

Rein's Corner

Dear MBlers,

July 1st, already! - This must be a first in the history of MBInytt. But thanks to modern media, we can reach you with the latest news from MBI almost(!) anywhere and any time. That 'almost' is significant, however. Many of you are already on vacation and it's probably good that you don't tap into MBIs pages all the time. Anyway; - here it is: this semester's last issue of MBInytt, with a fresh collection of facts, photos, and some new faces.

Let me take this opportunity to congratulate all the students who have worked hard through the semester and completed their exams, all those who have completed their bachelor degrees, and those who have had their final master exams. Allow me to iterate what I said on the last celebration, that I - and many with me - have been very impressed by the quality of the master thesis presentations. Thanks to all the supervisors and co-supervisors for excellent work and a special thank to all those who serve as censors, - here or at other institutions. Your efforts in an otherwise hectic period is most appreciated. One of the new master candidates also timely reminded us that many others also deserve credit when we celebrate, both the department's excellent technical staff and our dedicated administration. Congratulations also to this semester's four new *doctores*.

This is also an important transition time for those who move on to new studies, here or elsewhere, and for some, who embark on new jobs. I wish you all the best in your molecular careers and hope that MBI has served you well for both studies and research.

With this I wish you all a wonderful summer. Forget about the statistics (about rain in July); - that's for big numbers. We are already on track to some more records for Bergen. Take time to relax with friends and family and see you again after summer, fit for fight and new challenges! If you are not going far, remember that Bergen and its surroundings have lots of interesting places to explore.

Rein

Method of the Month- Isothermal Titration Calorimetry Strikes Back

By Carol Issalene

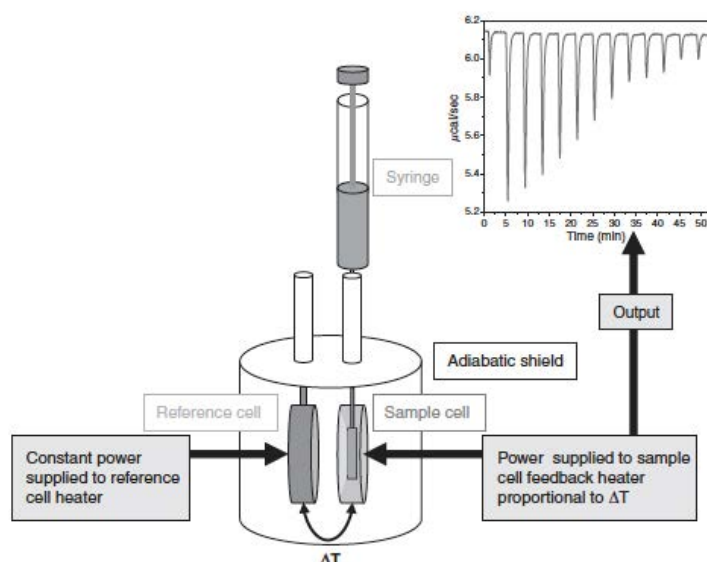
Isothermal titration calorimetry (ITC) has long been the golden standard for determining protein-protein interaction parameters. A drawback is the huge amount of protein it requires (ITC is known as "the protein sink"), and less greedy methods like surface plasmon resonance (Biacore) have been developed. The modern ITC devices like the one from TA Instruments we have at MBI use a nanocell that consumes less material.

ITC is a technique allowing the direct measurement of the two thermodynamic terms that define the binding affinity: the changes in enthalpy (ΔH) and entropy (ΔS), as well as the stoichiometry of the interaction.

The two binding partners are at first held separately:

- the reaction cell is filled with one of the partners.
- the injection syringe contains the other compound, which will be released in the reaction cell by means of small injections, allowing time for the reaction to happen (See figure). The binding reaction releases or absorbs heat from the environment (the reaction cell).

