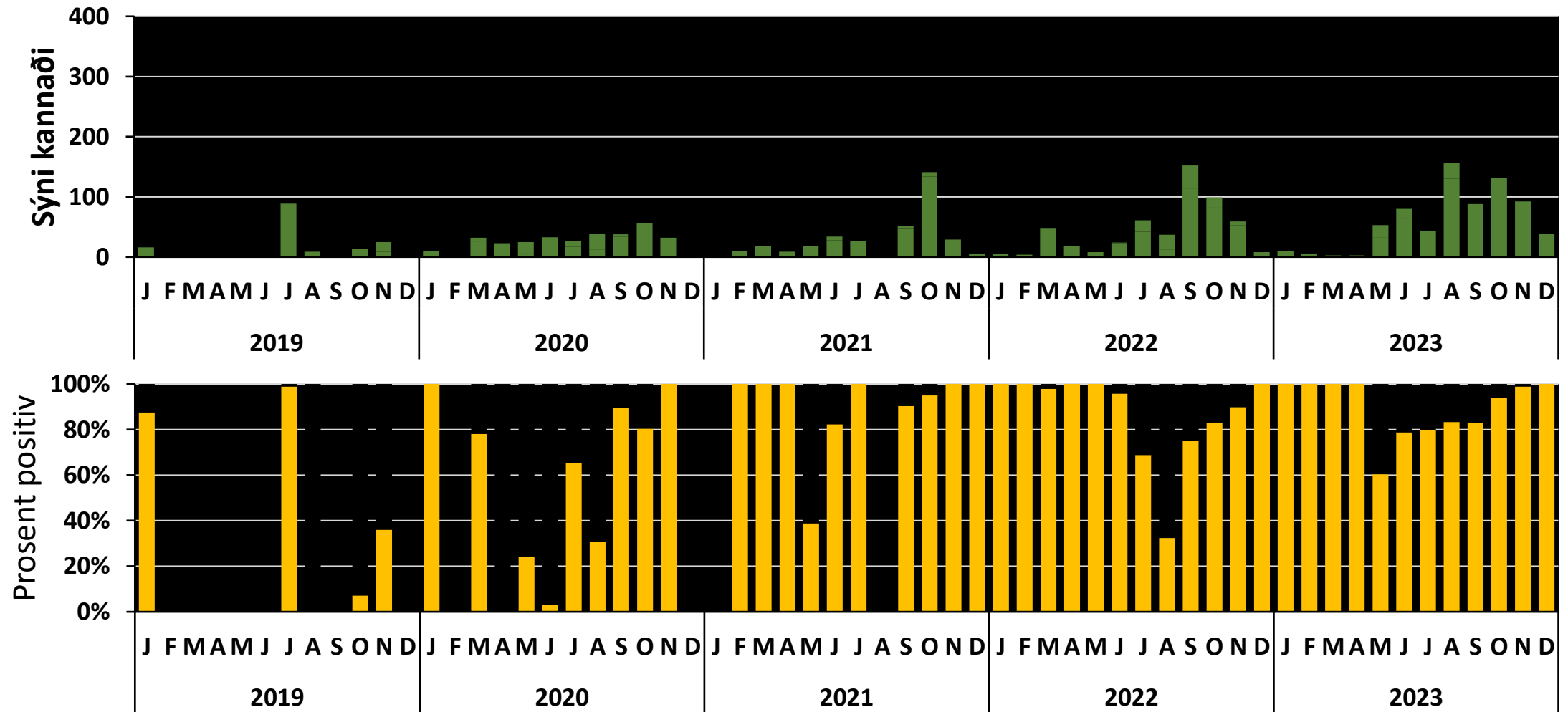
Prevalensurin av *P. perurans* hægst um heysti/veturin



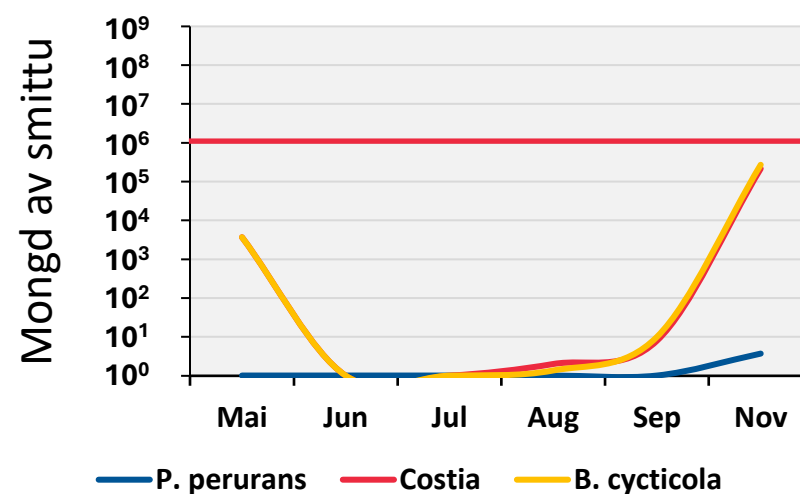
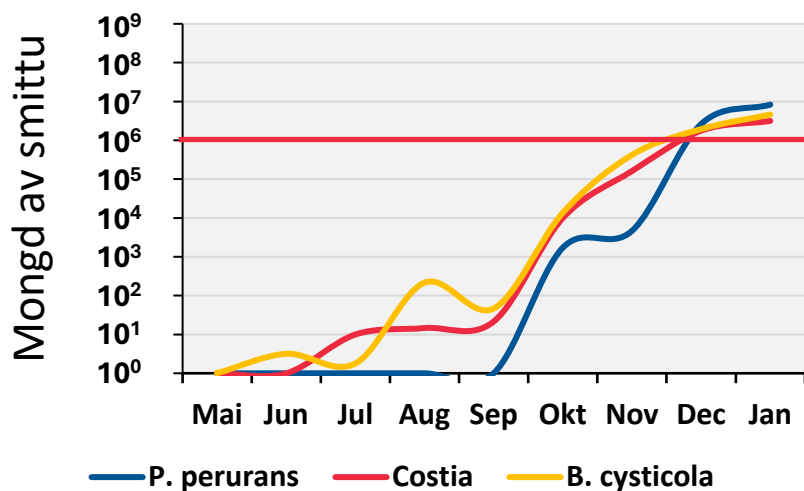
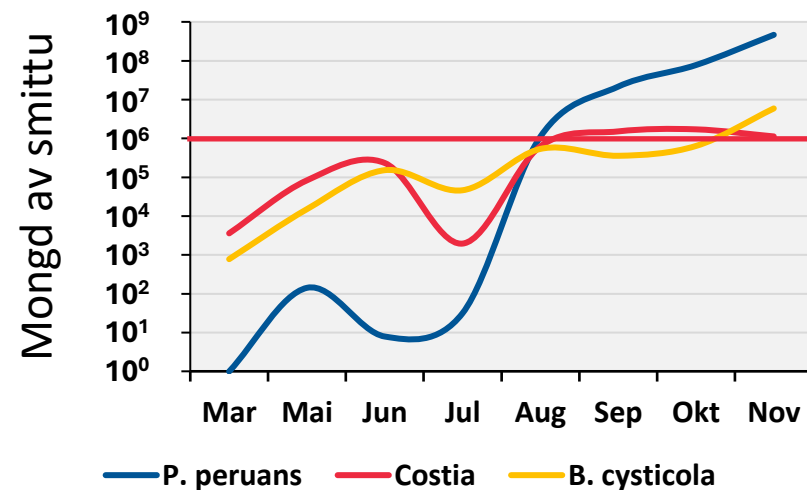
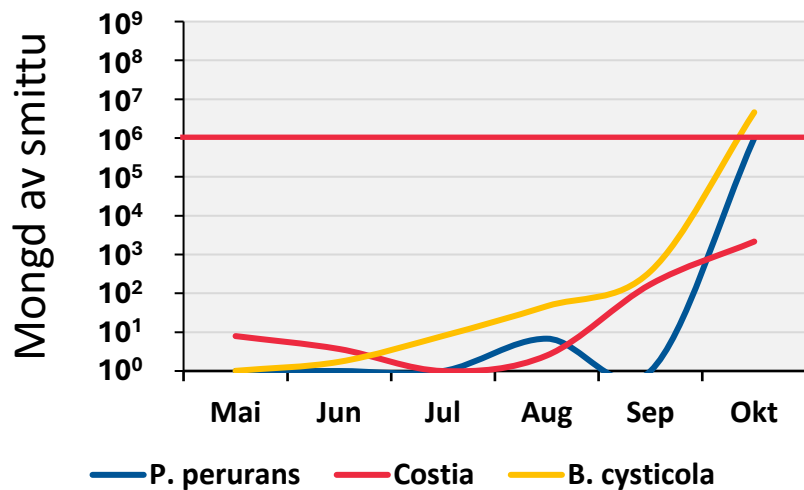
Prevalensurin av *Costia* vísir onga árstíðarvariation



