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Viktige tidsfrister

Mer info om følgende utlysninger og mange flere finner du på **Intranett >Forskning >BIO**

Husk BIOs interne frister 1 uke i forveien (gjelder ikke mindre bevilgninger som legater og fonds)

15. des: - Fellowships for taxonomy of deep-sea life	1. feb: - Nordic Marine Academy: både Mobilitet og organisering av Forskerkurs
6. jan: - Systems Biology of Microorganisms	8. feb - EU: FOOD
16. jan: - Polarforskning – se lenger ned	15. feb: - EU NEST Pathfinder
18., 19. og 25. jan: diverse Marie Curie -ordninger	

Siste nytt fra BIO

Godt gjennomslag for BIO hos Norges forskningsråd i desember

Vi kan nå slå det fast: BIOs forskere har hatt langt større suksess i høstens konkurranse i NFR enn vi hadde i fjor. Dette er svært gode nyheter for de som nå har fått postdoktorstipend og prosjektmidler, viktige nyheter for forskergruppene deres, og også godt for alle oss andre: BIO er avhengig av

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dekningsbidrag fra prosjektene for å kunne gi lønn til de fast ansatte ved instituttet. Fremdeles er det noen program som ikke er ferdig (blant annet Havet og kysten), men dette vet vi i alle fall om:

I tillegg til søknadene som er listet herunder, kan det være flere søknader med deltakere fra BIO som er fremmet av andre institutter eller institusjoner. De har vi ikke en fullstendig oversikt over. Vennligst ta kontakt med Kari eller Clelia om du er med på et innstilt prosjekt som ikke er listet herunder.

Typer prosjekter er indikert med: F=Forskerprosjekt, PD=Postdoktorprosjekt, og KMB=Kompetanseprosjekt med brukermedvikning.

Konkurransen har vært hard, særlig for frittstående prosjekter, med innvilgelsesrater ned mot 10 % avhengig av program. Flere gode søknader ble dermed avslått, tom. søknader som hadde fått 7 og 6 poeng (av maks. 7) fra to forskjellige reviewers.

FRIBIOMOL:

- Functional Metagenomics to Study Prokaryotes from Arctic and Subarctic Springs of Hydrothermal Origin. F. **Christa Schleper** og **Laila Reigstad**
- *Hemoglobin polymorphism in Atlantic cod - finally unravelling the old puzzle*. Søknad fremmet av AKVAFORSK. BIO-deltaker: **Ole Brix**

FRIBIOØKO

- Life histories for structured populations in fluctuating environments. PD. **Christian Jørgensen**
- Hidden reservoirs of biological diversity – geobiology of unexplored entolithic communities associated with lichens. PD. **Thorbjørg Bjelland**
- Genetic diversity and speciation in ancient inbreeding lineages. PD. **Bjarte Henry Jordal**
- I tillegg er det forskerprosjekt fra **Vigdis Torsvik** og fra **Stefan Ekman** på reservelisten

HAVBRUK:

- *Nitric oxide regulation of development in fish: emphasis on the light-brain-pituitary axis and gill during salmon smoltification*. **Sigurd Stefansson**
- *Moderne settefiskproduksjon av laks - normal utvikling og velferd i intensive oppdrettsystemer*. KMB. **Sigurd Stefansson**
- *Background levels: Occurrence and effective detection of cod pathogens*. **Are Nylund** og **Egil Karlsbakk**
- *Leptin in fish – exploring the actions of a novel hormone and its role in control of appetite, growth and puberty in Atlantic salmon and cod*. F. **Ivar Rønnestad**, **Sigurd Stefansson**, **Ian Mayer**
- *Interactions between wild and farmed Atlantic cod: non-lethal impacts of escapees on wild populations*. F. **Anders Fernö**, **Justin Meager**, **Jon Egil Skjæraasen**
- *Progressive, modern production of juvenile Atlantic cod*. KMB fremmet av Akvaplan NIVA. BIO-deltakere: **Sigurd Stefansson** og **Sigurd Handeland**

BIO + SMR

Fakultetsstyret blir i neste uke invitert til å vedta sammenslåing av BIO og SMR (Senter for miljø- og ressurs-studier) fra kommende årsskifte. Sakspapirer ligger her:

http://www.uib.no/mnfa/fakstyret/sakslister/2005/12_14/152.htm

Nye stipendiatstillinger i januar

Viktig melding til alle som har lyst på en doktorgrad i biologi: BIO skal lyse ut 5 universitetsstipendiatstillinger og en postdoktorstilling på nyåret. PhD-stillingene vil bli lyst ut bredt, slik at alle som har ønske om stipend innen teamet til en av BIOs forskergrupper skal kunne søke. En av stillingene vil trolig bli rettet inn mot forskergruppen [Ecological and Environmental Change](#).

