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## Denne ukas viktigste

### **Mer å registrere i FRIDA: forskningsopphold, forskningsterminer, etc**

Det er gledelig å merke den strømmen av artikler og kapitler som siste uke har funnet veien inn i FRIDA fra BIO-forskere. Jeg har ikke regnet på det, men det er trolig snakk om en ekstra halv million eller mer til UiB.

Men FRIDA skal ha mer. Jeg gjentar derfor stien til din side i FRIDA fra forrige uke:

1. Go to FRIDA: <https://wo.uio.no/as/WebObjects/frida.woa/wo/17.0.27.2>
2. Press Logg inn
3. Choose Universitetet i Bergen (leave the other fields open)
4. Press Logg inn again
5. Enter your UNIX-user name (nboxx or similar) and your UNIX password (as when you log into your PC) (and keep UiB your "organisasjon"), press logg inn. You are now in your personal home area in FRIDA.
6. Choose "Årsrapportering" at left and check for relevance in each of the submenus.

**Forskningsopphold** som ikke kommer inn under spesielle forskningsprogram føres opp under "Individbaserte program". **Forskningspriser** og **forskningsterminer** skal også registreres i FRIDA. Dette er ikke viktig for tildelingen til UiB statsbudsjettet, men det vil hjelpe stort på arbeidet som administrasjonen på BIO, fakultetet og UiB sentralt må gjøre for å få årsmeldingstallene korrekt. Så den som slurver med dette bidrar til at UiBs administrasjon må vokse. Det handler altså denne gang om hvordan UiB skal bruke tildelingen fra statsbudsjettet. Hver forsker vet best hvilke turer og møter hun/han har vært på og arrangert, og vi sparer mye på at den som vet best gjør jobben.

Hilsen Jarl

### **PhD Annual Reports**

The PhD committee at BIO has received over 100 annual reports from the PhD candidates registered at BIO!! The committee will go through the reports to get an overview of the candidate's progress and working conditions, and address problems if such are indicated.

The reports will be forwarded to the research group leaders at BIO, who will use the reports as a basis for an interview with the candidates.

We also wish to thanks all our candidates for submitting the reports within the deadline. Thanks!!

*PhD - committee at BIO*

### **Annual Meeting for BIO PhD students**

BIO invites all "new" PhD students to participate at the Annual Meeting for PhD students on 16. and 17. April 2007. All PhD students who have been registered since April 2007 will be invited. The programme will focus on your different "roles", as student, employee and researcher. A special invitation will be sent by email to all of you who are in the target group, but we ask you kindly to mark the dates in your calendar as follows:

16. April - 0900 - 1130

17. April - 0900 - 1600.

Thelma Kraft, Personalleder, Institutt for biologi

### **Mastergradsstudenter og veiledere: Søknad om midler til seminar/konferanse og feltarbeid**

Mastergradsstudenter ved BIO kan søke om midler til seminar/konferanse og feltarbeid i 2008. Frist 22. februar 2006. (neste søknadsfrist 1. mai). Søknaden skal sendes til BIOs studieadministrasjon, realfagbygget. Nærmere info og søknadsskjema: [http://www.uib.no/mnfa/felt\\_seminar/](http://www.uib.no/mnfa/felt_seminar/)

NB. Det gis anledning til å søke om deltakelse/delfinansiering på flere konferanser, men maksimalt støttebeløp er fremdeles NOK 5000.

Hilsen Eli Høie

### **Viktige tidsfrister**

Mer info om følgende utlysninger og mange flere (inkl. løpende, dvs. uten frister) finner du [her](#)

**Husk å sende søknadskjemaet til [post@bio.uib.no](mailto:post@bio.uib.no) 1 uke i forveien** (gjelder ikke mindre bevilgninger som legater og fonds)

25. feb	FP7 Cooperation / Environment		
26. feb	FP7 Cooperation / Food, Agr. Fisheries & Biotech	6. mars	FP7 Cooperation / nano
26. feb	FP7 Cooperation / Energy	25. mars	FP7 People / MC – Industry-Academia
28. feb	ERC / Adv. Investigator Grants (phy. sci & engineering)	28. mars	FP7 People / MC – International Staff Exchange
29. feb	FP7 Capacities / Research Infrastructure		
29. feb	ERASMUS Curriculum Development	8. apr	FP7 Cooperation / ICT
		11. apr	FP7 Capacities / SMEs
1. mars	NORDPLUS Curriculum Development	22. apr	ERC / Adv. Investigator Grants (life sci)
2. mars	Bergen marine forskningsklynge forprosjekter		

\*\*check [BIO-web](#) and [UiB's Department of Research Management](#) for more information

## **Essentials in English**

### **Congratulations to Professor Fiksen**

[Øyvind Fiksen](#) was hired as Associate Professor in August 2006 and now in January 2008, has been promoted to full Professor. Congratulations!

### **You are invited to participate in Researchers' Night**

Held for the second year, the event is designed to bring together researchers and members of the general (and interested!) public. Increased dialogue helps people to understand how important research is and the impact it has on their daily lives and for our collective future. It might even encourage increased recruitment! The initiative is supported by the Norwegian Research Council and they are holding a competition for Researchers' Night Project ideas. Last years' 15 winners received between 15-50 000NOK. [Read more](#)



## Siste nytt fra BIO

### Aldri før har så mange gjort så mye

I skrivende stund vet jeg om **209** artikler i referee-tidsskrift, bøker og bokkapitler fra BIO-forfattere i 2007. Dagens BIO-INFO bærer preg av disse siste innrapporteringene. 2007-tallene er ny rekord for BIO. Det var det også i 2006, da vi produserte **183**. I 2005 deltok vi i **161** arbeider. Hvor skal dette ende? Her er noen tall fra de som pr i dag ser ut til å ha gjort seg mest bemerket i fjor.

Hilsen Jarl Giske

Forskningsgruppe	sum JIF	Antall arbeider
Ecological and Environmental Change	91,4	30
Utviklingsbiologi hos fisk	63,9	30
Marin biodiversitet	60,2	38
Modelleringsgruppen	55,5	24
Marin mikrobiologi	52,8	21
Fiskerøkologi og havbruk	47,9	24

### Professor Fiksen

Vi gratulerer [Øyvind Fiksen](#) med opprykk til professor. Øyvind ble ansatt som førsteamanuensis i august 2006. Han søkte om opprykk i september samme år og i januar 2008 ble opprykket vedtatt i fakultetsstyret.