Prevalensurin av *Branchiomonas sp.* vísir onga árstíðarvariatiÓN

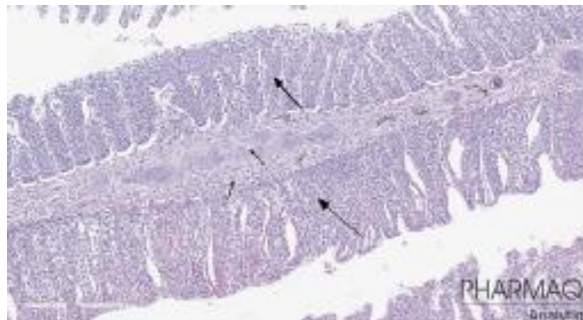
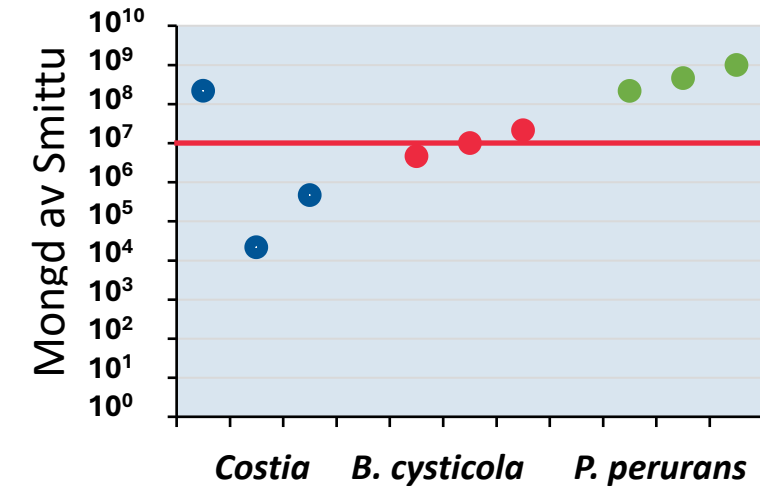


Smittudynamikkurin sera ymiskur fyri ymisk alibrúk

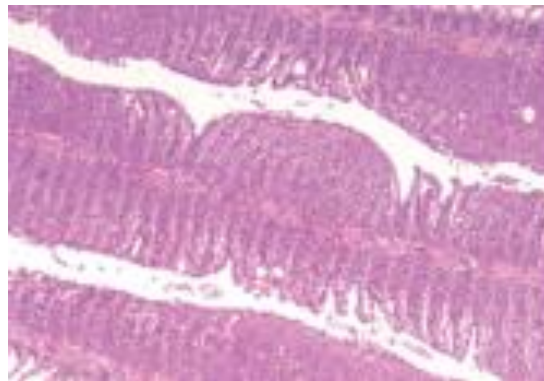
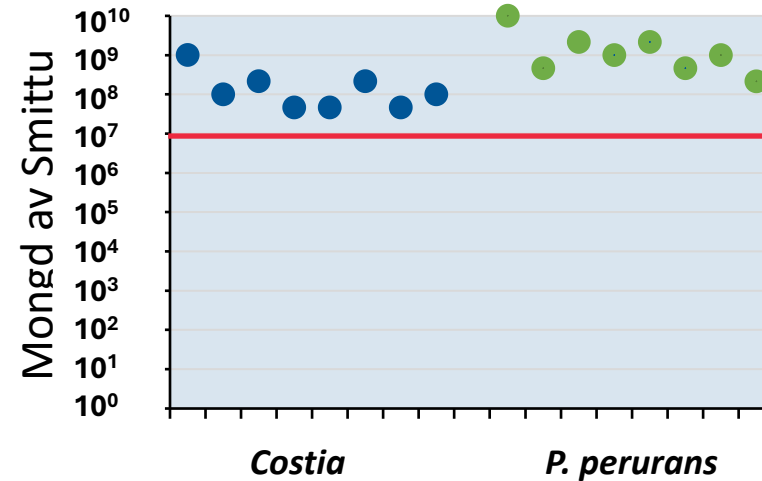