Postdoktorstillingen vil bli rettet inn mot geomikrobiologi, som er et felles satsningsområde for BIO og [Institutt for geovitenskap](#).

Lyst på (ny) jobb?

Husk at BIOs webside har stadig en fersk oversikt over ledige biologistillinger i Norge og andre steder. Klikk på "ny jobb?" på web-sida for [ansatte ved BIO](#). (Samme lenke finnes også fra [student-sida til BIO](#).)

Siste nytt fra verden rundt oss

Mange mener seg fremragende

99 norske forskningsmiljøer har fremmet søknad om å bli **Senter for fremragende forskning** i prekvalifiseringsrunden. Hele 79 av disse er innsendt av de seks universitetene. UiO-28, UiB-19, NTNU-18, UiTø-8, UMB-4 og UiS-3. De øvrige er fra instituttsektoren (15), vitenskapelige og statlige/private høyskoler (4) og helseforetak (1).

Det er i tillegg fremmet **59** søknader om å bli **Senter for forskningsbasert innovasjon** (SFI).

http://www.forskningsradet.no/forport/application;JSESSIONID_forport=DZ81ZoI7j11BGN1eADauZOUDaERs6jEBACUSIqIYVSQZcX2k1CFC!1735883585?origin=forside.jsp&event=bea.portal.framework.internal.refresh&pageid=AndreAktiviteter&lang=no_NO&childId=1132069296505&childName=Pro/And/SFI/mottattesoknaderdes05&childAssetType=GenerellArtikkel

NFRs Store satsinger 2007

Mer til næringsrettet forskning, tematiske områder, grunnforskning og utstyr.

Statens bevilgninger til Forskningsrådet bør øke med 1,1 milliarder kroner i 2007, foreslår Norges forskningsråd. Hovedprioriteringene er blant annet næringsrettet forskning, tematiske og teknologiske satsinger, grunnforskning og vitenskapelig utstyr og databaser.

Når den rødgrønne regjeringen møtes til sin første budsjettkonferanse en gang på nyåret, ligger Forskningsrådets forslag til *Store satsinger 2007* på bordet.

Dokumentet *Store satsinger* er Forskningsrådets første årlige innspill til departementenes arbeid med budsjettforslaget, og forteller hva Forskningsrådet mener bør være

hovedprioriteringene på kommende års statsbudsjett og hvor mye penger som bør brukes på disse. Les mer på [Forskningsrådets webside](#).

Avsluttende mastergradseksamen

Kristin Kvalø Pettersen: *Molecular phylogeny of the annelid ophryotrocha*

Kristin Kvalø Petersen holder fredag 16. desember avsluttende presentasjon av sin

Mastergradsoppgave i Marinbiologi

Tittel på oppgave: Molecular phylogeny of the annelid ophryotrocha

Veiledere: Christoffer Schander

Sensor: Torkild Bakken, NTNU

Bisitter: Ian Mayer

STED: Seminarrom 328 C1, Institutt for Biologi, bioblokken, HIB

TID: Fredag 16. desember kl. 11.15

Alle interesserte er velkommen!

Info fra studieseksjonen

Søknad om forskerutdanningsmidler 1. runde 2006

Kandidater som er tatt opp til forskerutdanning ved BIO kan søke om midler til forskerutdanningstiltak. Det kan søkes om:

- 1) Opphold over lengre tid ved utenlandsk universitet eller forskningsinstitusjon
- 2) Deltakelse på avanserte kurs, workshops, symposier, konferanser o.l.
- 3) Støtte til deltakelse i kurs/emner/feltkurs som gir studiepoeng og inngår i den individuelle planen

Nærmere informasjon og søknadsskjema finner du her: <http://www.uib.no/mnfa/fumidler/>
Eventuelle spørsmål rettes til: tommy.strand@bio.uib.no
Søknad sendes til forskerutdanningsutvalget ved Institutt for biologi
Søknadsfrist: 15. januar 2006.

Godkjenning av studiepoeng for deltagelse på internasjonal konferanse

Studenter som er tatt opp på et av masterprogrammene hos BIO, kan søke om godkjenning av 2 studiepoeng for deltagelse på internasjonal konferanse. Søknad med dokumentasjon sendes til studieseksjonen i Realfagbygget. **Frist: 19. desember** (da blir studiepoengene registrert på inneværende semester).

Gjesteforelesninger, seminarer og konferanser

Linking the internal and external ecologies of marine organisms

Howard Browman, Havforskningsinstituttet

14. desember Havforskningsinstituttets kantine i Nordnesgaten 50, klokken 12.15

WUN-video lecture: Systems Biology Approach to Modelling the Heart

[Professor Denis Noble](#) University Laboratory of Physiology, University of Oxford

Wednesday **14th Dec** at 18:00

In the CBU seminar room, HIB Databuilding, 5th floor

This will be a video-televised lecture organised by [World University Network \(WUN\)](#)

Please come 10 min before as we need to be seated when the presentation starts.

From the Health Protection Agency's web pages we borrow the following presentation of the speaker: His research is focussed on using computer models of biological organs and systems to interpret function from the molecular to the whole body levels. With its international collaborators, this team has used supercomputers to create the first virtual organ, the virtual heart. As Secretary-General of the International Union of Physiological Sciences (IUPS), he played a major role in launching the Physiome Project, an international project to use computer simulations to create the quantitative physiological models necessary to interpret the genome. [Les mer...](#)

And I wish to add that Noble and his colleagues are constructing one of the most advanced systems-based models ever seen in life sciences; a model for the heart which considers molecular, cellular tissue, mechanical and electrophysiological parameters, - Their model - although not yet complete (and will it ever be?) has already been used to make predictions of novel drug effects on the heart.

Anyone interested in systems biology and bioinformatics and biology should come!

Rein Aasland

Bayesian Inversion of Paleontological Data

Gjesteseminar ved Institutt for geovitenskap

Bjarte Hannisdal, Ph.D. candidate, Department of the Geophysical Sciences, The University of Chicago, Chicago, USA

16. desember 12:15-13:00. Institutt for geovitenskap, lunsjrom 2. etg. Realfagbygget

Abstract: This talk presents a new approach to the problem of inferring evolutionary patterns from paleontological data, by formulating it as an inverse problem: given observed morphological data, geological background information (stratigraphy, grain size, paleobathymetry, age model), and a model mapping evolutionary time series to fossil series, what is the most plausible model supported by the data? Monte Carlo methods are used to generate a large number of candidate models, and Bayesian inference is used to retrieve information on the probability distribution of parameters, as well as measures of how well the data are able to resolve the model parameters. This allows a more rigorous approach to paleontological inference that quantifies the uncertainty in all analytical elements: data, geological background information and model. The method is illustrated using data from the ODP New Jersey drilling project.

41st European Marine Biology Symposium – Challenges to Marine Ecosystems

September 4-8, 2006, Cork, Ireland. Deadline for submission of abstracts: **February 14**

[Mer info...](#)

Utlysninger og prosjekter

Følgende utlysninger har vært omtalt i tidligere BIO-INFO, men for dem av dere som har vært veldig opptatt med andre søknader og lurer på hva dere skal bruke resten av året til ☺ ...

Polarforskning

Forskningsrådet lyser ut midler i forbindelse med [International Polar Year \(IPY\)](#)

Søknadsfristen er for [den norske ordningen](#) er **15. mars**, men det er kun prosjekter som har fått "endorsement" fra IPY Joint Committee. Der er fristen **16. januar**

EU NEST Pathfinder (New and Emerging Science and Technology)

Dette er et annerledes program i FP6, som ikke er så lett å begripe fordi det er presist rettet mot områder som faller utenfor de andre programmene og mot nyligdefinerte og til dels uforutsette problemstillinger. Siden det har vært magert med utlysninger for forskningsmidler under FP6 på lenge, er det flere som har fått øynene opp for dette programmet. Temaer som kan være aktuelle for BIO:

Tackling Complexity in Science og Measuring the impossible.

