



The iGEM Debrecen 2010 Team

Over the last few months, a group of enthusiastic students have arranged for a common goal. The aim is to take part in one of the worlds best known undergraduate competition, the iGEM. The iGEM – International Genetically Engineered Machines, is a synthetic biology design competition that takes place at MIT (Massachusetts Institute of Technology) in Boston annually, open to all academic institutes worldwide. The motto of the competition is to think beyond the limits. The 'Debrecen iGEM team' is heterogeneous group composed of members from different fields of science and different nationalities, under the supervision of Dr. Balint Balint from the Biochemistry department. This multidisciplinary team put itself an aim working extensively for representing university of Debrecen and Hungary. One of the students is Bence Daniel, who is a graduated biology and laboratory operator and currently is in the molecular biology program UDMHSC says: "My interest in science dates back to my years in high-school. Playing on the international level is attractive in some aspects to me. first, I can practice my English a great incentive of its own, second, I find it exciting being a part of a group which is diverse and has variety of cultures and nationalities. I will try to give the best for

the success of the group." Another student, Shun-Chieh Liu from Taiwan, matriculated in the Medical International English program of Debrecen University: "I am suitable for the mission because I am industrious kind of person and willing to learn new things, to cooperate and to devote myself to the iGEM project. Judging by my five years of medical background, I believe I have knowledge which will assist the team to represent Debrecen University and Hungary with great respect". Says Shun-Chieh Liu., "The first time when I heard about iGEM was during a molecular medicine lecture. I was inquisitive, I started to collect more information about this competition. With time I learned to appreciate the concept behind it, which is to use the young unbiased minds of the new generation for solving problems in a distinctive, novel manner. