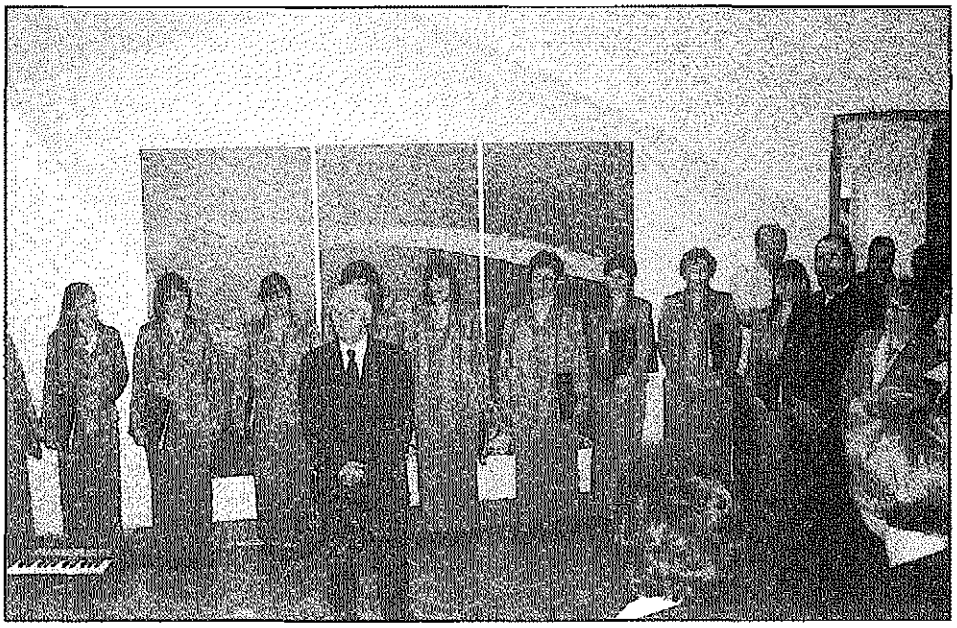


Dr. Lojze Marinček, minister za znanost in tehnologijo RS, je 15. 4. 1999 uradno odprl razstavo Barve zaliva ob tridesetletnici Morske biološke postaje v Piranu (Foto: V. Bernetič).
On April 15th 1999, at the 30th anniversary of the Marine Biological Station Piran, the exhibition Colours of the Bay was officially opened by Dr. Lojze Marinček, Slovene Minister of Science and Technology (Photo: V. Bernetič).

iz leta 1884, delo Antonia Zaratina, vodje moške ljudske šole v Poreču.

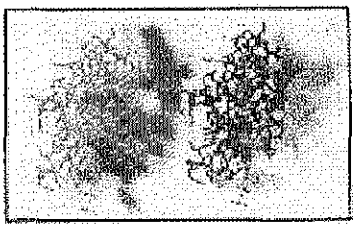
Pomemben del razstave je namenjen prikazu značilnega morskega profila slovenskega morskega obrežja, od strme flišne stene, preko abrazijske terase in bibavičnega pasu do sedimentnega dna. V prikaz so vključeni tudi najbolj značilni predstavniki morskega življa, ki pa so poimenovani le s svojimi strokovnimi - latinskimi imeni. Pripis slovenskih imen bi bil nedvomno dobrodošel, saj je razstava namenjena tudi in predvsem nestrokovni javnosti. Najpogostejše rastlinske in živalske vrste Tržaškega zaliva pa lahko obiskovalci razstave spoznavajo tudi s pomočjo stalne projekcije prekrasnih podvodnih diapozitivov Marjana Richterja. Posebna pozornost je posvečena prehrambni verigi morskega ekosistema in vlogi posameznih organizmov v njej - od bakterij in planktonskih organizmov pa do tistih plenilcev, ki kraljujejo na samem vrhu.

"Morska" razstava vsekakor ne bi bila popolna brez prikaza nekaterih pojavov, ki so se v preteklih letih dodobra prevetrili in razburkali dokaj pasiven odnos pretežnega dela slovenske javnosti do morja. Govora je seveda o množičnem pojavu meduz, intenzivnem "cvetenju" morja, pojavu sluzastih agregatov ter občasnem pomanjkanju kisika v pridnenih delih zaliva. Iz prikazanega gradiva je razvidno, da so bili (in so še) omenjeni pojavi deležni velike pozornosti ne le v javnosti, pač pa tudi v znanstveno raziskovalnem delu Morske biološke postaje. Dokončnih odgovorov o vzrokih in mehanizmih sicer obiskovalci ne bodo prebrali, slutiti pa je opozorilo, da modrega planeta ne poznamo dovolj, in da bi moralo biti naše poseganje vanj veliko bolj razumno in previdno.