### Congratulations to Mette and Svein

♪ Congratulations to two BIO colleagues on their birthdays ♪: **Svein Norland** (60) and **Mette Hordnes** (50).

Mette skal feires i kommende uke, mens mikrobiologene slo sammen feiring av Sveins 60-årsdag (se bildet) med Wenche Andersens 40-årsansettelse ved UiB denne uka. Begge fikk taler med fine ord fra instituttet og kolleger.



Førstekonsulent **Wenche Skjoldal Andersen** har vært ansatt ved UiB i 40 år. Hun begynte 29. januar 1968 som kontorassistent ved Institutt for generell mikrobiologi. Ifølge utlysningsteksten stilte man den gang strenge kvalifikasjonskrav for å bli tilsatt i en slik stilling, man skulle både ha avlagt Examen Artium og ha gode kunnskaper i maskinskriving. I hele sin ansettelsesperiode har Wenche vært tilsluttet mikrobiologimiljøet ved UiB, og Institutt for biologi takker for hennes lojalitet og innsats gjennom svært mange år. Vi gratulerer jubilanten.



### Fordeling av utstyrstildeling til BIO fra fakultetet

I budsjett-tildelingen til BIO for i år fikk vi 1,8 millioner til utstyr, av dette er det krav om at 0,25 mill skal gå til forskningsfartøylene. Prioriteringene er i følge BIOs lister i budsjettskrivet for 2008, med unntak av nr 5 og 6 med vitenskapelig utstyr som er prioritert inn på lista pga av at nåværende utstyr er blitt ubrukelig.

## Undervisningsutstyr

		Pris	Kum
1	Undervisningsutstyr til <i>Hans Brattström</i>	240 000	240 000
2	Feltutstyr botanikk	38 000	278 000
3	Bestemmelseslitteratur, Espeland	30 000	308 000
4	Feltutstyrspakke for økologisk forskning (redusert)	75 000	383 000

## Vitenskapelig utstyr

		Pris	Kum
1	Fluorescens-forskningsmikroskop (Helvik)	540 000	540 000
2	Scanning sonar (Fiskeriøkologi & havbruk)	193 000	733 000
3	Pakke for eksperimentelt arbeid med diatoméer (Vandvik)	255 000	988 000
4	Video Ray mini-ROV (Schander)	200 000	1 188 000
5	Bordsentrifuge (Wergeland)	122 000	1 310 000
6	Geldokumentasjonsutstyr (Schander, Rønnestad)	100 000	1 410 000

Anskaffelse av undervisningsutstyret koordineres av studieleder **Eli Høie**. Ved innkjøp skal ellers selvfølgelig innkjøpsprosedyrene ved UiB følges, - ta kontakt med **Annike Lygren**.

### **EvoFish i BT-magasinet**

I BT magasinet forrige lørdag (2/2) var det et stykke om fiskeriindustert evolusjon. Fiskeriminister Helga Pedersen sier at fiskerier som fører til evolusjon høres uakseptabelt ut, og at hun vil lytte til råd for å se om noe kan gjøres.

### **Kranglar om fiskesmitte; Are Nylund deltek**

Mattilsynet varslar tvangsslakting av 1,5 millionar regnbogeare i Storfjorden. Fjordlaks meiner Mattilsynet manglar heimel for vedtaket. Over to månader etter at det vart påvist VHS-virus i Fjordlaks Aqua sitt anlegg på Opshaugvik i Stranda byrjar situasjonen i bli tilspissa. Mattilsynet meiner det hastar med å slakte fisken og å gjennomføre sanering av den store lokaliteten for regnbogeare.

Fjordlaks har innhenta alternativ ekspertise ved Universitetet i Bergen. Professor **Are Nylund** har analysert død fisk frå anlegget på Opshaugvik. Det er ikkje muleg å konkludere med at VHS-virus er årsaka til at regnbogeare døyr i anlegget, skriv Nylund i ein rapport. Han viser til at det er svært avgrensa kunnskap om marine variantar av VHS-viruset, og kva sjukdomsteikn det gir hos regnbogeare. Universitetet vil setje i gang smitteforsøk med regnbogeare i saltvatn, men har fått avslag. Professor Nylund sin analyse av død regnbogeare er for øvrig ein strid i striden mellom Mattilsynet og Fjordlaks.

- Å sende prøvemateriale av død fisk til Universitetet i Bergen er i strid med vedtaket om bandlegging av anlegget, skriv Mattilsynet i eit brev til Fjordlaks. Les meir i [Sunnmørsposten](#)

## **Siste nytt fra verden rundt oss**

### **Ny kampanje skal få ungdommen til å velje realfag**

Ein ny kampanje frå Nasjonalt forum for realfag skal få 15-åringar i landet til å satse på realfag. - Viktige samfunnsprosmål i høve til klima og bistand krev auka realfagleg kompetanse, seier kunnskapsminister Bård Vegard Solhjell. [Les meir ..](#)

### **Streaming video on Nature**

Enjoy streaming videos featuring discussion, analysis and interviews with leading scientists as they share their discoveries.

This year Nature will continue to provide you with groundbreaking streaming videos on the biggest scientific projects. [Access the online video streaming archive today!](#)



## Berg-Hansen/CWT has a new phone number

Now when you call from abroad, you can now reach Berg-Hansen by dialling +47 08050 or +47 220 08050. The number within Norway is still 08050.