Since the system is maintained at a constant temperature, the instrument registers the heat difference between the reference cell and the reaction cell



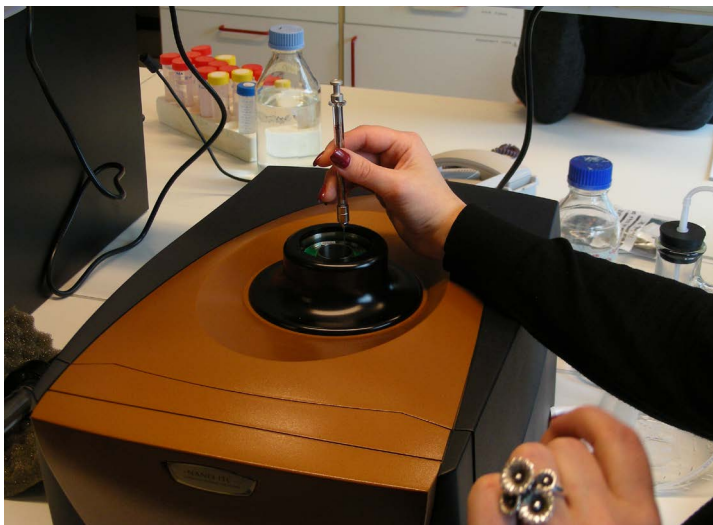


Foto: Rein Aasland
Injection

and compensates by reducing or increasing the power applied to the control heater so that the temperature remains constant.

Modern instruments make it possible to measure heat effects (due non-covalent interactions) as small as $0.1 \mu\text{cal}$ ($0.4 \mu\text{J}$) and binding constants K_a as large as 10^8 - 10^9 M^{-1}

For instructional videos and articles, see tainstruments.com

Nye doktorgrader

Puja Gupta forsvarte 11. april sin doktoravhandling med tittelen *Genetic and Molecular analysis of Zebrafish Retina Development*

Thomas V. Kalvik forsvarte 10. april sin doktoravhandling med tittelen *Substrates and Cellular functions of the human N-terminal acetyltransferases NatA and NatC*

Nye mastergrader

Vi gratulerer **Kristin Gravdal, Mamata Khatri, Morten Larsen, Sandra Ninzima** og **Kjetil Thorstensen** med avlagt mastergrad!

Nye publikasjoner

Blacker TS, Mann ZF, Gale JE, Ziegler M, Bain AJ, Szabadkai 5, Duchon MR. Separating NADH and NADPH fluorescence in live cells and tissues using FLIM. *Nat Commun.* 2014 May 29;5:3936. doi: [10.1038/ncomms4936](https://doi.org/10.1038/ncomms4936).

Fladmark KE. Toxins and Biologically Active Compounds from Microalgae, in *Biological Effects and Risk Management*, vol 2. CRC Press 2014, p196–216 Edited by Gian Paolo Rossini. Print ISBN: 978-1-4822-3146-5, eBook ISBN: 978-1-4822-3147-2 DOI: [10.1201/b16806-9](https://doi.org/10.1201/b16806-9)

Personalnytt



Foto: UiB

Kari E. Fladmark fyller 50 år 18. juli. **Vi vil markere dette med en sammenkomst fredag 29. august.** Detaljene følger etterhvert.



Foto: Wenche Telle

Henriette Aksnes er tilsatt i 3-årig stilling som postdoktorstipendiat ved MetaSig/Nat-gruppen fra 22. april.



Foto: UiB

Christian Dölle er tilsatt som senioringeniør i vikariat for Marc Niere ved MetaSig/NAD-gruppen for perioden 1.6-30.11

Nytt fra Heliks

Jobbsøkerkurs med Karrieresenteret

9. april arrangerte Heliks i samarbeid med Karrieresenteret et jobbsøkerkurs for molekylærbiologer. Eivind Olsvik holdt kurset på vegne av Karrieresenteret. Det var godt oppmøte på kurset, med studenter fra bachelor- og masterstudiet.

Kurset ga et generelt innblikk i hva som er viktig i prosessen når det gjelder jobbsøking, CV og søknader. Vi fikk hjelp til å identifisere fordeler ved vår egen utdanning som kan være nyttige på arbeidsmarkedet, slik som erfaring med selvstendig arbeid, evne til å arbeide strukturert, en analytisk tilnærming til arbeidsoppgaver og utstrakt erfaring med samarbeid. Og - det er ikke altfor mange av oss! Så for å oppsummere det hele: vi må ha tro på oss selv og dra med oss de positive egenskapene og erfaringene vi får ved å studere molekylærbiologi ved MBI.

