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### Տեղեկագիր Արցախի «Առողջ Ապրելակերպ եւ Կեանքի Ոճ» Ծրագրի

2003-ի գարնան ուրախ առիթը ունեցաւ ծանօթանալու Փրոֆ. Յակոբ Փանոսեանին, Խաղաղական ովկեանոսի ակիմ ճաշարանի մը մէջ: Մտքերու փոխանակում կատարեցինք Հայրենիքի կարիքներուն՝ ներկայ քաղաքական, տնտեսական, եւ ժողովուրդի նիւթական վիճակին մասին, ինչպէս նաեւ ժողովուրդի առողջապահական եւ ընկերային կացութեան մասին: Փրոֆ. Փանոսեան ներկայացուց ինծի ԱՐՓԱ Հիմնարկի «Առողջ Ապրելակերպ եւ կեանքի Ոճ» (ԱԱԿՈ) ծրագիրը եւ Հայաստանի Հանրապետութեան (ՀՀ) մէջ իրենց տարած կարեւոր աշխատանքները: Պրոֆ. Փանոսեան տեղեկացուց թէ արդէն ՀՀ տարբեր Մարզերու մէջ 61 դպրոցներէն աւելի քան 10,000 աշակերտներ մասնակցած են ԱԱԿՈ դասին, եւ որ հարցախոյզներու արդիւնքները ցոյց կուտան անոր օգտակարութիւնն ու կարեւորութիւնը: Ամփոփապէս յանձն առի ԱԱԿՈ ծրագիրը տարածել Արցախի դպրոցներուն մէջ:

2004-ի Մայիսին երբ վերադարձայ Հայրենիք, Ստեփանակերտի մէջ տեսակցութիւն ունեցայ Նախագահ Արզաղի Դուկասեանի, Վարչապետ Անուշավան Դանիելեանի, կրթութեան եւ Գիտութեան Նախարար Արմէն Սարգսեանի եւ առողջապահութեան նախարար Զոյա Լազարեանի հետ եւ ներկայացուցի Արցախի դպրոցներուն մէջ ԱՐՓԱ Հիմնարկի ԱԱԿՈ ծրագիրը դասաւանդելու գաղափարը: Բոլորն ալ մեծ խանդավառութեամբ ընդունեցին առաջարկս եւ գրաւոր արտօնութիւն տուին զայն կիրառելու Արցախի դպրոցներուն մէջ:

Հետ-այսու՝ Երեւանի մէջ խորհրդակցութիւններ ունեցայ ԱՐՓԱ-ի Փոխ Նախագահ՝ Սերոբ Տէր Պողոսեանի եւ Վարչութեան անդամ՝ Տօթթ. Մատլէն Թաշճեանի հետ: Որոշեցինք 2004-2005 ուսումնական տարեշրջանէն սկսեալ գործադրել ԱԱԿՈ դասընթացքը Ստեփանակերտի եւ Ծուշիի դպրոցներուն մէջ:

2004-ի Սեպտեմբեր 27-ին Ստեփանակերտի Նայիրի Հիրանցիի սրահին մէջ նախապատրաստման սեմինար կազմակերպեցինք մայրաքաղաքի եւ Ծուշիի բոլոր դպրոցներու տնօրէններուն եւ կենսաբանութեան ուսուցիչներուն համար: Սեմինարը առաջնորդեց Տիկ. Լուսինէ Ալլոյան՝ ԱՐՓԱ Հիմնարկի ԱԱԿՈ ծրագրի Պատասխանատու Գործավարը: Ներկայ էր նաեւ Կրթութեան եւ Գիտութեան Փոխ Նախարար Պրոֆ. Ա. Ասրյան: Սեմինարի աւարտին բոլոր ուսուցիչները փորձի քննութիւն անցուցին: Այդ երեկոյեան բոլոր ներկաները մասնակցեցան Ճաշկերպութեան խրախմանքի եւ երգ ու պարով ու մեծ խանդավառութեամբ սկիզբը դրուեցաւ ԱԱԿՈ ծրագրի դասաւանդմանը Արցախի մէջ:

Դասընթացքներուն հետեւելու եւ արդիւնքները արժեւորելու համար կինս՝ Ալիսը եւ ես մասնակցեցանք Ստեփանակերտի թիւ մէկ դպրոցի դասընթացքներուն: Նեկայ էին Դպրոցի տնօրէն՝ Տ. Դադայան եւ ութերորդ դասարաններու կենսաբան ուսուցիչներ Տ. Զափյան, Լ. Սարգսյան, Է. Հովհաննիսյան եւ Ֆիզմաթ Դպրոցի տնօրէն՝ Վ. Գաբրիէլյան: Բոլոր դասարաններու մէջ աշակերտները մեծ ուշադրութեամբ եւ հետաքրքրութեամբ կը հետեւէին

#### Editorial

A new law on restricting the sale, consumption and use of tobacco products in the Republic of Armenia (RA) was in force on March 2, 2005. It prohibits smoking in any public transport system, and in all cultural, educational and health institutions. The National Assembly of RA passed the law after it was twice rejected by the lawmakers, some of whom are the biggest cigarette producers and importers in RA. The same parliament also ratified the European Union's Framework Convention on Tobacco control (FCTC). One of the requirements of FCTC is to implement the rule of the World Health Organization that requires warning labels on cigarette packs. The latter part of the law will become mandatory in 2008 and cigarette advertising will be outlawed by 2010.

According to recent statistics more than 70 percent of men in RA are smokers, a higher percentage than any country in Europe. The number of women and especially teenage smokers has registered an increase in recent years, as has the production and import of cigarettes in RA. According to official figures, around 1.7 billion cigarettes were imported into RA in 2004.

Recent efforts to reduce tobacco use and the exposure to environmental tobacco smoke in Armenia are encouraging. These efforts will hopefully be fruitful. For, it is well known that if smoking does not start during adolescence, it is unlikely ever to occur. It is also known that the probability of cessation among adults is inversely related to age at initiation. Even infrequent experimental smoking in adolescence significantly increases the risk of adult smoking. Once smoking has begun, cessation is difficult and smoking is likely to be a long-term addiction. The duration of smoking is 16 and 20 years for 50% of the smokers. Hence, prevention on the onset of adolescent smoking is an essential component of efforts to reduce smoking and its attendant morbidity and mortality in Armenia. The often cited most important factors contributing to smoking are: age, gender, ethnicity and acculturation, living arrangements, family size and structure, parental socioeconomic status, spending money and employment status, and rural/urban residence. Stress and the associated distress or depression could also be important factors in the initiation of smoking. Other factors that have been consistently associated with smoking are self-esteem and personal health concerns. Smoking among adolescents typically rise with increasing age and grade level in school. Adolescents who begin smoking at a younger age are more likely to become regular smokers and less likely to quit smoking. Individuals who adopt a healthy lifestyle and understand its implications tend to stay away from smoking, drinking and other addictions. Young people in Armenia are virtually unaware of the health risks of the use of tobacco and alcohol. ARPA Institute is proud to have initiated the Health Education and Lifestyle program (HELP) in 1998. The health risks in smoking, excessive drinking, substance and drug abuse,

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դասընթացներուն: Յանախ մանրամասն հարցումներով անոնք կը թափանցէին նիւթին խորերը:

Տարուան ընթացքին շատ ծնողներ մեր կաթնամթերքի գործարանի գրասենեակը կը զանգահարէին իրենց շնորհակալութիւնը յայտնելու այս շատ կարեւոր դասընթացը հովանավորելու համար: Դպրոցներ այցելութեան ժամանակ, ուսուցիչներ կը պատմէին թէ ինչպէս շատ մը ծնողներ կը գովէին ԱԱԿՈ-ի կարեւորութիւնը, մատնանշելով իրենց զաւակներուն վրայ ունեցած դրական ազդեցութիւնը: Ուրիշներ ալ թէ ինչպէս իրենց զաւակները կը խնդրէին հայրերէն որ ծխելը դադարեցնեն, յիշելով որ ան վնաս է ոչ միայն ծխողին, այլ նաեւ շուրջիններուն, եւ ամբողջ ընտանիքի անդամներուն: Այսպէս անոնք կը տեղեկացնէին թէ ինչպէս աշակերտներ կը ջանան համոզել իրենց ծնողները որ ծխելը եւ ոգելից ըմպելիներու յաճախակի գործածութիւնը կը վնասէ թէ նիւթապէս եւ թէ բարոյապէս, ամբողջ ընտանիքի խաղաղ եւ բարուր կենակցութեան վրայ:

Երեկոյ մը Ստեփանակերտի զբոսայգիին մէջ խումբ մը պատանիներ կը ծխէին: Մտտեցանք իրենց եւ կիսա, Ալիսը, ամենափոքրին հարցուց անունը, տարիքը, որ դպրոցը յաճախելը եւ առած դասերն ու նիշերը: Ալիսը մտերմօրէն եւ գուրգուրանքով բացատրեց որ ծնողքին տեղ Պարտական է բարի խրատ տալ իրենց: Մօտ կէս ժամ մանրամասն բացատրեց ծխելու վնասները իրենց առողջութեան, դասերուն, յառաջադիմութեան եւ կեանքի մէջ յաջողութեան: Ալիսը համոզեց պատանիները որ եթէ բոլորն ալ նետեն իրենց ծխախոտները, երկրորդ հանդիպելուս նուէրներ պիտի տանք իրենց: Բոլորն ալ նետեցին իրենց ծխախոտները եւ նույնիսկ ծխախոտի տուփերը կոխկրտեցին: Այս դէպքէն ետք շատ անգամներ հանդիպեցանք այդ տղաներուն եւ անոնք հպարտութեամբ կը յայտնէին որ ալ բնաւ չեն ծխեր:

Օգոստոսին Ջերմուկի մօտ լճակի մը կողքը հինգ պատանիներ նստած կը ծխէին: Մօտեցանք իրենց եւ Ալիսը կրկին մօր մը հոգատարութեամբ, իրենց մանրամասն բացատրեց ծխելու վատառողջ հետեւանքները: Անոնք մէկ առ մէկ ծխելը դադարեցուցին: Յաջորդ օրը տղաքը նշմարելով մեզ վազեցին մեր մօտ ըսելու որ այդ մեր խօսակցութենէն իվեր ծխելը դադարեցուցած էին եւ ցոյց տուին թէ իսկապէս ծխախոտ ալ չունին: Երեսնի մէջ ալ ամէն անգամ երբ առիթը ներկայանար, ըլլայ Օփերայի սպասման դահլիճը, թատրոններու մուտքին եւ կամ խանութներուն մէջ, երբ կը տեսնէինք ծխող Պատանիներ, մօտենալով կը ջանալինք իրենց բացատրել ծխելու անմիջական եւ յետագայի վնասները: Սերմանողն ալ երբ ցորենի հատիկները հողին մէջ կը նետէ անոնց մեծ մասը կը բեղմնատրուին: Սակայն եթէ քարքարոտ տեղ իյնան ապարդիւն կը մնան: Այսպէս, եթէ հարիւր հոգիէն տասը փրկենք ծխախոտի ատերիչ լուծէն, մեծ օգտակարութիւն է մեր ժողովուրդին համար:

Համոզուած ենք որ ԱՐՓԱ Հիմնարկի ԱԱԿՈ ծրագիրը նույնպէս մեծ յաջողութեամբ պիտի պատկուի Արցախի մէջ եւս: Պէտք է շարունակել եւ ծաւալել ԱՐՓԱ Հիմնարկի այս շատ կարեւոր եւ օգտակար աշխատանքները: Վստահ ենք որ մեր ներդրումը դրական ազդեցութիւն կ'ունենայ Արցախի պատանիներուն վրայ: Յաջողութիւն կը մտայնենք այս ձեռնարկին եւ բոլոր ԱՐՓԱ-ի ձեռնարկներուն:

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**Lectures/Seminars:**

**1. An Advanced Miniature Gas Chromatograph-Mass Spectrometer System for Air and Water Quality Measurements in Long Duration Human Flight, by Dr. Ara Chutjian**

Any space mission involving extended astronaut travel time must have an accompanying system for monitoring the quality of the onboard air and water. The system must not only meet the detection criteria for undesirable species, at the detection limits set by NASA and the National Academy of Sciences; but must also meet generic requirements, such as having low mass, volume, and power; requiring minimal astronaut involvement, and having minimal need for consumables. The criteria for acceptable air and water contamination levels was reviewed. Some of the engineering physics involved in a new, second-generation, miniature gas chromatograph-mass spectrometer being proposed for the International Space Station was discussed. The GCMS operation, with comparisons to methods currently in use aboard the ISS was given. **This work was carried out at JPL/Caltech, and was supported through contract with NASA.**

**2. Armenia 2020: Visions of a Nation, By Dr. Noubar Afeyan**

The lecture covered scenario planning as well as socioeconomic research conducted by Armenia 2020 relating to the future prospects of Armenia. Established in 2002, Armenia 2020 is an organized network of individuals working to build a shared vision and a prosperous future for Armenia. Participants include Armenians from around the world, both in Armenia and in the Diaspora, supported by other action-oriented professionals, researchers, experts and problem-solvers dedicated to understanding and shaping Armenia’s future. Armenia, a small country of 3 million people, gained independence from the Soviet Union in 1991, but faces persistent poverty despite a highly educated and accomplished population and a sizable, wealthy and compassionate Diaspora. This project is part of an ongoing effort to build a shared vision among Armenians both in Armenia and in the Diaspora, focused on creating successful Armenian companies and attractive jobs as well as a shared strategy in which Government, private sector and the Diaspora work together to realize their potential. The lecture presented research into attitudes and mental models among Armenians, research on productivity and competitiveness within Armenia's economic sectors, four alternative development scenarios and projected ideas to spur transformation.

*Continued on page 4*

unhealthy diets as well as the benefits of healthy diets, exercise and a positive attitude in life have been taught to over 10,000 adolescent students in RA during the past 7 years. The Government of Armenia, the Ministry of Education and Science (MES), recently started to implement their version of health education and lifestyle in 16 schools this year and 125 schools next academic year. The Executive Director of ARPA, Hovsep Seferian, is working with the MES and the American University of Armenia (AUA) to implement and enhance this program and to develop a publicity campaign that will utilize the media, will organize public gatherings and publications to try to motivate the youth to say no to smoking and to be aware of the above mentioned health risks. A new video has been developed, with the help of Kapriel Panossian, that will air on TV during the New Year and will make the public aware about the health risks of smoking. The HELP course is being taught in 21 schools in Stepanakert and Shushi in Karabagh since last year and Mr. & Mrs. Anivian are the sponsors for the program. The Board of Directors of ARPA is grateful for their support. Their report is in this Newsletter.

We would appreciate any inputs or assistance from the readers of this Newsletter and the community at large. Please help us raise the longevity of the population of RA. The economic impact of early death due to preventable health risks is staggering. Armenia needs a great deal of help to get to a level of economic and political



**Joint Lecture & Celebration of the 90<sup>th</sup> Anniversary of “Mussa Dagh Resistance”, with the Mussa Ler Association of LA, Prof. V. Shemmassian was the Speaker.**

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**Audiences and Prof. Terzian Lecturing**