## Need to order BIO/UiB visiting cards?



Click on the following link to UiB's graphic profile:

<http://www.uib.no/form/profilorg/>

- (1) Department of Biology
- (2) John Smith (3) job title
- (4) address 1 (5) address 2
- (6) direct telephone
- (7) mobile phone number
- (8) fax number
- (9) web address
- (10) E-mail address
- (11) optional – home phone number

## Warty comb jellyfish threat

A team of German and Danish researchers has found evidence that the warty comb jellyfish (*Mnemiopsis leidyi*) may be increasing the threat to cod stocks in the Baltic Sea. [Read more.](#)

## Ledige stillinger

Sjekk oversikten på [jobbnor!](#)

Frist	Stilling
10.02	Molekylærbiologisk institutt: <a href="#">Stipendiat i molekylærbiologi</a>
10.02	<a href="#">Lecturer/Senior Lecturer in Marine Animal Biology</a> , University of Sydney
14.02	Division of Marine and Atmospheric Research, Australia: <a href="#">research scientists, group leaders</a>
15.02	Institutt for biomedisin: <a href="#">Postdoktor</a>
15.02	Institutt for biomedisin: <a href="#">Stipendiat i molekylær nevrovitenskap</a>
15.02	Institutt for indremedisin: <a href="#">Stipendiat innan mat, ernæring og helse</a>
15.02	<a href="#">Nordic stipendiat positions</a>
20.02	masters and PhDs funded ( <a href="#">Irish postgraduate FUNDING scheme</a> )
20.02	Nofima/Akvaforsk Sunndalsøra: <a href="#">postdoc i fiskefysiologi og -velferd</a>
<b>22.02</b>	<b>BIO: <a href="#">Førsteseekretær (ekspedisjonssekretær)</a></b>
22.02	Postdoc position in <a href="#">marine fish community ecology</a> , University of Bristol
25.02	<a href="#">Associate senior lecturer in Systematic Botany and Biodiversity</a> , University of Göteborg
<b>26.02</b>	<b>BIO: <a href="#">Postdoktor i mikrobiologi (3 år)</a></b>
<b>28.02</b>	<b>BIO: <a href="#">Postdoc: effektar av klimaendringar på regenerasjonsprosessar i alpine økosystem</a></b>
29.02	University of Auckland, NZ: <a href="#">Postdoctoral Research Fellow in Ecological Statistics</a>
29.02	<a href="#">Information Manager</a> , Laboratoire d'Océanographie de Villefranche
29.02	<a href="#">Project Manager</a> , Laboratoire d'Océanographie de Villefranche
01.03	University of Connecticut: <a href="#">3 Post-Docs</a> in Coastal Ecosystems and Human Health
04.03	<a href="#">Sars Centre: 1 Postdoctoral (Forsker) and 1 PhD position: <i>Oikopleura</i> cell cycle</a>
30.03	<a href="#">Post-doc fellowships in Canada - guidelines - letter of recommendation - application</a>
15.04	<a href="#">three-month fellowships</a> for scientists, technicians, PhDs and Post Doctoral Fellows

## Forskning: utlysninger, nye satsinger og prosjekter

### Bergen marine forskningsklynge ber om innspill til forprosjekter

[Bergen marine forskningsklynge](#) ble opprettet 8. januar 2008. Partnerne er Christian Michelsen Research AS, Fiskeriforskning/Nofima, Havforskningsinstituttet, Helse Bergen HF, Nansen senter for miljø- og fjernmåling, NIFES, Unifob AS og



Universitetet i Bergen. Formålet med klyngen er å styrke tverrfaglig samarbeid innen marin forskning, utdanning og utvikling innen de fire temaene: Klima, Marint miljø og ressurser, Marin teknologi og Fra hav til helse. Bergen marine forskningsklynge ber nå om innspill til forprosjekter for store fellesinitiativer (SFF, SFI, etc) innen temaene ”Marint miljø og ressurser” og ”Marin teknologi”. [Se vedlagt utlysningstekst.](#)

**Søknadsfrist: 2. mars 2008** Søknaden sendes elektronisk til [sekretariatet ved Bergensklyngen](#)

### **Rettigheter til forskningsresultater (IPR) i 7RP**

Forskningsrådet inviterer til seminar om hvilke krav som prosjektdeltakerne må oppfylle og hvilke muligheter som de har til å sørge for egne interesser gjennom hensiktsmessige avtaler ved å delta i prosjekter i EUs 7. rammeprogram (7RP). [Les mer](#)

 Forskningsrådet



### **Invitation to participate in “Researcher’s Night”**

Målet med Researchers' Night er å skape et møte mellom forskerne og folket. Ved å oppnå kontakt får folk flest lære mer om hvor viktig forskning faktisk er for deres hverdag og for deres fremtid - og hvor interessant og givende det kan være å være forsker! NFR kommer med støtt ... hvert av de lokale norske vinnerprosjektene kunne få en støtte istørrelsesorden 15 - 50.000 kr. I fjor støttet vi totalt 15 ulike Researchers' Night-prosjekter. [Les mer](#)

### **Erasmus Mundus programmet**

Univeristetet i Rennes, Frankrike inviterer Universitetet i Algarve og UiB til å delta på Erasmus Mundus External Cooperation Window søknaden for samarbeid med læresteder i Brasil. UiB er valgt ut som partner i dette konsortiet blant annet på grunnlag av vårt marine fokus. [Lær mer.](#)

## **Ukens bilde**



**Title:**

Workshop with Master students AIB group

**Date / photographer:**

Ragnar Nortvedt, Sept.2007

**Description:** The Applied & Industrial Biology Research Group arranged a successful workshop for the PhD and Master students at Solstrand Bad & Hotel in September 2007. *Behind from left:* Raggen, Lars Helge Stien, Diep Mach, Carl Robert Larsson, Bjørn Ole Haugsgjerd, Bjørn Tore Lunestad, Camilla Gjerstad, Sølvi Espeland and Endre Grimsbø. *Front from left:* Veronika Tkachenko, Thu Thuy Thi Truong, Yunita Maimunah, Patricia Apablaza, Ana Maria Gutierrez, Grigory Merkin and Fernando Oyarzun. (Absent: Ole Brix, Anne Sverdrup, Jogeir Toppe, Åge Oterhals, Inna Smirnova Larsen and Izumi Sone).

**Ukens bilde:** You are invited to submit photos (electronically!) for a “Ukens bilde”. Please include a very short description and credit information. Picture can be of researchers / students in action, technology, organisms, field sites ... Please send your pictures to Ukensbildekomiteen c/o Elinor Bartle (preferable format jpg, gif; size around 300px sq; saved for web - under 60kb).