Tapaskveld

Heliks arrangerte tapaskveld torsdag før påskeferien. Oppmøtet var så som så, men vi som var der koste oss veldig! Vi dekket bordene i Loopen, og gjorde i stand til en hyggelig kveld. Alle hadde med en rett hver og det ble en stort og godt koldtbord med noe for enhver smak. Det ble en veldig koselig kveld, og de siste fikk hjem rundt elleve.

Allmøte

Årets allmøte ble arrangert 5 mai, med valg av nytt Heliks-styre. Helene Torkildsen tar over etter Ina B. Johansen som leder for Heliks. Karina Dale fortsetter som nestleder. Styret ble konstituert 8.mai i Loopen – med masse god mat.



Foto: Heliks



Foto: privat

Puja Gupta er tilsatt i et midlertidig engasjement som avdelingsingeniør på lab 6 (Kari E. Fladmark) for perioden 1.7-31.10

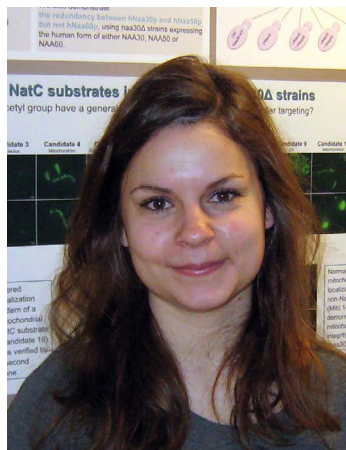


Foto: Ole Horvli

Marianne Goris er tilsatt i 3-årig stilling som stipendiat ved MetaSig/Nat-gruppen fra 15. juni, med finansiering fra Norges forskningsråd. Thomas Arnesen er hovedveileder.



Foto: privat

Hasan Arsin er tilsatt som PhD stipendiat ved BIO, tilknyttet Uni Research AS. Han har arbeidsplass på Unis lab her ved MBI og skal jobbe på prosjektet NorZymeD. Hans Kleivdal og Ida Steen er hovedveiledere.

Heliks nominert til springbrettprisen 2014

Heliks sendte inn søknad til [springbrettprisen 2014](#) – og av mange gode søknader ble vår trukket ut som en av de syv beste! Dermed ble Molekylærbiologisk Karrieredag 2014 nominert til Springbrettprisen 2014. Vi ble invitert til First Hotel Maritim på prisutdeling og stilte med tre stykker fra styret. Der ble vi møtt av god mat og god underholdning! Til slutt var det SAU som stakk av med prisen – og 10 000kr i premie!

Heliks nominerer seg selv og vår stolthet – Karrieredagen – gjerne igjen til neste år!

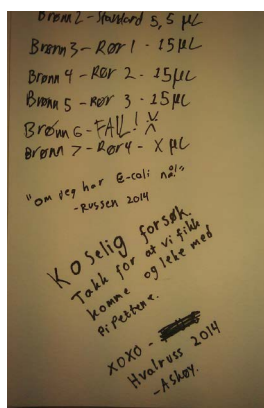
Skolebesøk

29. og 30. april tok elevene fra VG3Bi på Askøy og Langhaugen fri fra russefeiring for å besøke undervisningslaboratoriet på MBI. De utførte en labøvelse i mer eller mindre våken tilstand. Alle overlevde...



Foto: Carol Issalene

Fornøyde elever...



...og notatene deres



Foto: Rein Aasland

Some of us can still remember how fast the coins were eaten in this old pay-phone... 14 May the now so obsolete phone booth outside HIB was removed at last.