Útbrot av AGD eru vanliga um heysti

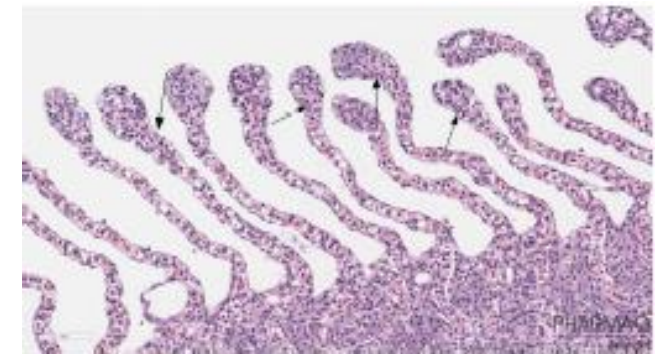
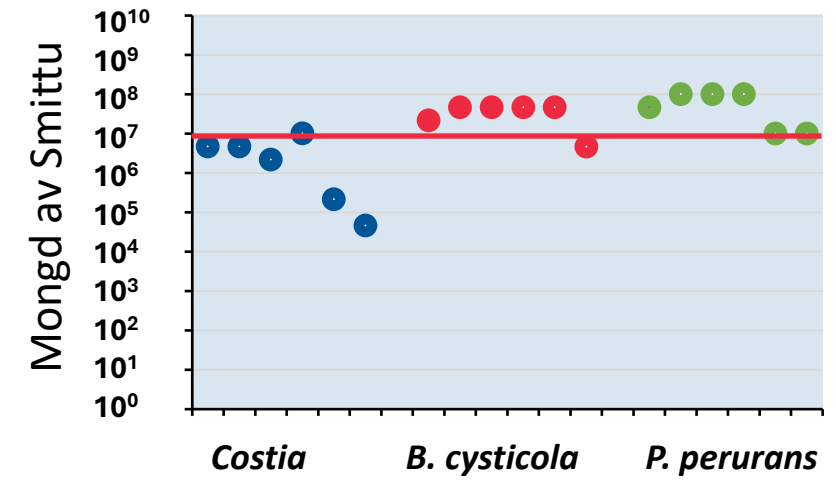
September



Oktober



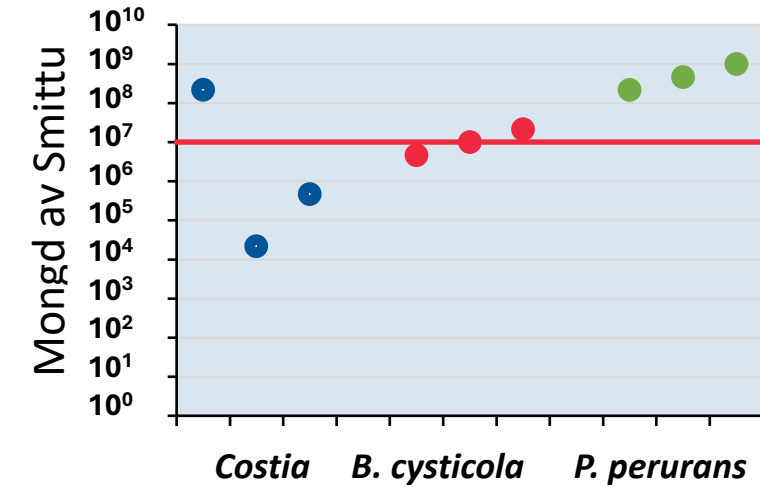
Oktober



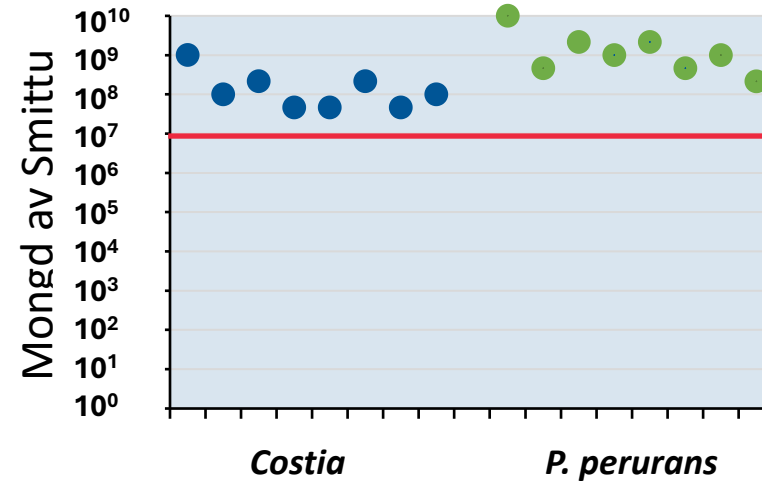
Prøve 1. Gjeller. Epitelliocyster

AGD kann viðføra munandi økt felli møguliga saman við øðrum táknusmittum

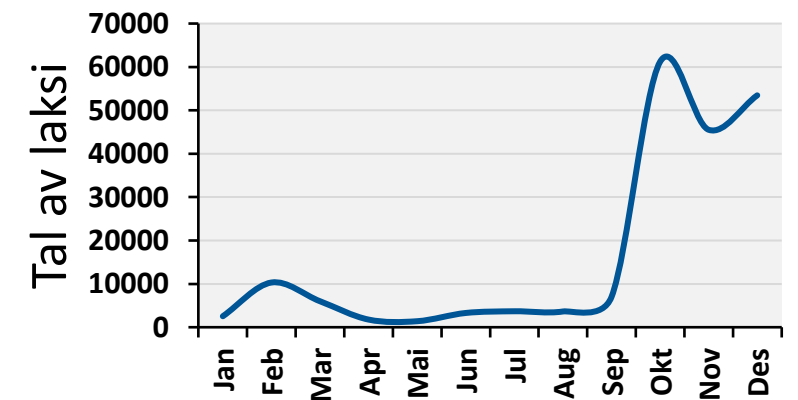
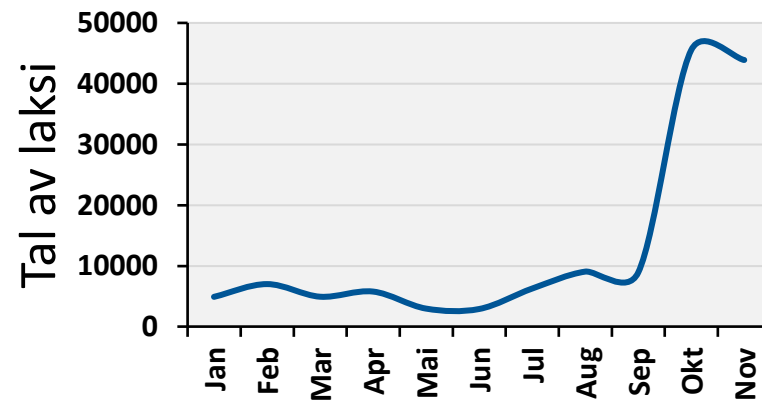
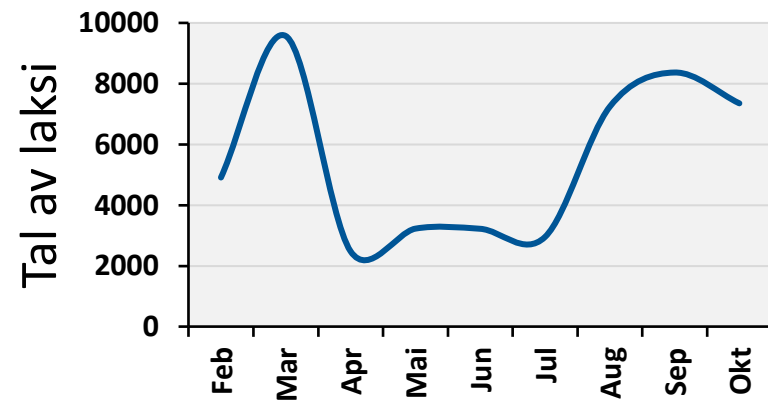
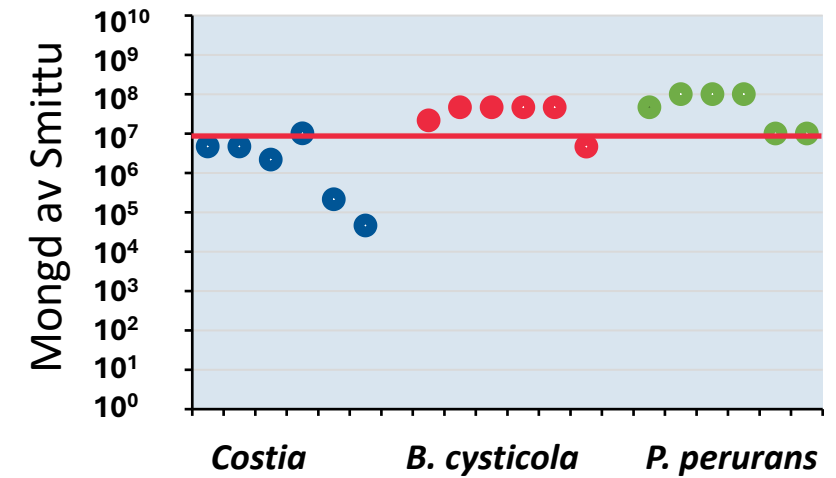
September