## **Nye medarbeidere**

**Universitetsstipendiat Patricia Apablaza** comes from Chile where she got a title as Veterinary Doctor and Master in Sciences with a major in Microbiology at the University of Concepcion. She had her own veterinary clinic for eight years in Concepcion, Chile. Patricia started her studies at the University of Bergen in autumn 2004 and got a Master in



Applied Physiology, financed by the Applied and Industrial Biology Research Group at BIO in January 2007.

Patricia entered her 4 year PhD Research Fellow position in August 2007 in a collaboration project between the Applied and Industrial Biology Research Group and Nofima (old Fiskeriforskning). The aim is to improve the quality of fish powder from Atlantic herring, with particular focus on its stability to oxidation, using natural antioxidants obtained from the process. Fish powder is a potential ingredient in healthy functional food products. Patricia will study aspects of the quality of the raw material (whole fish, fillets and roe), the variables involved in the process to manufacture fish powder and the quality of the final product, under supervision of Professor Ragnar Nortvedt, Professor Ole Brix and Senior Research Scientist Jan Pettersen (Nofima).



**Personalkonsulent Heine Skår Nilsen** er tilsatt fra 4. februar 2008. Han er bachelorgrad i personalledelse og er i tillegg utdannet sosionom. Før han begynte ved BIO hadde han jobbet to år ved barneverntjenesten og ett år ved personalavdelingen ved NHH. Heine er småbarnsfar med tvillinger på vel ett år.

## Gjesteforelesninger, seminarer og kollokvier

### Darwindagen tirsdag 12. februar

På dagtid er det foredrag om mennesket og evolusjonen (gratis adgang). På grunn av mange forhåndspåmeldinger fra skoleverket blir arrangementet flyttet fra kafeen på De Naturhistoriske Samlinger til 'Egget', det nye auditoriet i Studentsenteret, Parkveien 1.

**12.15 Ole Didrik Lærum** - Armauer Hansen og darwinismen på Vestlandet

*Tema: Når mennesket utilsiktet forårsaker evolusjon*

13.15 **Gaute Velle** - Utfallet av 13,7 milliarder år med evolusjon

13:45 **Lawrence Kirkendall** - Mennesket som evolusjonær drivkraft

14:15 **Erin S. Dunlop** - Fishing as an evolutionary force

*Tema: Bioteknologi som evolusjonær ingeniørkunst*

15:00 **Dag E. Helland** - Bioteknologi: draum og fakta

15:30 **Kjetil Rommetveit** - Bioteknologi og bioetikk

Om kvelden er det debatt i samarbeid med Studentersamfunnet på Sardinien, USF Verftet kl 1915 (gratis adgang).



**19:15 Bevissthet - en adaptiv illusjon?**

Er vi smarte nok til å forstå hvordan vi forstår? Kan evolusjonsteori og hjerneforskning forklare menneskelig tenkning og bevissthet?

Disse spørsmålene vil debatteres av **Kenneth Hugdahl** (professor i hjerne ved Avdeling for biologisk og medisinsk psykologi ved Universitetet i Bergen), **Ståle Gundersen** (førsteamanuensis i filosofi ved Universitetet i Stavanger) og **Hanno Sandvik** (postdoktor ved Institutt for Biologi ved Norges Teknisk-Naturvitenskapelige Universitet i Trondheim).

**18:15 Mennesket v2.0 på storskjerm**

Før debatten vises TV-programmet Mennesket v2.0 på storskjerm.

Mer utfyllende informasjon om Darwindagen finner du på <http://darwin.uib.no>



### **Special session at 2008 ASLO Summer Meeting**

The [American Society of Limnology and Oceanography](#) (ASLO) is meeting 8-13 June 2008 in John's, Newfoundland. A special session will be held on Influence of Coupling of Microbial and Metazoan Food Webs on Fluxes of Organic Material: Spatial and Temporal Scales and Variability. Invited speakers are Maurice Lévassour (Role of food webs on DMS dynamics) and Shubha Sathyendranath (Remote sensing of phytoplankton community structure). The scientific program for the St. John's ASLO meeting is very exciting. St. John's is one of the oldest cities in North America, with a unique culture and atmosphere. The deadline for submission of abstracts and application for student travel grants is **February 28, 2008**. [more information](#).

### **Nofima arrangerer seminar - Resirkulering av vann i oppdrett**

Sunnalsøra 27.–28. februar 2008.



Oppdrettere og andre interesserte inviteres til å få innblikk i siste trender innen resirkulering, fra forskning, myndigheter, og andre oppdrettere. Dette er også en gylden sjanse til å være med på å påvirke forskningsinnsatsene i det nye Senter for resirkulering i akvakultur, som starter opp på Sunndalsøra om snaut et år. Du vil høre inviterte foredragsholdere fra Norge, Færøyene, Nord Amerika og Chile, som vil gi en status i resirkulering og se fremover. På seminaret vil også Nofima og SINTEF stifte et fagforum for bruk av resirkulering av vann i oppdrett av fisk i Norge. Forumet tar sikte på å være et formidlingsorgan og en åpendiskusjonsarena for medlemmene. [Les mer](#)

### **St.-Petersburg International Conference NanoBio'08**

16-18. juni 2008 er det en konferanse i Russland på NaniBioteknologi, se [mer info](#) på nettet.

### **Møteplass marin: klimaendringer og havbruk**

I samarbeid med NIVA inviteres til åpent informasjons- og debattmøte.

Tid: **Tirsdag 1. april 2008 kl 0900-1600**

Sted: Scandic Bergen City Håkonsgaten 2 /7: [www.kart](#)

Påmelding: Gratis – men – begrenset antall deltagere

Møteledere: Vilhelm Bjerknes, NIVA og Tor Solberg Protevs AS

*Hva blir konsekvensene for havbruk når temperaturen øker?*

- Varmere hav eller slutt på Golfstrømmen?
- Hva vil skje med fjordene – og ser vi noe allerede?
- Kan økt algeoppblomstring hjelpe skjelldyrkerne?
- Vil ”mere vær” kreve andre oppdrettsanlegg?
- Hva med fiskefysiologi og fiskehelse?
- Kommer det nye varmekjære oppdrettsarter?
- Hvilke utfordringer møter oppdretteren?
- Blir det varmere – også for forvaltningen?