Ferieavvikling i administrasjon og ledelse sommeren 2014

Ferieavvikling i administrasjon og ledelse ved MBI sommer 2014

	UKE	juni 24	juni 25	juni 26	juni 27	juli 28	juli 29	juli 30	juli 31	august 32
Adm	Jarle		F	F	F	F				
	Margun			F			F	F	F	F
	Knut Olav					F	F	F	F	
	Gunhild				F 4. juli	F	F	F	F	
Ledelse	Grethe					F	F	F		
	Andrea			F 27. jun	F		F	F	F	F
	Rein					F	F	F	F	
	Mathias					Stedf. leder	Konferanse	F	F	F
	Aurelia	F					Stedf. leder	Stedf. leder	Stedf. leder *	F

* reiser på ferie torsdag denne uken

 på arbeid
 ferie

Bestilling

uke 25 Margun gjør bestillinger for Jarle
 uke 26 Bestillinger for uke 26 bør gjøres i uke 25. Ved behov kan Grethe eller Wenche hjelpe til med bestillinger
 uke 27 Margun gjør bestillinger for Jarle
 uke 28 Margun gjør bestillinger for Jarle
 uke 29-32 Jarle gjør bestillinger

Anvisning

uke 27 og 32 Rein anviser
 uke 28 Andrea anviser
 uke 29-31 Rein og Andrea er på ferie, men anvisning av bestillinger vil bli gjort tilnærmet daglig via nett.

Rein og Andrea kan kontaktes hele sommeren på mobil.

Rein 924 25 456
 Andrea 971 72 904

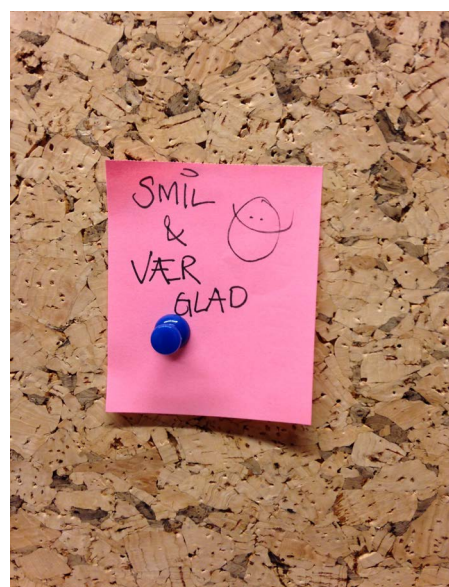


Foto: Rein Aasland

Thanks to whoever posted this simple and wonderful encouragement on the message board - most appreciated!

We need to communicate our science to the public more and better.

Dear All MBlers,

In the public in general, how many people do you think knows about our discipline: **molecular biology**, - or **molecular life science**, for that sake? Who knows what **protein modifications** are, **cellular signalling**, **protein structure** and **unstructure**, **chromatin**? And what is **molecular dynamics** and how can one **model** it? And what are **nuclear receptors** and how do they regulate reproduction? And why is **zebrafish** such a good **model organism** for research?



Yet, molecular biology has enormous **impact** on our understanding of life and processes in living organisms, - from normal embryology to development of disease. But do they know?

We all have an **obligation** to communicate our science, not only in scientific journals, but also to the general public. Some of you already do! - and that's most appreciated.

To do this, we have a larger diversity of media to use. Several Norwegian Newspapers have significantly improved their science journalism, and some - like **Aftenposten** and **Bergens Tidende** - are eager to have scientists write in their columns (both have 2page "innsikt articles", and Aftenpostens new and weekly magazine **Innsikt** is a new and very nice medium, with a growing readership. We have our web and facebook pages, and there are lots of other opportunities. Every autumn, a large and national science fair (Forskningsdagene) attracts thousands of people - and we haven't been there since long.

It has been claimed that it is **impossible** to communicate molecular biology, since it deals with a micro- and nanoscopic world that ordinary people cannot relate to. I would argue that that's not true. Just like particle physicists can draw attention to their weird and alian quantum world, and astrophysicists can attract scores of peolpe to hear about star formation and dark matter, - we can communicate from our molecular world. **Good pictures**, both as images and analogies, is one key to communication. And, even the most basic of our basic research can be put into a wider and more accessible context. Watch the excellent videoportrait of **Harald Stenmark** on youtube: (<https://www.youtube.com/watch?v=aD4vhEsPbww>) - He was recently awarded King Olav's Price for Cancer Research.

It doesn't have to be glossy and gee wiz, but it must be **inviting** and **attractive**. When I fly Norwegian, I always check their flight magazine, which is an excellent example of attractive and well structured layout for communication.

SO: let's roll up our sleeves and get to it. There will be rewards for those who contribute the best popular science communication from MBI.



And last, but not least, good science communication may well be read by prospective students and future colleagues.

Rein