Søknadsfrist: **15. februar**. [Mer info...](#) (se under 15. februar)

EU Global Change and Ecosystems

Få temaer som kan være aktuelle for BIO i denne utlysningen, f.eks. Develop models and simulations to assess and forecast changes in terrestrial biodiversity and ecosystems: og Assess and forecast changes in the Mediterranean and Black sea ecosystems and their ability to provide services.

Søknadsfrist: **2. mars**. [Mer info...](#)

Nye artikler

Aud Larsen: spormetaller under en sommerblomstring av alger og bakterier

Muller FLL, [Larsen A](#), Stedmon CA, Sondergaard M 2005. Interactions between algal-bacterial populations and trace metals in fjord surface waters during a nutrient-stimulated summer bloom. *Limnol. Oceanogr.* 50: 1855-1871

Abstract: We examined how variations in algal-bacterial community structure relate to Cu, Zn, and Mn speciation during a diatom-rich bloom that was induced by daily additions of inorganic macronutrients to fjord waters in August 2002. The experiments were carried out in 11-m(3) floating mesocosm bags deployed in the Raunefjord, near Bergen, Norway, and operated in a chemostat (flow-through) mode. Copper speciation was controlled by the formation of very strong organic complexes ($\log K_{-1} = 15.2-15.8$; $\log K_{-2} = 13.0-13.4$) whose likely source was the cyanobacterium *Synechococcus* sp. Strong ligand concentrations were comparable to dissolved Cu levels. This covariation kept the free Cu^{2+} concentration within the range of $10(-12.4)$ to $10(-11.2)$ mol L⁻¹, i.e., below the toxicity threshold for *Synechococcus*. Weaker ligands ($\log K_{-3} = 8.2-9.4$) were released during - and up to 4 d following - the exponential growth of algae. During this period, the weaker Cu-binding ligands appeared to have the same source or production process as the proteinlike fluorophores detected in these coastal waters. Zinc speciation was controlled by complexation with a single class of organic ligands that appeared to be released inadvertently upon the death and/or grazing of phytoplankton. Labile manganese fluctuations were inversely synchronized with the abundance of heterotrophic bacteria until the coastal waters experienced a massive rain event on day 17 of the experiment. The rainfall, which was a source of nitrogen and micronutrients, appeared to stimulate the growth of larger cells (diatoms) but to inhibit that of the smaller cells (heterotrophic bacteria and cyanobacteria).



Justin Meager: komplekse avveieringer ved habitatvalg

[Meager JJ](#), Williamson I, Loneragan NR, Vance DJ 2005. Habitat selection of juvenile banana prawns, *Penaeus merguensis* de Man: Testing the roles of habitat structure, predators, light phase and prawn size. JOURNAL OF EXPERIMENTAL MARINE BIOLOGY AND ECOLOGY 324: 89-98

Abstract: The effects of fish predators, light phase, habitat structure and prawn size on the habitat preferences of juvenile *Penaeus* (Fenneropenaeus) *merguensis* de Man were examined with laboratory experiments. The behaviour of juvenile *P merguensis* within habitats of different structural complexity was also examined. Experiments were carried out in a tank (1.8 m diameter) divided into four habitats representing: bare substratum, leaf litter (little vertical structure), mangrove pneumatophores (regular vertical structure) and mangrove woody debris (heterogeneous vertical structure). The location of 10 prawns was monitored over 270 min (135 min light and 135 min dark), with different prawns five times for each combination of prawn size class, and predator (no predator; *Arius graeffi* Kner and Steindachner and *Lates calcarifer* Bloch).