Velkommen: **Tom Chr. Nilsen**, fylkesvaraordfører

Foredragsholdere: **Helge Drange**, Bjerknessenteret, **Dag Aksnes**, UiB, **Fridtjof Moi**, NIVA, **Thorbjørn Johnsen**, NIVA, **Stein Mortensen**, HI, **Aina Valland**, Fiskeri- og havbruksnæringsens landsforening, **Øivind Bergh**, HI, **Bjørn Olav Rosseland**, UMB, **Sveinung Sandvik**, Vestnorsk Havbrukslag, **Erlend Waatevik**, Skretting, **Tone Holthe Svensen**, Fiskeri- og kystdepartementet  
Spørsmål og oppsummering: **Nils Torsvik**, Fiskaren

FRI ENTRÉ – men påmelding – begrenset antall deltagere. Påmeldingsfrist: **Torsdag 6. mars kl 1400**

Påmelding via hjemmesiden til Bergen Næringsråd: [www.påmelding.bergen-næringsråd.no](#)

### **Hva med et år i Canada via Canadian Post-Doctoral Research Fellowship?**

**Objectives and Goals:** As part of the Government of Canada Awards (GCA), the Government of Canada offers one-year post-doctoral research fellowships tenable at recognized public Canadian universities and affiliated research institutes.

The Canadian Post-Doctoral Research Fellowship Program (PDRF) is designed to provide research opportunities to promising recent doctoral graduates in the humanities, social sciences, natural

sciences and engineering. Fellowships are not offered to professional artists nor to those wishing to do clinical research and training involving patient-care. Priority will be given to candidates who have not previously studied in Canada under a Canadian government scholarship.

**Eligibility:**

- Applicants must be citizens of Norway. Anyone who has obtained Canadian citizenship or who has applied for permanent residency in Canada shall not be eligible for an award.
- Applicants must have completed a Ph.D. degree within the last 4 years or have completed the Ph.D. degree requirements before the beginning of the award.
- Applicants must be accepted into a post-doctoral position at a recognized public Canadian university or affiliated research institute of their choice.

**Value:**

Total value of the fellowship is \$32,000 CAD and it is not taxable in Canada. As no dependant allowance is payable, it is essential that fellows who plan to bring their family to Canada have sufficient financial resources for their support.

- Forms are available online: [Guidelines](#) [Application form](#) [Letter of Recommendation](#)
- **Applications and supporting documents should be sent to the following address before March 30th, 2008:**

Mr./M. Bjørn Petter Hernes, Embassy of Canada, Wergelandsveien 7, 0244 Oslo  
Tel.: 22 99 53 14, Fax: 22 99 53 01, e-mail: [bjorn.hernes@international.gc.ca](mailto:bjorn.hernes@international.gc.ca)

## Nye artikler

Har du en artikkel som ikke har stått her? Du kan sende bibliografi og abstract (helst i Word-format, helst *ikke* pdf av hele artikkelen!) til Jarl så snart du har sidetall eller DOI (slik at publiseringsår er fastsatt).

### **Trond Løvdal, Evy Skjoldal, Mikal Heldal, Svein Norland & Frede Thingstad: næringssalter påvirker bakteriers morfologi**

Løvdal T, Skjoldal EF, Heldal M, Norland S, Thingstad TF 2008. Changes in morphology and elemental composition of *Vibrio splendidus* along a gradient from carbon-limited to phosphate-limited growth. MICROBIAL ECOLOGY 55: 152-161

**Abstract:** We examined morphology, elemental composition (C, N, P), and orthophosphate-uptake efficiency in the marine heterotrophic bacterium *Vibrio splendidus* grown in continuous cultures. Eight chemostats were arranged along a gradient of increasing glucose concentrations in the reservoirs, shifting the limiting factor from glucose to phosphate. The content of carbon, nitrogen, and phosphorus was measured in individual cells by x-ray microanalysis using a transmission electron microscope (TEM). Cell volumes (V) were estimated from length and width measurements of unfixed, air-dried cells in TEM. There was a transition from coccoid cells in C-limited cultures toward rod-shaped cells in P-limited cultures. Cells in P-limited cultures with free glucose in the media were significantly larger than cells in glucose-depleted cultures ( $P < 0.0001$ ). We found functional allometry between cellular C-, N-, and P content (in femtograms) and V (in cubic micrometers) in *V. splendidus* ( $C = 224 \times V^{-0.89}$ ,  $N = 52.5 \times V^{-0.80}$ ,  $2 \times V^{-0.65}$ ); i. e., larger bacteria had less elemental C, N, and P per V than smaller cells, and also less P relative to C. Biomass-specific affinity for orthophosphate uptake in large P-limited *V. splendidus* approached theoretical maxima predicted for uptake limited by molecular diffusion toward the cells. Comparing these theoretical values to respective values for the smaller, coccoid, C-limited *V. splendidus* indicated, contrary to the traditional view, that large size did not represent a trade-off when competing for the non-C-limiting nutrients.

### **Lindsey Moore & Ivar Hordvik: karakterisering av subenheter i laksens immunforsvar**

Liu Y, Moore L, Koppang EO, Hordvik I 2008. Characterization of the CD3 zeta, CD3 gamma delta and CD3 epsilon subunits of the T cell receptor complex in Atlantic salmon. DEVELOPMENTAL AND COMPARATIVE IMMUNOLOGY 32: 26-35

**Abstract:** The CD3 subunits are essential components of the T cell receptor complex, transmitting signals to the inside of the cell. We report here cDNAs and corresponding genes encoding CD3 zeta, CD3 gamma delta and CD3 epsilon in Atlantic salmon, and real-time RT-PCR analysis to reveal their tissue-specific expression. Salmon CD3 zeta is the subunit that shows the highest sequence similarity

to the mammalian counterparts, comprising of a short extracellular (EX) part, a transmembrane (TM) peptide and a long cytoplasmic (CY) tail with three immunoreceptor tyrosine-based activation motifs (ITAMs). The gene encoding CD3 zeta in salmon has 7 exons. Salmon CD3 gamma delta (a forerunner of CD3 gamma and CD3 delta in mammals) and CD3 epsilon are related molecules each having an Ig-like EX domain, a TM peptide and a CY tail with one ITAM. Two distinct CD3 gamma delta genes were found, each having 6 exons. The gene encoding CD3 epsilon in salmon has 5 exons. RT-PCR also revealed a transcript from a degenerated CD3 epsilon gene in salmon (*Salmo solar*) and brown trout (*Salmo trutta*). This pseudogene is located tail to tail to a CD3 gamma delta gene in salmon and has a typical CD3 epsilon gene structure with the exception of 1 extra exon. All the CD3 genes in salmon were most abundantly expressed in thymus but the expression of the CD3 epsilon pseudogene was only a fraction of that from the intact CD3 epsilon gene.