Tudi zaradi omenjenega sporočila je razstava več kot dobrodošla. Morje se - za razliko od kopnega - namreč še vedno obravnava kot (ne)prostor, v katerem lahko vsakdo počne kar hoče - se kopa, pluje, lovi, nabira, nasipava in ga ob vsem tem še izdatno onesnažuje.

Tamara Lah

REPORT ON THE THIRD MEETING OF SLOVENIAN BIOCHEMICAL SOCIETY



The Slovenian Biochemical Society (SBS) was established in 1993 after splitting from the Yugoslav Biochemical Society as a consequence of political separation and declaration of independence of Slovenia. The first meeting was held in 1995 in Portorož, the second

meeting at Otočec near Novo mesto in 1995, and this time we returned to the Adriatic Coast. During this time the membership of the SBS has increased, but the budget remains rather modest, due to a low membership fee and little support from other sources.

SBS is also a member of the European Federation of Biochemical Societies. The Society is therefore obliged to organize regular *National meetings*. All three meetings so far have had international participation, mainly due to the fact that by including foreign scientists into the scientific board and the program, the Ministry of Science and Technology of Republic of Slovenia is much more willing to financially support the meeting.

This has also proved to be very stimulating, particularly for young scientists and the biochemistry students who have less chance to be exposed to the international scientific community. Due to the many collaborations that we have all over the world, it was not hard to find excellent speakers. This may change slightly in future, mainly due to the increasing number of contributions. However, the general opinion of the present scientific committee of the meeting, supported by the majority of SBS members, (according to the results of the questionnaire after the meeting) is that international participation inspired all scientists and reflects the recognition and quality of our scientific achievements. The presence of our foreign coworkers at the meeting also gave them the opportunity for visiting the collaborating departments and laboratories in Ljubljana and even to establish new scientific contacts, thus strengthening the links with Slovenian scientists.

In the three and a half days of the meeting, we covered several major fields of biochemistry with 52 lectures and 97 poster presentations. Due to substantial inter-disciplinary research in areas including biotechnology, biology, biophysics, genetics and clinical biochemistry, as well as biomedical research, it was hard to draw a line between all these and the "true biochemistry". We therefore had to limit the contributions to the research and research groups, which are carrying out primarily basic biochemical investigations. Although these may well have applications, we did not include sections on biotechnology as in the previous years.

Finally, in this meeting we also wanted to emphasize the power of the young and we invited to speak younger, although not yet so prominent, researchers who, however show potential. We decided therefore to shorten the time of presentations and to increase the number of, particularly young, speakers. As a stimulus to others who were not selected as speakers this time, we offered a challenge to win one of the three awards for the best poster. The Diploma (and practical gifts) went to the - again- young awardees:

1) *Martina Fink, Michael R. Waterman and Damjana Rozman* from Institute of biochemistry, Medical Centre for Molecular Biology at Medical Faculty, University of Ljubljana, for the presentation: *Human lanosterol 14α-demethylase (CYP51) promoter responds to cAMP dependent and to sterol dependent regulation.*

2) *Simon Caserman, Benjamin Gorinšek, Damjan Bergant, Metka Ravnik-Glavač and Damjan Glavač* from Laboratory for Molecular Genetics, Institute for Pathology at Medical Faculty in Ljubljana, for the presentation: *C618R mutation in the RET proto-oncogene in a Slovenian kindred with a familial medulary thyroid carcinoma (FMTC) and Hirschprung disease.*

3) *Margus Pooga, Matjaž Zorko, Maria Lindgren, Ursel Soomets and Ulo Langel* from Estonian biocentre Tartu, Estonia; Institute of Biochemistry, Medical Faculty University of Ljubljana, and Stockholm University, Stockholm, Sweden for the presentation: *Transportants - family of cellular delivery peptides.*

The opening "EMBO lecture", sponsored by the European Society for Molecular Biology was given by Miroslav Radman, and proved a most provocative beginning of the meeting. Miroslav Radman, born in Split (Croatia), is at present the Head of Faculty of the Medicine Necker-Inserm Institute at University of Paris, and winner of several awards in the field of evolution, cancer and mutation research. His lecture on *"The precision of Biosynthetic Processes in Evolution and Disease"* was a biological, philosophical and economical discussion on the molecular driving forces of evolution. He pointed out, by showing us his modelling and experimental evolution studies, that a certain level of biosynthetic errors may contribute to the adaptability or fitness of large population, and that the balance between low and high rate mutants is critical also for the development of diseases, such as cancer.