### **3. The Cosmic Ray Division (CRD) in Armenia, By A. Yeramian**

The Cosmic Ray Division (CRD) of the Alikhanian Physics Institute in Armenia is one of the world's premier centers, conducting research in high energy astrophysics and space weather forecasting. At research stations high on Mt. Aragats and in Yerevan, a staff of 100 scientists, technicians, support personnel and students conduct leading research on forecasting energetic events on the sun which can damage manmade satellites in space, disrupt communications and power stations on earth, and endanger space and air crews at high altitudes. The CRD and its scientists have earned enormous respect among their colleagues in the international scientific community, putting Armenia among the top 5 countries of the world in cosmic ray research. Recent additions to the list of their scientific collaborators include the U.S. National Oceanographic and Atmospheric Agency, the European Space Agency, and the international Committee on Space Research. CRD has a long standing partnership with Stanford University of California and with Nagoya University in Japan. The CRD has been featured in the international magazine *Science*, because of its excellence. An illustrated presentation, with beautiful pictures on the space weather effects, was made and research at CRD was explained in simple terms. Pictures of the stations, the scientists, and the World Summit Award ceremony in Geneva were part of this presentation.

### **4. Advances in Implantable Medical Device Technologies, By Dr. Varaz Shahmirian**

Implantable medical devices have been successfully used in treating several diseases such as heart failure and sudden cardiac arrest, diabetes, deafness, and neurological disorders such as Parkinson's disease. These devices include pacemakers, cochlear implants, neuro stimulators, and implantable drug delivery pumps used in pain therapy and insulin delivery. These are implanted in the body and are highly miniaturized electronics, electrical leads, wireless communication modules, electromechanical assemblies, and sophisticated algorithms. They are packaged in a fully biocompatible titanium case and operate on a custom battery for several years. The lecture was about several implantable devices and technologies.

### **5. Effects of Technology, Globalization and Entropy in Everyday Life, By Dr. Jack Hokikian**

The author's book *The Science of Disorder: Understanding the Complexity, Uncertainty, and Pollution in Our World* served as the basis of the lecture. Through the Laws of Thermodynamics, Laws of Energy and Entropy, the effects of technology, accelerated consumption of natural resources and globalization on our environment and lives was discussed. "Why our lives are becoming increasingly complicated, disordered and uncertain" and "why we have less time for ourselves, even though we are surrounded with more 'timesaving' devices than ever before" were discussed. Approaches and methods were provided on how to attain a philosophy of life that can guide daily actions and decisions.

### **6. Musa Dagh Genocide Resistance In Light of New Evidence, By Dr. Vahram Shemmassian**

"Musa Dagh" is a household name among Armenians and "rings a bell" among other people. In July 1915, during the early phase of the Genocide, about 6,000 Armenian highlanders living near the biblical town of Antioch were given deportation orders by the Ottoman government. About one-third heeded the order and were exiled to the Syrian town of Hama, but the majority decided to take arms and resist.

No published study exists regarding the fate of those who were dispatched to Hama. Memoirs published in recent years and archival materials not used before were cited to shed new light on certain aspects of the resistance. A replica of the cross and pictures were also presented.

## **The Gyumri Blood Bank:**

Global Healing (GH), is an American charitable organization with a very successful Blood Bank project in Tbilisi, Georgia. In 2003, ARPA invited Cindy Basso Eaton, the president of GH, and Dr. Levan Availishvili, the Director of the Tbilisi blood bank, to visit and help create a second modern blood bank in Armenia. Alice Runge, the Chairperson of ARPA blood bank committee, accompanied them on two different occasions, to determine the best site of this joint venture. After thorough evaluations, the group decided on Gyumri, the Shirak region as the most suitable, which still bears the scars of the 1988 earthquake. Shirak, a region of 300,000 did not yet have an adequate blood bank facility or program. The Governor of the Region donated space in the Polyclinic II building, in central Gyumri. The remodeling was completed and the facility was officially opened on July 8, 2005. Many officials attended the affair, including well-wishers such as the Gyumri team of Medicines Sans Frontiere.

Staff training started in early July. Dr and Mrs. Chris Gresens, Miss Lillian Morton, Mr. Ron Newton as well as Mr Lee Schuller, all blood bank experts, volunteered their time and expertise to train the staff of the Gyumri blood bank. Training consisted of introduction to new procedures, new blood bank forms as well as new equipment.