### **Tom Ole Nilsen, Lars Ebbesson & Sigurd Stefansson: endokrinologi hos ung laks**

Nilsen Tom Ole, Lars O.E. Ebbesson, Pia Kiilerich, Björn Th. Björnsson, Steffen S. Madsen, Stephen D. McCormick & Sigurd O. Stefansson 2008. Endocrine systems in juvenile anadromous and landlocked Atlantic salmon (*Salmo salar*): Seasonal development and seawater acclimation. *General and Comparative Endocrinology* 155: 762-772

**Abstract** The present study compares developmental changes in plasma levels of growth hormone (GH), insulin-like growth factor I (IGF-I) and cortisol, and mRNA levels of their receptors and the prolactin receptor (PRLR) in the gill of anadromous and landlocked Atlantic salmon during the spring parr-smolt transformation (smoltification) period and following four days and one month seawater (SW) acclimation. Plasma GH and gill GH receptor (GHR) mRNA levels increased continuously during the spring smoltification period in the anadromous, but not in landlocked salmon. There were no differences in plasma IGF-I levels between strains, or any increase during smoltification. Gill IGF-I and IGF-I receptor (IGF-IR) mRNA levels increased in anadromous salmon during smoltification, with no changes observed in landlocked fish. Gill PRLR mRNA levels remained stable in both strains during spring. Plasma cortisol levels in anadromous salmon increased 5-fold in May and June, but not in landlocked salmon. Gill glucocorticoid receptor (GR) mRNA levels were elevated in both strains at the time of peak smoltification in anadromous salmon, while mineralocorticoid receptor (MR) mRNA levels remained stable. Only anadromous salmon showed an increase of gill 11 $\beta$ -hydroxysteroid dehydrogenase type-2 (11 $\beta$ -HSD2) mRNA levels in May. GH and gill GHR mRNA levels increased in both strains following four days of SW exposure in mid-May, whereas only the anadromous salmon displayed elevated plasma GH and GHR mRNA after one month in SW. Plasma IGF-I increased after four days in SW in both strains, decreasing in both strains after one month in SW. Gill IGF-I mRNA levels were only increased in landlocked salmon after 4 days in SW. Gill IGF-IR mRNA levels in SW did not differ from FW levels in either strain. Gill PRLR mRNA did not change after four days of SW exposure, and decreased in both strains after one month in SW. Plasma cortisol levels did not change following SW exposure in either strain. Gill GR, 11 $\beta$ -HSD2 and MR mRNA levels increased after four days in SW in both strains, whereas only the anadromous strain maintained elevated gill GR and 11 $\beta$ -HSD2 mRNA levels after one month in SW. The results indicate that hormones and receptors of the GH and cortisol axes are present at significantly lower levels during spring development and SW acclimation in landlocked relative to anadromous salmon. These findings suggest that attenuation of GH and cortisol axes may, at least partially, result in reduced preparatory upregulation of key gill ion-secretory proteins, possibly a result of reduced selection pressure for marine adaptations in landlocked salmon.

### **Jens C Nejstgaard, Paolo Simonelli, Christofer Troedsson & Markus Brakel: metode for å bestemme fødeinntak fra matens gener**

Nejstgaard Jens C., Marc E. Frischer, Paolo Simonelli, Christofer Troedsson, Markus Brakel, Filiz Adiyaman, Andrey F. Sazhin & L. Felipe Artigas 2008. Quantitative PCR to estimate copepod feeding. *Mar Biol* 153:565–577. DOI 10.1007/s00227-007-0830-x

**Abstract** Copepods play a central role in marine food webs as grazers of plankton and as key prey for many predators. Therefore, quantifying their specific trophic interactions is critical for understanding the role of copepods in ocean processes. However, because of methodological constraints, it remains difficult to investigate in situ copepod feeding without reliance on laborious intrusive and potentially

biased incubation approaches. Recent advances in PCR-based methodologies have demonstrated the feasibility of directly identifying copepod diets based on prey DNA sequences. Yet, obtaining quantitative information from these approaches remains challenging. This study presents results of systematic eVorts to develop a quantitative PCR (qPCR) assay targeted to 18S rRNA gene fragments to estimate copepod gut content of specific species of prey algae. These results were first compared to gut content estimates based on Xuorescence in the copepod *Calanus finmarchicus* fed monocultures of two diVerent microalgae species in controlled laboratory studies. In subsequent field studies, we compared feeding rates obtained by microscopy and qPCR for *Temora longicornis* and *Acartia clausi* feeding on the haptophyte *Phaeocystis globosa* in natural blooms. These investigations demonstrate a semi-quantitative relationship between gut content estimates derived from qPCR, gut pigment, and direct microscopy. However, absolute estimates of gut content based on qPCR methodology were consistently lower than expected. This did not appear to be explained by the extraction methods used, or interference by non-target (predator) DNA in the PCR reactions, instead suggesting digestion of prey-specific nucleic acids. Furthermore, the 18S rDNA target gene copy number of the phytoplankton varied with growth phase. Nonetheless, when prey target gene copy number in the ambient water is quantified, the qPCR-approach can be compared to other methods, and then used to semi-quantitatively estimate relative copepod grazing on specific prey in situ without involving further incubations. A distinct advantage of a DNA-based molecular approach compared to gut Xuorescence and direct microscopic observation, is the ability to detect non-pigmented and macerated prey. Future studies should aim to correct for breakdown in prey DNA and perform extensive calibrations to other methods in order to achieve a quantitative measure of feeding rates in situ.