The closing lecture was also a highlight, being presented by the famous structural biochemist and crystallographer, Wolfgang Baumaister, from the Max Planck Institute for Biochemistry in Martinsried near Munich (Germany). This was an excellent presentation of the structure and function of the largest proteolytic enzyme known so far - the proteasome. This protease is unique in its structure, comprised of 26 protein units, that allows for a complex and precise mechanism of regulation of its specific proteolytic activity in the cell cytoplasm, which is crucial for normal cell function.

The main progress in our biochemical research since last meetings has been in molecular biology and genetics, in particular in gene regulation and evolution. These two topics were separated into the sessions *Signal transduction and regulation* and *Gene structure and evolution*. New and/or alternative signalling pathways were presented in excellent lectures by Paolo-Sasione Corsi from CNRS-Inserm, Strasbourg (France) and Ana Plemenitaš and her collaborator from US, Tom Cujec, who works in the laboratory of Matjaž Peterlin, both of Slovene origin, on the mechanism of HIV-induced signal transduction mechanisms. The contribution of Damjana

Rozman's group from Institute of Biochemistry & Medical Center for Molecular Biology at Medical Faculty was also outstanding, describing the hormonal regulation of cholesterol, while gene regulation in bacteria and animals was presented by Peter Dovč and coworkers from the Department of Biology and Department of Animal Sciences of the Biotechnical Faculty.

Gene evolution was shown to be an active, growing field of research in Slovenia, developing mainly at the Department of Biochemistry and Molecular Biology at Josef Stefan Institute (the group of Franc Gubenšek) and at the Department of Biology at Biotechnical Faculty (Jože Trontelj and coworkers).

Moving now to the major achievements in the two largest sections, the longest tradition in Slovenian biochemical research is certainly in the area of protein biochemistry. The session on *Structure and function of proteins* started with Jean-Marie-Frère, who presented a striking example of the generation of mutation, seen in the rapid proliferation of beta-lactamases, capable of degrading antibiotics. He stressed the need for renewed research into ways of inhibiting these enzymes. Several speakers, such as Gordon Rule, Gregor Gunčar and Roman Jerala demonstrated the complementary contributions of X-ray crystallography and NMR studies in revealing structural aspects of Rho factors and proteinase inhibitors, respectively. Further, structure-function aspects of other enzymes, such gyrases, acetyl and butyryl cholinesterases, nucleoside kinases, plant oxidases and peroxidases, phospholipases from venoms and particularly the proteolytic enzymes - cathepsins B, H and C - were presented. The latter studies were mainly from the group of Vito Turk at the Department of Biochemistry and Molecular Biology at the Jožef Stefan Institute, in certain cases in collaboration with the two Slovenian pharmaceutical companies, Lek and KRKA.

Toxicological research is focused on several bacterial and animal proteins of sources. These are equinatoxin and other cytolytic toxins, mycrocystins and toxic phospholipases from snake venoms. Recent structural investigations in the group of Peter Maček from Department of Biology at Biotechnical Faculty in collaboration with Gianfranco Menestrina, have led to new discoveries in the structure and pore-forming mechanisms of equinatoxin, while the biochemical properties of phospholipases and the toxic effects of specific snake venoms were described by the group of Franc Gubenšek at Josef Stefan Institute.

Another interesting molecule, where structure-function relationship is still a puzzle, is TNF-alpha. As in all previous proteins, recombinant DNA techniques as well as conformational studies have led to new understanding of structure-function relationships. In the case of TNF-á this may lead to direct medical application in tumour treatment and the research by Vladka Gaberc-Porekar and Viktor Menard at the National Institute of Chemistry is strongly supported by the pharmaceutical company LEK.