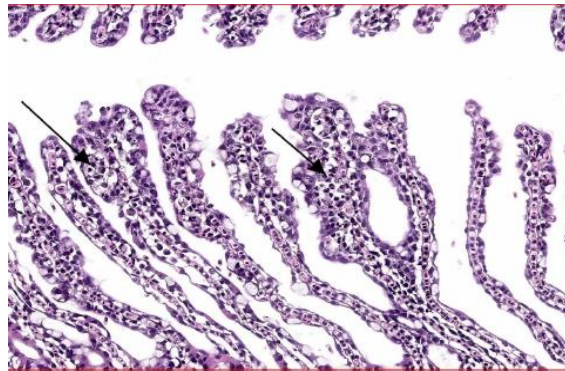
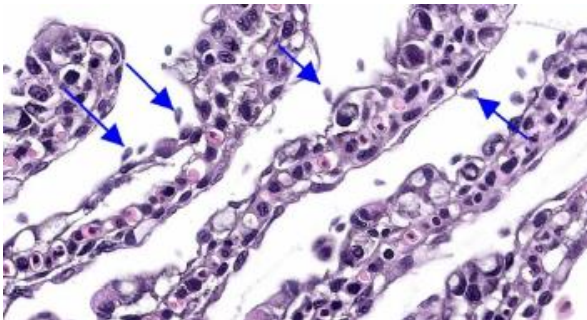
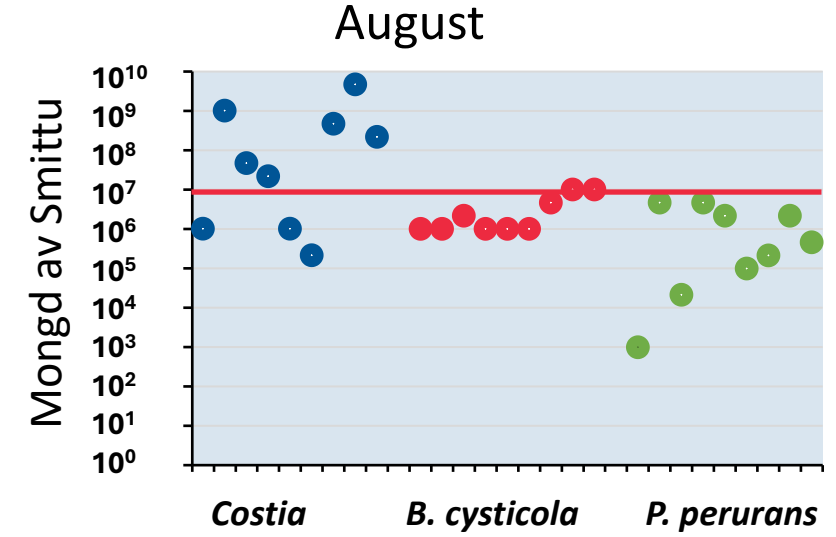
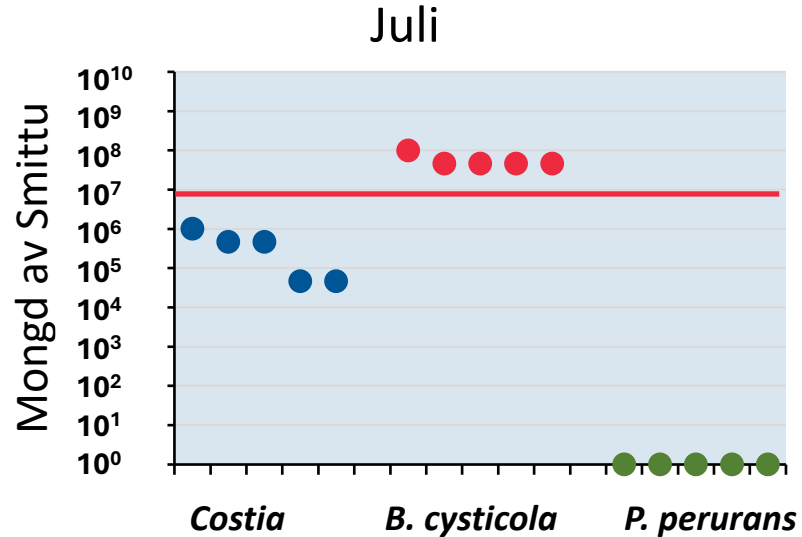
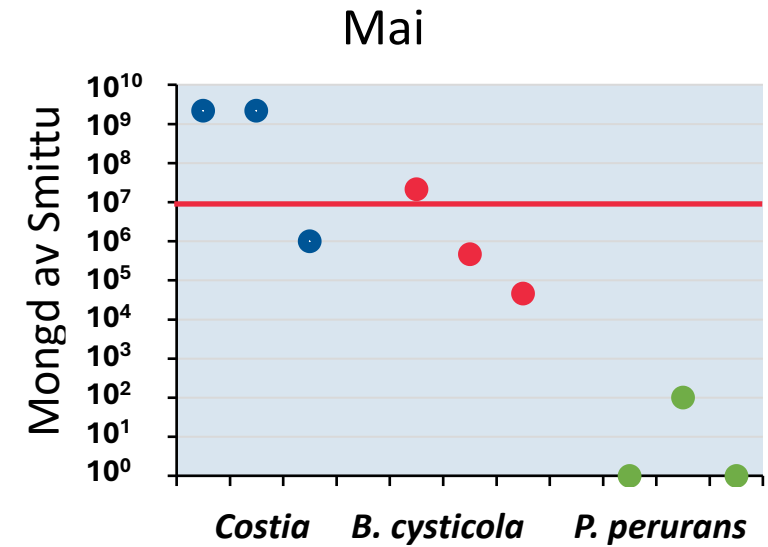
Oktober