### **Gidske Andersen & Knut Krzywinski: vekst og levealder hos akasietrær**

Andersen GL, Krzywinski K 2007. Longevity and growth of *Acacia tortilis*; insights from  $^{14}\text{C}$  content and anatomy of wood. BMC Ecology 7: 14. doi:10.1186/1472-6785-7-4

**Background** *Acacia tortilis* is a keystone species across arid ecosystems in Africa and the Middle East. Yet, its life-history, longevity and growth are poorly known, and consequently ongoing changes in tree populations cannot be managed in an appropriate manner. In other arid areas parenchymatic bands marking growth zones in the wood have made dendrochronological studies possible. The possibilities for using pre- and post-bomb  $^{14}\text{C}$  content in wood samples along with the presence of narrow marginal parenchymatic bands in the wood is therefore tested to gain further insight into the age, growth and growth conditions of *A. tortilis* in the hyper-arid Eastern Desert of Egypt.

**Results** Based on age scenarios and the Gompertz growth equation, the age of trees studied seems to be from 200 up to 650 years. Annual radial growth estimated from calibrated dates based on the post-bomb  $^{14}\text{C}$  content of samples is up to 2.4 mm, but varies both spatially and temporally. Parenchymatic bands are not formed regularly. The correlation in band pattern among trees is poor, both among and within sites.

**Conclusion** The post-bomb  $^{14}\text{C}$  content of *A. tortilis* wood gives valuable information on tree growth and is required to assess the age scenario approach applied here. This approach indicates high longevities and slow growth of trees. Special management measures should therefore be taken at sites where the trend in tree population size is negative. The possibilities for dendrochronological studies based on *A. tortilis* from the Eastern Desert are poor. However, marginal parenchymatic bands can give insight into fine scale variation in growth conditions and the past management of trees.

### **Ann-Elise Olderbakk Jordal: hva skjer med fiskefôr når planteolje erstatter fiskeolje?**

Jordal, Ann-Elise Olderbakk; Lie, Øyvind; Torstensen, Bente E. 2007. Complete replacement of dietary fish oil with a vegetable oil blend affect liver lipid and plasma lipoprotein levels in Atlantic salmon (*Salmo salar* L.). Aquaculture Nutrition 13:114-130

**Abstract:** To study how hepatic lipid turnover and lipid transport may be affected by complete replacement of dietary fish oil (FO) with a vegetable oil blend (VO) from start feeding until the adult stages, Atlantic salmon (*Salmo salar* L.) were fed either 100% FO- or 100% VO-based diets (55% rapeseed oil, 30% palm oil and 15% linseed oil) from start feeding until 22 months. Liver and plasma lipoprotein lipid class levels and lipoprotein fatty acid composition were analysed through the seawater phase, whereas liver fatty acid composition, plasma cholesterol, triacylglycerol (TAG) and protein levels were analysed through both freshwater and seawater stages. Further, enzyme activity of

liver fatty acid synthetase (FAS), NADH-isocitrate dehydrogenase, malic enzyme, glucose-6-phosphate dehydrogenase and 6-phosphogluconate dehydrogenase and expression of the gene Peroxisome proliferator-activated receptor  $\gamma$  (PPAR $\gamma$ ) was analysed during both fresh water and seawater stages through the experiment. Dietary VO significantly increased salmon liver TAG and hence total liver lipid stores after 14 and 22 months of feeding. Further, after 22 months of feeding, plasma lipid levels and plasma low-density lipoprotein (LDL) levels were significantly decreased in VO-fed salmon compared with FO-fed fish. The same trend, although not statistically significant, was seen for plasma very low-density lipoprotein (VLDL). The activity of FAS was generally low throughout the experiment with the VO group having significantly lower activity after 16 months of feeding. The expression of PPAR $\gamma$  in livers increased prior to seawater transfer followed by a decrease, and then another increase towards the final sampling (22 months). Dietary vegetable oil replacement had no impact on PPAR $\gamma$  expression in salmon liver. In summary, liver TAG stores, plasma lipid and LDL levels were affected by dietary vegetable oil replacement in Atlantic salmon during a long-term feeding experiment. Current results indicate that high dietary vegetable oil inclusion increase hepatic TAG stores and decrease plasma lipid levels possible through decreased VLDL synthesis.

### **Lars Ebbesson: fettsyreinntak og metabolsk syndrom**

Ebbesson SO, Tejero ME, Nobmann ED, Lopez-Alvarenga JC, Ebbesson L, Romenesko T, Carter EA, Resnick HE, Devereux RB, Maccluer JW, Dyke B, Laston SL, Wenger CR, Fabsitz RR, Comuzzie AG, Howard BV. 2007. Fatty Acid Consumption and Metabolic Syndrome Components: The GOCADAN Study. *J Cardiometab Syndr.* 2007 Fall;2(4):244-249.

**Abstract:** Fatty acids (FAs) have been related to changes in glucose and lipid metabolism. In this article, the authors assess the association between intake of specific FAs and components of the metabolic syndrome (MS) in adult Eskimos. A total of 691 Inupiat Eskimos (325 men and 366 women), aged 34 to 75 years, were examined as part of the Genetics of Coronary Artery Disease in Alaska Natives (GOCADAN) study. The investigation included a physical examination, blood pressure measurements, blood sampling under fasting conditions, 2-hour oral glucose tolerance test, and a personal interview including a validated food frequency questionnaire. Components of MS were defined according to the Third Report of the National Cholesterol Education Program Adult Treatment Panel criteria. Consumption of individual FAs showed associations with MS components. Long-chain omega-3 FAs, from fish and sea mammals, were associated with lower blood pressure, serum triglycerides, and 2-hour glucose and higher high-density lipoprotein cholesterol, fasting insulin, and homeostasis model assessment. Saturated fat consumption was associated with higher triglyceride levels and blood pressure. Trans-FA consumption was associated with higher blood pressure. Consumption of long-chain omega-3 FAs from marine sources may improve certain MS components, and thus may reduce risk for cardiovascular disease. High consumption of saturated FAs and trans-FAs may have an adverse effect on MS.

### **Gyda Christophersen & Thorolf Magnesen: forbedret metode for dyrking av kamskjell**

Louro, A., Christophersen, G., Magnesen, T. and Román, G. 2007. Suspension culture of the great scallop *Pecten maximus* in Galicia, NW Spain: Intermediate secondary culture from juveniles to young adults. *J Shellfish research* 26:1-8.