In the absence of predators and during the light phase, when observations on prawn behaviour were made, swimming was the most common behaviour (of seven mutually exclusive behavioural categories) with few differences in behaviour between sizes. All size classes of juvenile *P merguensis* selected vertical structure (mangrove debris and pneumatophores) over low vertical structure (leaf litter and bare substratum), in both light and dark conditions and in the presence or absence of predators. When *L. calcarifer* was present, the selection by prawns of the mangrove-debris habitat increased significantly. This was attributed to an increase in predation risk in the other habitats. *L. calcarifer* rarely pursued prey amongst the mangrove-debris structure, compared to habitats with less heterogeneous vertical structure (pneumatophores, leaf litter and bare substratum).



Sven Leininger og Christa Schleper: nye gener som styrer nitrit-reduksjon

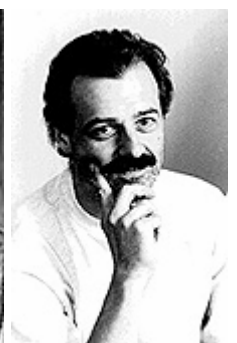
Treusch AH, Leininger S, Kletzin A, Schuster SC, Klenk HP, [Schleper C](#) 2005. Novel genes for nitrite reductase and Amo-related proteins indicate a role of uncultivated mesophilic crenarchaeota in nitrogen cycling. ENVIRONMENTAL MICROBIOLOGY 7: 1985-1995

Abstract: Mesophilic crenarchaeota are frequently found in terrestrial and marine habitats worldwide, but despite their considerable abundance the physiology of these as yet uncultivated archaea has remained unknown. From a 1.2 Gb large-insert environmental fosmid library of a calcareous grassland soil, a 43 kb genomic fragment was isolated with a ribosomal RNA that shows its affiliation to group 1.1b of crenarchaeota repeatedly found in soils. The insert encoded a homologue of a copper-containing nitrite reductase with an unusual C-terminus that encoded a potential amicyanin-like electron transfer domain as well as two proteins related to subunits of ammonia monooxygenases or particulate methane monooxygenases (AmoAB/PmoAB) respectively. Expression of nirK and the amoA-like gene was shown by reverse transcription polymerase chain reaction (PCR) analyses in soil samples, the latter being found at higher levels when the soil was incubated with ammonia (measured by quantitative PCR). Further variants of both genes were amplified from soil samples and were found in the environmental database from the Sargasso Sea plankton. Taken together, our findings suggest that mesophilic terrestrial and marine crenarchaeota might be capable of ammonia oxidation under aerobic and potentially also under anaerobic conditions.



Kjartan Hodneland, André Bratland, Curt Endresen og Are Nylund: ny type av salmonid alfavirus

Hodneland K, Bratland A, Christie KE, [Endresen C](#), [Nylund A](#) 2005. New subtype of salmonid alphavirus (SAV), Togaviridae, from Atlantic salmon *Salmo salar* and rainbow trout *Oncorhynchus mykiss* in Norway. DISEASES OF AQUATIC ORGANISMS 66: 113-120



Abstract: In Europe, 2 closely related alphaviruses (Togaviridae) are regarded as the causative agents of sleeping disease (SD) and salmon pancreas disease (SPD): SD virus (SDV) has been isolated from rainbow trout *Oncorhynchus mykiss* in France and the UK, while SPD virus (SPDV) has been isolated from salmon *Salmo salar* in Ireland and the UK. Farmed salmonids in western Norway also suffer from a disease called pancreas disease (PD), and this disease is also believed to be caused by an alphavirus. However, this virus has not yet been characterised at the molecular level. We have cultured a Norwegian salmonid alphavirus from moribund fishes diagnosed with cardiac myopathy syndrome (CMS) and fishes diagnosed with PD. The virus has also been found in salmon suffering from haemorrhagic smolt syndrome in the fresh water phase. The genomic organisation of the Norwegian salmonid alphavirus is identical to that in SPDV and SDV, and the nucleotide sequence similarity to the other 2 alphaviruses is 91.6 and 92.9%, respectively. Based on the pathological changes, host species and the nucleotide sequence, we suggest naming this virus Norwegian salmonid alphavirus (NSAV). Together with SPDV and SDV it constitutes a third subtype of salmonid alphavirus (SAV) species within the genus *Alphavirus*, family Togaviridae.