The second largest section is the sections on *Molecular basis of the disease*. Here, the prevalent concern is cancer. One aspect of these studies concerns proteolytic enzymes, where the two groups of Janko Kos, located at Jožef Stefan Institute and KRKA and of Tamara Lah at National Institute of Biology are focused on the clinical and basic aspects of cysteine cathepsins and their inhibitors in cancer. Genomic and genetic alteration at the initiation and progression of cancer are also studied in the groups of Damjan Glavač at the Institute of Pathology of the Medical Faculty. Oncogene and anti-oncogenes (tumour suppresser genes) are activated during tumour progression and their correlation to clinical progression is studied mainly in the group of Radovan Komel, head of the Medical Center for Molecular Biology and Institute of Biochemistry at Medical Faculty. Closer collaboration with clinicians may lead to the new agents used gene therapy of cancer patients. In this session, we even had a guest scientist from Wuhan University of China, Yipeng Qi, who reported on new apoptotic genes. Other diseases, such are asthma, osteoporosis, polycystic kidney disease and cystic fibrosis, immune diseases and diabetes have been studied in collaboration between institutes and university laboratories and the Clinical Centre in Ljubljana. In animals, studies on diseases such as dermatophytosis and mycrosporosis were reported from the Veterinary Faculty. In addition, many new genetic modifications of existing drugs and toxins were discussed during all the sessions, which may improve the therapeutic protocols in many other diseases. New methods for determining biological toxicity were also presented.

The sessions on *Biomembranes and Signal Transduction*, chaired by Marina Dermastia, Matjaž Zorko, Anthony Trewavas and Gerard Lambeau, focused mainly on plant and human cell systems of intracellular Ca mediating signal transduction, the mechanisms of phospholipases and eqionatoxin interaction with membranes and signal transduction.

Last, but not least in importance were the two workshops on *Education in biochemistry*. The first, moderated by Metka Renko, Ana Plemenitaš and Roger Pain, dealt with new concepts of teaching biochemistry within life sciences and in medical education which were discussed by our guests from British Biochemical Society and by the heads of Biochemistry studies at our Faculties. Interdisciplinary teaching in medicine and teaching in the contexts of science biochemistry and biotechnology were discussed in depth, and common problems, such as overloading of teachers were aired. In the *Round Table on Slovenian Terminology in Biochemistry*, Slovene biochemists voted for having Slovene terminology instead of accepting English words. The strategy for reaching general agreement and for publication, as well

as fund-raising for an English-Slovene dictionary was elaborated. We agreed that we need the Slovenian terminology in biochemistry, not only for teaching, but also for communicating with the public and media in order to gain general public acceptance and recognition of our scientific achievements.

Primož Pipan in Uroš Košir

MEDNARODNI DELOVNI TABOR V SEČOVELJSKIH SOLINAH

V drugi polovici meseca julija je na območju naravnega rezervata Stare soline v Fontaniggah, v krajinskem parku Sečoveljske soline, v organizaciji Društva za prostovoljno delo MOST, Študentskega kluba Domžale ter Pomorskega muzeja Sergej Mašera iz Pirana prvič potekal mednarodni etnološko renovacijski delovni tabor SOLINE - SALTPANS. V solinarsko hišo, v kateri ni nihče prebival že več kot trideset let, so se vrnili stanovalci. Šest prostovoljcev iz Španije, Nizozemske, Češke, Italije in Slovenije, ki nas je združila ideja o "drugačnem" preživljanju prostega časa, smo v njej za dva tedna našli svoj novi dom. Obnavljali smo solni fond, ki je v lasti muzeja solinarstva, in solinarju Rinaldu pomagali pri pobiranju in spravilu soli. Solinam smo tako za kratek čas znova vdihnili življenjski utrip, kakršnega so tu poznali dolga stoletja, v času po drugi svetovni vojni pa je zaradi spremembe v načinu življenja utonil v pozabo.