**Abstract:** A strategy for producing juvenile *Pecten maximus* to a suitable size for final culture (approximate to 20-60 mm shell-height) within a year is suggested. Effects of stocking density, fouling on cages and shells, and handling frequency (every 1, 2, or 3 mo) on scallop growth and survival were investigated. Small juveniles (16.8 +/- 1: 3.0 mm) were initially stocked in August at densities of 24, 36, and 48 scallops quarter(-1) (17% to 34% coverage), and 35.5 +/- 5.1 mm scallops were restocked in January to 6, 12, 18, and 24 quarter(-1) (18% to 73%). Survival was neither affected by stocking density nor handling, and was 98% the first period and from 93.2% to 96.9% between January and July. Shell-growth was mainly affected by stocking density and less affected by handling frequency. Growth slowed down during the winter months, and stocking density influenced growth during all seasons. Juveniles kept at the lowest densities obtained highest growth. Final mean shell-height was 54.8-67.2 mm and coverage 22% to 165%. Scallops handled monthly and bimonthly had significantly larger sizes than scallops handled every three months. Fouling on the cages increased with rising sea

temperature, whereas high stocking density significantly reduced fouling on cages. Effective production during intermediate secondary culture in Galicia should include high initial stocking density in August, restocking to low density in January, and changes or cleaning of cages every second month.

### **Ragnar Nortvedt: metode for å dekontaminere fiskeolje**

Oterhals Åge, Marianne Solvang, Ragnar Nortvedt & Marc H. G. Berntssen 2007. Optimization of activated carbon-based decontamination of fish oil by response surface methodology. *European Journal of Lipid Science and Technology* 109: 691 – 705

**Abstract:** The effect of activated carbon (AC) adsorption on the reduction of persistent organic pollutants (POP) in fish oil was studied based on response surface methodology at a 5-g/kg AC inclusion level. Pretreatment of the oil by alkali refining and bleaching increased the POP levels. The tested process variables (contact time and temperature) affected the AC adsorption rate and significant first- and second-order response models could be established. Polychlorinated dibenzo-*p*-dioxins and dibenzofurans (PCDD/F) showed a very rapid adsorption behavior and the concentration and toxic equivalent (TEQ) level could be reduced by 99%. Adsorption of dioxin-like polychlorinated biphenyls (DL-PCB) was less effective and depended on *ortho* substitution, *i.e.* non-*ortho* PCB were adsorbed more effectively than mono-*ortho* PCB with a maximum of 87 and 21% reduction, respectively, corresponding to a DL-PCB-TEQ reduction of 73%. A common optimum for both PCDD/F and DL-PCB adsorption could not be identified. AC treatment had no effect on the level of polybrominated diphenyl ether flame retardants. The differences in adsorption patterns may be explained based on molecular conformation. No change in oil quality could be observed based on oxidation parameters. Compliance with present PCDD/F and DL-PCB legislation levels in fish oil can be achieved based on AC adsorption.

### **Richard Telford: variasjon i temperatur og atlantisk vann under Holosen.**

Hald, M., Andersson, C., Ebbesen, H., Jansen, E., Klitgaard-Kristensen, D., Risebrobakken, B., Salamonsen, G., Sarnthein, M., Sejrup, H.P. & Telford, R.J. 2007. Variations in temperature and extent of Atlantic Water in the northern North Atlantic during the Holocene. *Quaternary Science Reviews* 26: 3423-3440.

### **Stefan Ekman: molekylær fylogeni i lav-slekt**

Næsborg, Rikke Reese; Ekman, Stefan; Tibell, Leif. Molecular phylogeny of the genus *Lecania* (Ramalinaceae, lichenized Ascomycota). *Mycological Research* 2007;111(5):581-591

### **Bjørn Berland: rundormparasitter i fisk i Sørkinahavet**

Zainathan, S.C.; Shaharom, F.; Berland, Bjørn. Nematode parasites in commercialised marine fishes from South China Sea. *Parassitologia* 2007; 49 Suppl 2:234-234

### **Bjørn Berland: labprosedyrer for å studere fiskeparasitter**

Santos, M.J.; Saraiva, A.; Berland, Bjørn. Laboratory procedures to study fish parasitology. *Arquipélago, Life and Marine Sciences* 2007 Suppl 6:41-41

### **Bjørn Berland: nye teknikker i studier av parasittiske ormer**

Berland, Bjørn. Novel techniques in helminthology - part four. *Parassitologia* 2007;49 Suppl 2:10-10

### **Bjørn Berland: prepareringsteknikker**

Berland, Bjørn. Methodology to prepare whole mounts: shortcuts. *Arquipélago, Life and Marine Sciences* 2007 Suppl 6:33-35

## **Bok-kapitler**

### **Lars Ebbesson: nitrittoksid i sebrafiskens neurobiologi**

Holmqvist B, Ebbesson LOE and Alm P (2007). Nitric oxide in developmental neurobiology of zebrafish. Review. In "Nitric oxide", *Advances in Experimental Biology series*, Tota B and Trimmer B (eds). (Elsevier, Amsterdam), Vol 1. pp 229-274. ISBN 978-0-444-53119-3

**John-Arvid Grytnes: mønstre i biodiversitet i høydegradienter**

Grytnes, J.-A. & McCain, C.M. 2007. Elevational patterns in species richness. In: *Encyclopedia of Biodiversity* (Ed. S. Levin), Elsevier. 10.1016/B978-012226865-6/00503-1 Published online, pp. 1-8.

**Ragnar Nortvedt & Lars Stien: sjømat via etisk og bærekraftig produksjon**

Nortvedt, R., Espe, M., Gribbestad, I., Jørgensen, L., Karlsen, Ø., Otterå, H., Rørå, M.B., Stien, L.H. and Sørensen, N.K., 2007. High-quality seafood products based on ethical and sustainable production. Chapter 2 in: M.Thomassen, R.Gudding, B.Norberg and L.Jørgensen (Eds.) *Aquaculture Research: From Cage to Consumption*. The Research Council of Norway, ISBN 978-82-12-02409-0 (pdf), p. 28-44.