Sindre Grotmol og Geir Totland: ulik vekst av ryggrad i hals og hale hos laks



Fjellidal PG, Nordgarden U, Berg A, [Grotmol S](#), [Totland GK](#), Wargelius A, Hansen T 2005. Vertebrae of the trunk and tail display different growth rates in response to photoperiod in Atlantic salmon, *Salmo salar* L., post-smolts. AQUACULTURE 250: 516-524

Abstract: This study shows that exposure to continuous light induces regional differences in growth in the vertebral column of Atlantic salmon under-yearling post-smolts reared in seawater cages. Exposure to continuous light during the period from January to the summer solstice (June) generally produced significantly larger fish than those reared under natural light. Until April, however, the



fish exposed to continuous light grew more slowly, as reflected in the vertebral column by decreased growth in the truncal vertebrae, while the growth of the tail vertebrae was similar in the two groups. From April to June the fish exposed to continuous light displayed the fastest growth, with a higher growth rate in the vertebrae of the trunk than among fish reared under natural light. The mineral rate and mechanical strength of the vertebrae at the summer solstice was significantly lower in fish exposed to continuous light. Our results suggest that the growth of different regions of the vertebral column of salmon may be regulated partly independently, and that mineralisation is also affected during fast growth.

Albert Imsland, Arild Folkvord og Sigurd Stefansson: genotypiske forskjeller i respons på lys hos torsk

[Imsland AK](#), Foss A, [Folkvord A](#), [Stefansson SO](#), Jonassen TM 2005. Genotypic response to photoperiod treatment in Atlantic cod (*Gadus morhua*). AQUACULTURE 250: 525-532

Abstract: Interactions between environment and genotype in individually tagged Atlantic cod juveniles (initial weight 9.1 g) were studied. Juvenile cod were reared for 3 months under simulated natural photoperiod (LDN) and continuous light (LD24:0) at 10 degrees C and 13 degrees C. At the end of the trial blood samples were taken from all fish and used to classify the fish according to their haemoglobin genotypes into three groups, Hb-I(1/1), Hb-I(1/2) and Hb-I(2/2). Individual growth trajectories and specific growth rate were studied in order to investigate whether these growth responses to extended photoperiods are genotype dependent.



Continuous light enhanced growth at both temperatures. However, a significant interaction between genotypes and photoperiods was found at both temperatures, demonstrated by the variation in genotype response towards photoperiod treatment. At both temperatures the highest growth rates were found for Hb-I(2/2) at LD24:0, whereas the lowest overall mean growth rates were found for the same

genotype reared at LDN. Conversely, the Hb-I(1/1) genotype displayed the fastest specific growth rates in the LDN groups at both temperatures.

Øyvind Fiksen: modellering av havskilpadder

Mazaris AD, Ø Fiksen & YG Matsinos 2005. Using an individual-based model for assessment of sea turtle population viability. *Popul Ecol* 47:179–191

Abstract Marine turtle species have a complex life history characterized by interannual variability in reproductive performance and a long life span. These ecological features in combination with the animals highly migratory nature create numerous difficulties when trying to assess population dynamics. This study attempts to couple existing information on species demographics and behavioral strategies with simple energetic rules in a theoretical framework. We study sea turtle population dynamics using an individual-based model that incorporates known behavioral-ecological characteristics of the species. Methodology used to design the model was based on the superindividual approach (Scheffer et al. *Ecol Model* 80:161–170, 1995). We constructed our simulation experiment on a virtual sea turtle population, which was parameterized by using recent literature reviews with emphasis on reproductive parameters of the Mediterranean loggerhead sea turtle population. Switching rules describing critical processes of reproductive performances were established as theoretical functions of efficiency of energy transfer. In order to explore the significance of variable reproductive patterns upon population dynamics and persistence, a series of simulations was performed. The model was also run under fluctuated demographic variables to perform a sensitivity analysis of critical parameters and life-history stages. Based on the specific model parameterization, simulation results show that population persistence was most sensitive to fecundity and to survival at the pelagic juvenile stage. Additionally a surprising finding is the relatively high importance of egg survival in terms of both hatching and hatchling success. We conclude that enhancing the population with new individuals by increasing survival in the early life stages could compensate for additional losses in other age classes. The need for further research regarding biological and behavioral features as well as basic demographic insights into the endangered loggerhead sea turtle is also highlighted.