V poznem popoldanskem soncu z okna solinarske hiše tiho odmeva melodija Doorsov, pomešana z vonjem po pečenih jajčevcih. Lucka in Jurriaan s palotom jemljeta solinsko blato z dna jarka, napolnjenega z vodo, ga spustita na vrh trikotnega nasipa in pogladita, tako da za njima ostaja geometrično popolnoma ravna linija, ki bo v nekaj dneh, ko se bo blato posušilo in strdilo, postala obnovljen nasip ob evaporacijskih bazenih. Uroš z lopato oblikuje robni odtočni žleb v bodočih kristalizacijskih bazenih in utrjuje nasipe med njimi, pri tem pa stalno ponavlja, da je blato presuho in ga zato ni moč tako lahko oblikovati kot prejšnji dan, ko je bilo ravno prav mokro. Jaz pa tečem po fotoaparat, kajti tega posnetka zares nočem zamuditi. Ko se vrnem nazaj, se preostali trije že smejijo na ves glas, komaj zadržujejo solze in s prsti kažejo na Ester. Naša najstarejša prostovoljka je namreč lovila ravnotežje v dobrem metru globoki fossi, napolnjeni z vodo, v katero je pomotoma zašla med iskanjem ravno prav mokrega blata za popravilo nasipov. Čof! "Aiuto, aiuto, aiutate mi!" In že je v vodi, vsa mokra in blatna. Jaz fotografiram, drugi pa ji ponujajo roke in jo nekako poskušajo spraviti ven na suho. Sledilo je še nekaj padcev v motno mlakužo, nazadnje pa smo jo le uspešno potegnili na suho. Na koncu te zahtevne operacije smo tudi mi prav tako blatni kot ona, in ker je sonce že zares nizko, soglasno sklenemo, da je za danes dela dovolj in da je najboljše, da se gremo umit v morje. Kot naročeno takrat Roger ugasne radio in z okna zavpije: "Come on, dinner is ready!" Da, za danes smo delo končali.

SCI - Service Civil International je mednarodna nevladna organizacija s sedežem v Antwerpnu, katere glavna dejavnost je propagiranje mednarodnega prostovoljnega dela. Že od svoje ustanovitve leta 1920 se ukvarja z organizacijo mednarodnih delovnih taborov. Ti so zasnovani tako, da prostovoljke in prostovoljci iz različnih držav skupaj živijo in delajo na določenem projektu. To pa jim daje priložnost, da vzpostavijo mnoge mednarodne stike ter s tem pomagajo podreti umetno postavljene ovire in predsodke med narodi, kar pripomore k boljšemu razumevanju navad drugačnih kultur ter izboljšanju strpnosti do njih.

Večina taborov poteka v poletnem času, v povprečju trajajo dva tedna, sporazumevalni jezik je ponavadi angleščina, teme projektov pa so različne; ekološke, renovacijske, delo z mladostniki... Udeleženci morajo plačati participacijo za tabor in potne stroške, v zameno za delo, ki ga opravljajo, pa dobijo namestitev, prehrano in zavarovanje v času trajanja tabora. Vsako leto nacionalne podružnice SCI organizirajo okoli 1000 mednarodnih delovnih taborov, ki jih vodijo lokalni koordinatorji in se jih udeleži več tisoč prostovoljk in prostovoljcev z vsega sveta.

Potencialne udeleženke in udeleženci iz Slovenije se na mednarodne delovne tabore lahko prijavijo na Društvu za prostovoljno delo MOST (Breg 12, 1000 Ljubljana, tel. 061 125-80-67), ki od 1991 na območju Slovenije zastopa SCI. V letu 1999 je pod njegovim varstvom v Sloveniji potekalo štirinajst mednarodnih delovnih taborov; eden med njimi tudi v Sečoveljskih solinah.

V solinah smo se le redko ravnali po urinih kazalcih. Vedeli smo le, da moramo začeti delati med osmo in deveto uro dopoldne, v preostalem delu dneva pa smo se ravnali glede na vročino. Dežurni je vstal pred drugimi in pripravil zajtrk, nato pa smo se lotili dela na solnem fondu. Na začetku tabora, ko sol še ni kristalizirala, smo obnavljali nasipe velikih evaporacijskih bazenov. Nekako do kolen bosi smo stali v bližnjih jarkih in z lopati podobnim orodjem, imenovanim paloto, iz njih jemali solinsko blato, ga razporejali po nasipih in oblikovali v ravne proge. Kasneje, ko je sol že kristalizirala, je solinar Rinaldo, medtem ko smo zajtrkovali, pograbil ves dnevni pridelek soli na kupčke, mi pa smo jo potem s samokolnicami zvozili v skladišče. Med enajsto in dvanajsto, ko je bilo sonce že bliže zenitu, nas je vročina pregnala v naše domovanje. Na urniku je bilo kosilo, po njem pa zaslužena "siesta", ki je uradno trajala vse do tedaj, ko je prenehala popoldanska vro-