Dr. Chris Gresens trained the Director of the blood bank, Dr. Armenouhie Chakhalian, on how to conduct interviews. The latest techniques in interviewing, phlebotomy, donor blood preparation, testing and storage were discussed. US blood bank forms and procedures are now in use in Gyumri, and are compliant with AABB (American Assoc of Blood Bankers) standards. Cindy Basso Eaton set up the computers and printers for the facility.

I cannot thank enough Mrs. Cindy Basso Eaton of GH, Dr. Chris Gresens and his Team, the American companies for the donated equipment and supplies, as well as individuals who donated to ARPA and GH for the Armenian blood bank project. We would like to see all blood banks in Armenian operate with international standards. In this regard, in 2000, Mrs. Rita Tilikian Hasserjian and Alice Runge organized a 3 day conference in Yerevan. Dr. Steven Kleinman, a consultant to the Canadian and American Governments in blood banking, led and Mrs. Karen Lipton, the CEO of AABB, chaired the conference. For 3 days the Armenian blood bankers interacted with Dr. Kleinman and Mrs Lipton. At the end of the conference the Armenian Blood Bank Association was created, in the hope of using the association members as inspectors of the future blood banks. Mrs. Lipton left all the AABB standards with the Armenian blood bankers, to be translated and modified for use in Armenia. The Standards have now been translated and are awaiting Government approval.

A lot remains to be done. In order for the blood banks in Armenia to operate with acceptable standards, they need basic equipment, such as refrigerators, freezers, centrifuges and other miscellaneous items. Only a few blood banks in Yerevan, such as the "Sarko Tilikian Blood Services Center" established by ARPA in 1998, operate with acceptable standards. The majority remain in great need of help.

We would like to continue our efforts in helping Armenia establish a National blood banking system that operates with international standards. Thanks to you and all the donors to the ARPA blood bank project, we are getting closer each day to our goal of ensuring the use of safe blood in Armenia to save LIVES.

Alice Runge

## **Armenia – Diaspora Scientific Collaboration: a Search for New Algorithms**

By Professor Gagik Melikyan, California State University, Northridge

This summer, as any other summer since 1998, I headed to Armenia to follow up on many scientific and business contacts, and also to travel as much as the busy work schedule would allow. An invitation to visit was kindly extended by the National Academy of Sciences, a main research-oriented institution in the country that, over the decades, has made – directly or indirectly – tremendous contribution to the wellbeing of the society. The nation has always been proud of its Academy and its scientists many of whom have risen to national prominence not only in Armenia, but also all over the Soviet Union. Since gaining independence in 1991, the changes in politics and economy in Armenia have made the life of scientists, and their families, nearly unbearable because of the inadequate financial compensation, nearly collapsed infrastructure, a lack of modern instrumentation and total neglect shown by the governmental bodies. The consequences have been the massive waves of immigration in early 90s, with a sizable slice of the population of the scientifically productive age leaving the research endeavor for better alternatives. Fortunately, until now, despite all hurdles, although downsized and partially restructured, the Academy remains mostly intact.

A closer look at the current state of affairs led me to the following conclusions. First, the Armenian scientists working in 40+ research centers of the Academy, after many years of neglect and indifference, have come to a breaking point when everybody realizes that the change is needed, and it needs to be designed, thought through and implemented in the most expeditious manner. Second, some scientists working in the headquarters of the Academy do realize that the change has to be made by the scientists themselves in order to avoid even greater damage to the very foundation of the once-proud institution. Third, the new algorithms of the interaction between the scientific community in Armenia and that in Diaspora need to be found so that a rich, and largely untapped, scientific potential of the latter would help to restructure the Academy in the most optimal way, i.e. by capitalizing on the existing strengths and traditions and by introducing the western ways of science management and organization.