Oktober



Táknubruni av *Costia*/*B. cysticola* kann vera alt árið

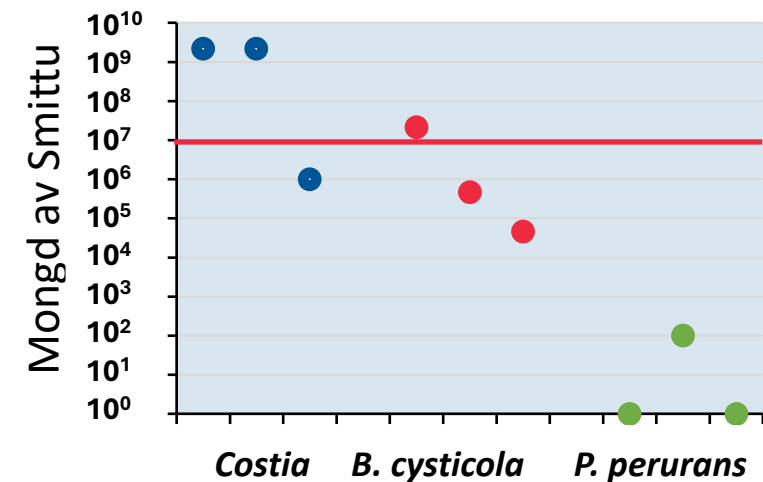


Ílde 2. F1: Fokale betennelser og nekroser under respiratorisk epitel (ílir).

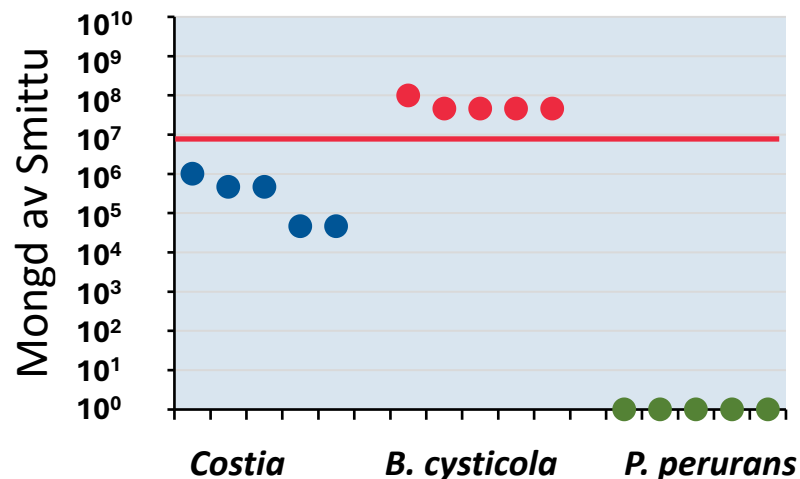


Táknubruni av *Costia*/*B. cysticola* kann viðføra økt felli

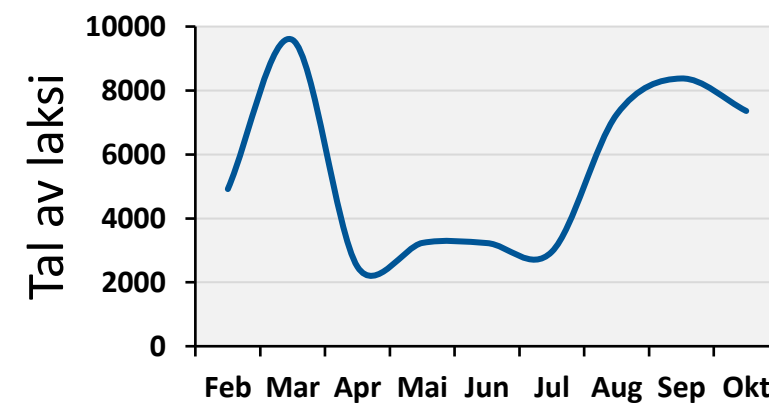
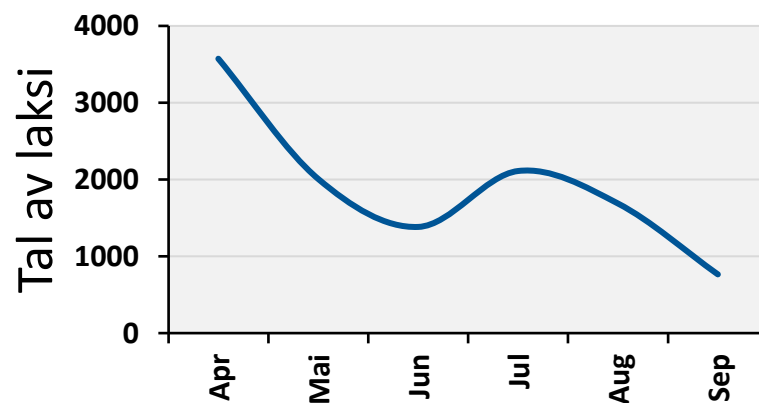
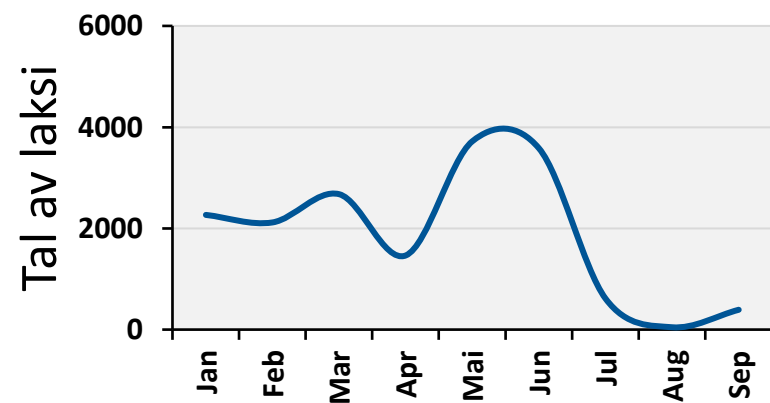
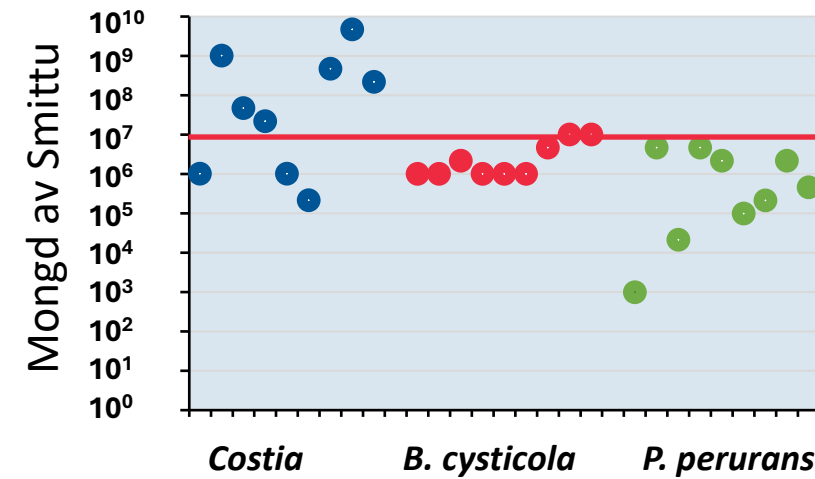
Mai



Juli

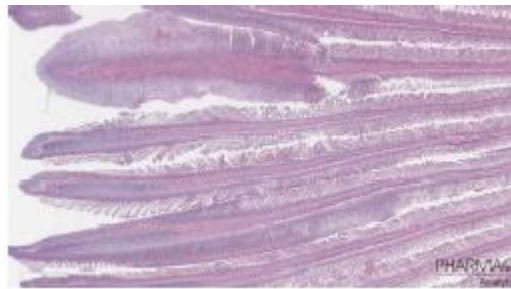
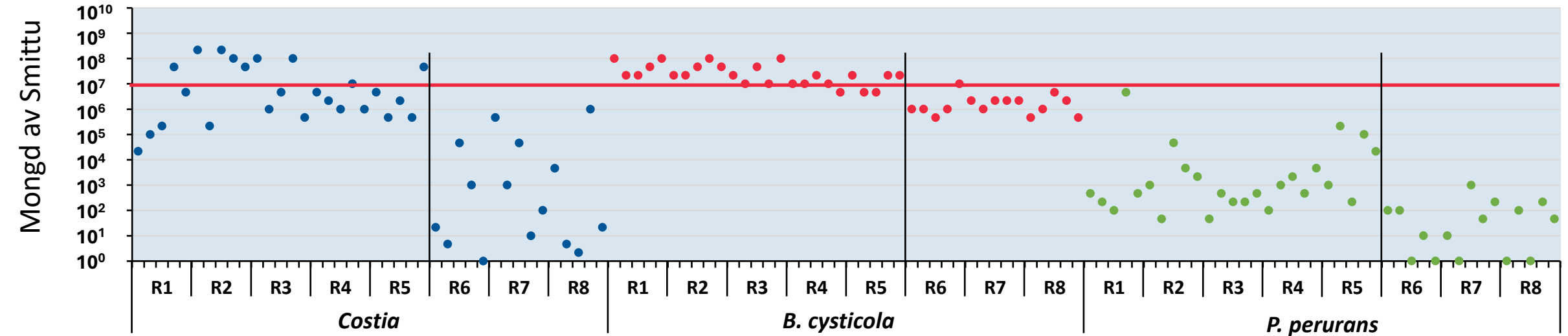


August

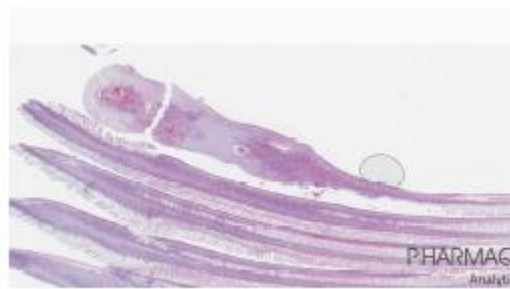


Táknubruni av *Costia* og/ella *B. cysticola* ofta avmarkað til ávísar ringar

Oktober



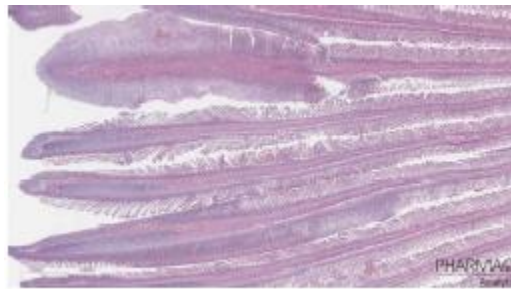
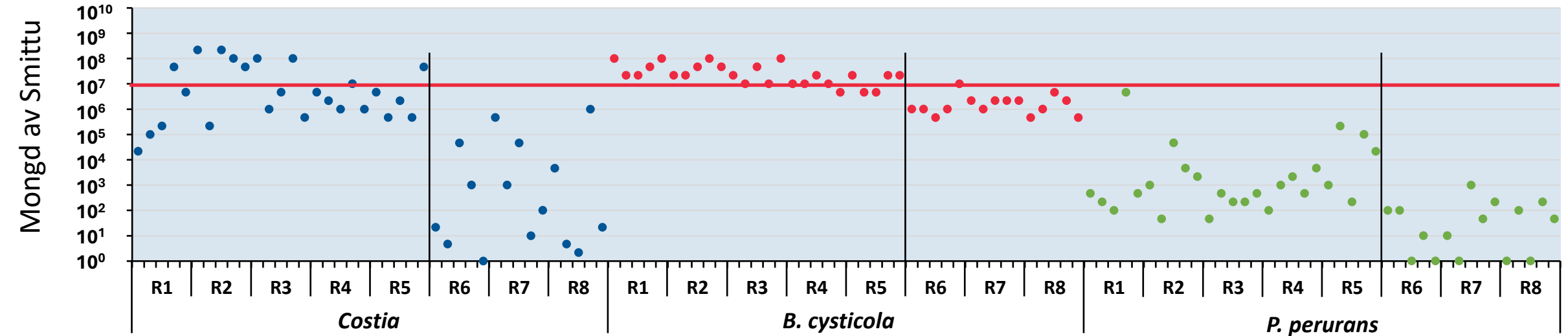
Prøve 3. Gjeller. Hyperplastisk gjellebetennelse



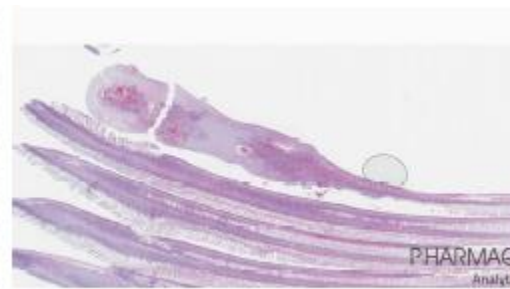
Prøve 6. Gjeller. Oversikt. Hyperplastisk gjellebetennelse