I was presented with the reorganization plan that was developed by the Academy and was in the process of being discussed at various research centers throughout the academic system. I felt honored to be given an opportunity to provide an input based on my first-hand knowledge of the educational systems both in Armenia and the United States. Given the sensitivity of the matter it was quite a responsibility to advice on the matters that may affect the professional career of the large numbers of scientists and the very fate of the whole research centers. To my satisfaction, the most critical comments made on the reorganization proposal were well received by the Armenian scientists who showed genuine interest in learning about pros and cons of the American educational system and which parts of it, in my opinion, should be adopted in the course of the major restructuring and optimization.

My other accomplishment this summer has become a 30-day long marathon on writing a joint proposal with Armenian scientists. The combined competencies of both teams – Armenian biologists from the National Academy of Sciences and my laboratory at the California State University Northridge (CSUN) – will allow us to

develop a new generation of aromatase inhibitors, one of the most promising means for a breast cancer cure. *In vivo* testing of the synthetic samples on mice will be carried out in Armenia at a fraction of the cost needed for the same work to be carried out here, on the U.S. soil. The positive feature of the proposed study is that the main portion of the funds will be made available to the Armenian team to pay wages and to acquire scientific instrumentation. This kind of collaboration might become a paradigm for interaction with the research centers in Armenia. The qualified workforce is in need of some capital investment and fully capable – with some additional training and supervision provided by the U.S. scientists – of conducting costly *in vivo* studies, a full range of toxicological and pre-clinical and clinical trials.

During my previous visits to Armenia I could sense that most of the research centers in the Academy have not received any significant allocation of funds that would have allowed them to acquire the state-of-the-art instrumentation. During the 2004-2005 academic year, I worked closely with the CSUN administration to persuade them to donate the Shimadzu-made high-pressure liquid chromatograph (HPLC) to the Institute of Organic Chemistry, National Academy of Sciences of Armenia. In May 2005, the United Armenian Fund (UAF) has helped us to transfer the HPLC machine from their warehouse in the east coast to Armenia, free of charge. Provided as a humanitarian help, the instrument has not been taxed by the Armenian government further facilitating the overall transaction. Since the new instruments are not readily available to the Armenian scientists, the acquisition of the used equipment – in an excellent or good condition – from the U.S. universities and companies might to some extent remedy the situation. This algorithm might become another avenue of the interaction between the Armenian and Diaspora scientists working in the government laboratories, universities and private companies.

One of the objectives of my trip to Armenia was to find a reliable partner who could manufacture the specialty chemicals, biochemical and pharmaceutical products and intermediates. The benefit for the Armenian side would have been the creation of R&D jobs that could expand, over the time, if my company MELTECH, based in Los Angeles, could sell these products on the U.S. market. I have to admit that my previous attempts in finding business partners were not particularly encouraging mostly because of the different work ethics. It looks like this time I was able to find the professional people, with a proven record of accomplishments, who were able to provide us with unique natural products, i.e. *snake venoms*. These are complex mixtures of proteins and metalloenzymes that contain recently isolated, and tested, natural disintegrins, the promising anticancer agents. They are shown to positively affect angiogenesis and cancer cell proliferation in different types of cancer. The MELTECH is currently selling snake venom that could be used in the pharmaceutical industry for a variety of purposes, in particular for an anticancer drug development. If you are interested in acquiring this product, to help create manufacturing jobs in Armenia, please contact us at [meltech@socal.rr.com](mailto:meltech@socal.rr.com).

Overall, we had a great time in Armenia! Not only was it professionally fulfilling and motivating and enriching, and not only were we able to lay the groundwork for the future collaboration, but we also found some time to travel around the country. There is a proliferation of travel agencies in Yerevan that provide comfortable transportation and professional guides well versed in foreign languages. We touched the snow on Mount Aragatz, we enjoyed swimming in Lake Sevan, we lit candles in the wonderful centuries-old churches, we admired the uniqueness of the cross stones, and most importantly, during these tours, we enjoyed talking to Armenians, coming to the Motherland from all over the world, many of them for the first time since independence, with their kids and grandchildren, and with tears in their eyes.

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