Men eisini táknuskaðar helst av algum, algutoksinum, zooplankton og/ella manetum

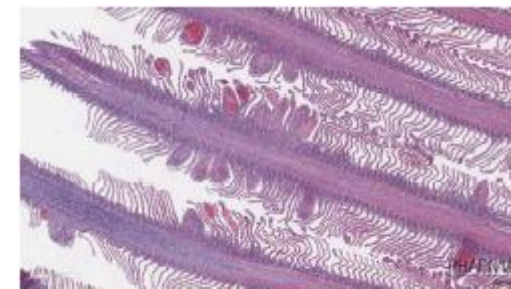
Oktober



Prøve 3. Gjeller. Hyperplastisk gjellebetennelse



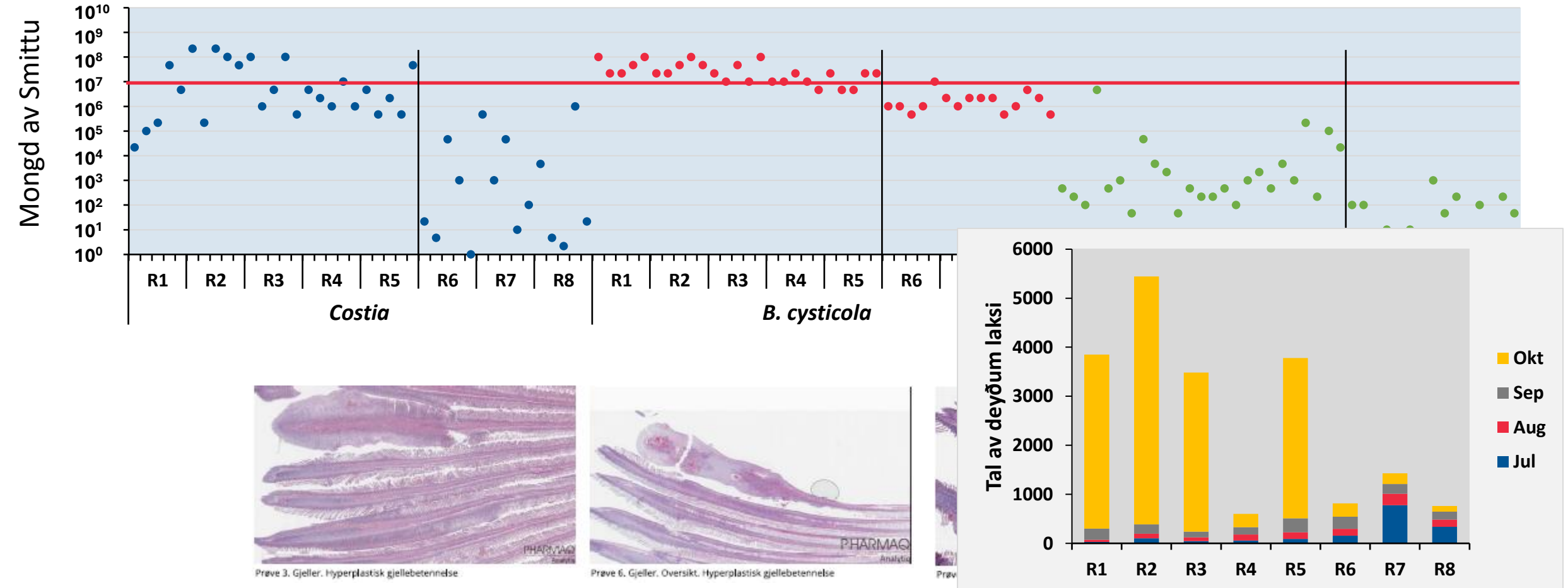
Prøve 6. Gjeller. Oversikt. Hyperplastisk gjellebetennelse



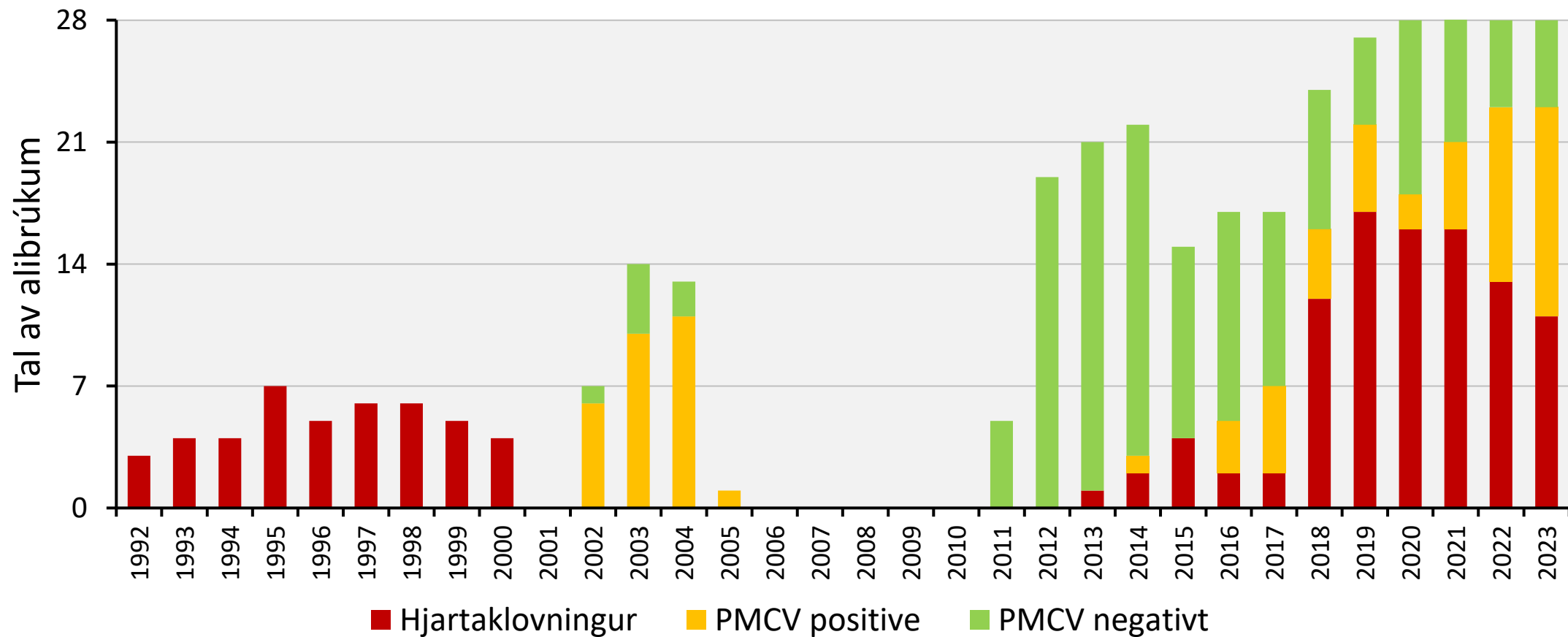
Prøve 3. Gjeller. Karskader

Munandi økt felli serliga í ringunum við størstu nøgðum av *Costia* og *B. cysticola*

Oktober

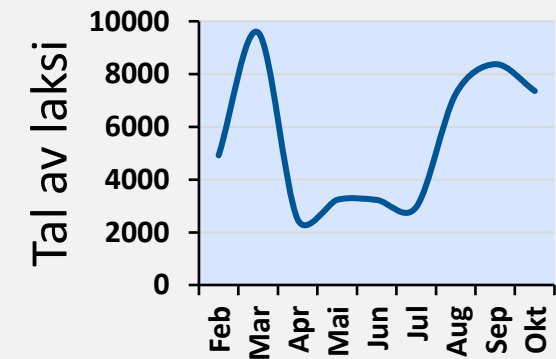
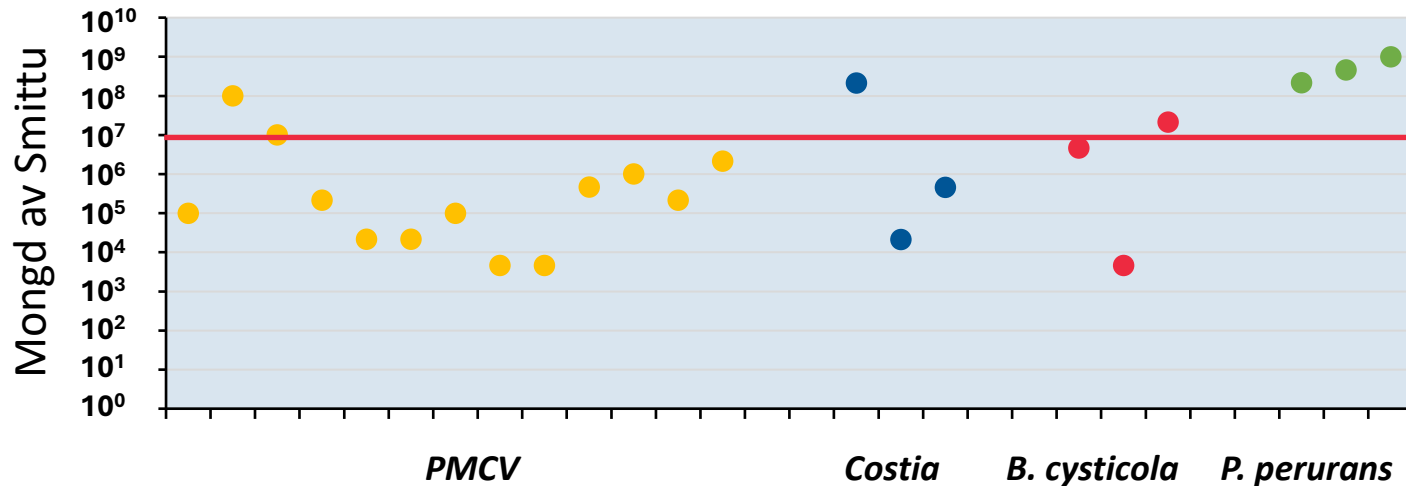
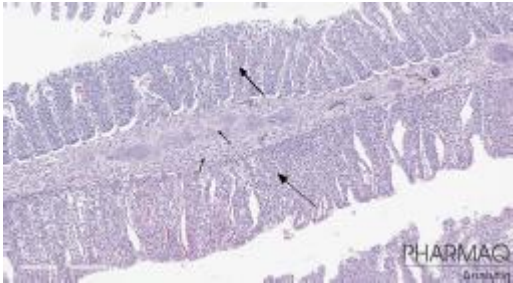


Prevalensur av hjartaklovningi og PMCV

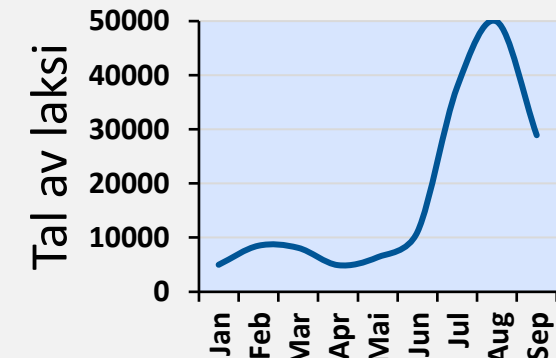
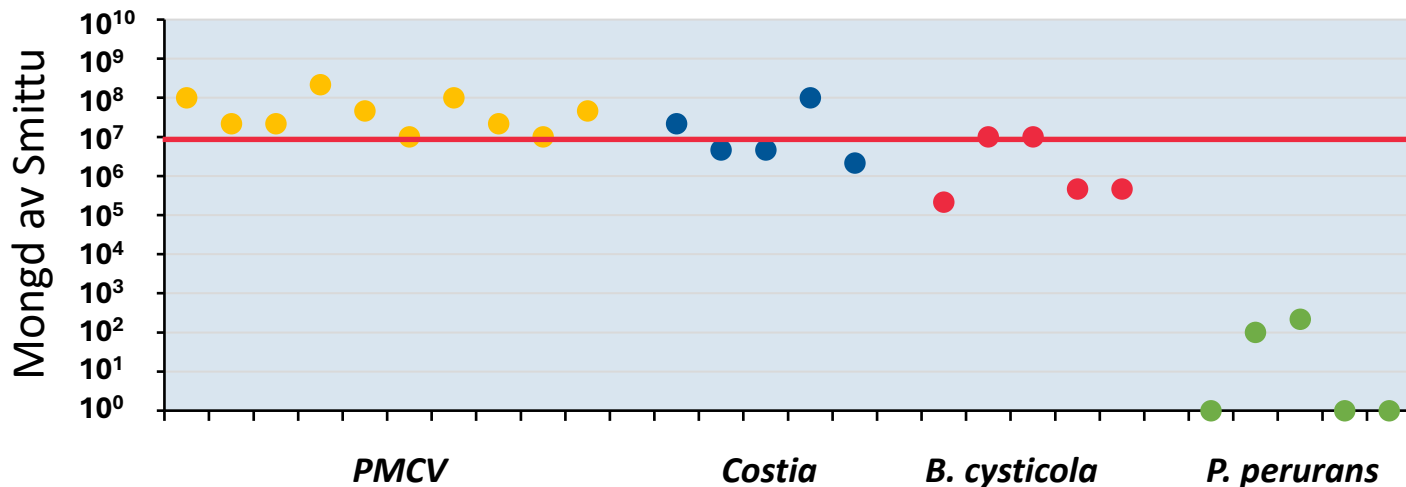
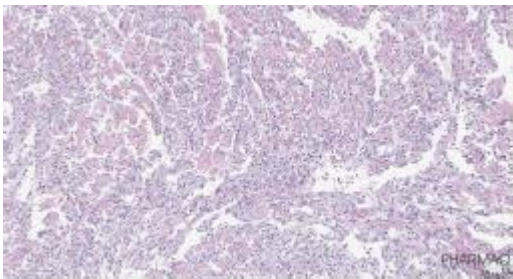


Er samspælið millum hjarta- og respitátióustrupulleikar við til at økja felli?

Hyperplastic inflammation



Bruni í hjartanum = CMS



Samanumtøka

- AGD og/ella táknubruni av *B. cysticola* og/ella *Costia* er staðfest á fleiri alibrúkum.
- AGD og felli er bert um heysti tá sjógvurin er heitast.
- Táknubruni og felli av *B. cysticola* og/ella *Costia* er eisini staðfest aðrar tíðir av árinum
- AGD og/ella táknubruni saman við t.d. hjartaklovningi sær út til at økja vandan at fáa álvarsama sjúku og økt felli.

A wide-angle photograph of a serene fjord in the Faroe Islands. The water is a deep, calm blue, reflecting the sky. On the left, a steep, green hillside descends to the water's edge. In the center, a small white boat is visible on the water. The background features more green hills and a small, isolated rock formation. The sky is a vibrant blue with scattered white clouds. The text "Takk fyri" is overlaid in the center in a large, white, sans-serif font.

Takk fyri

Mynd: Peter S. Østergaard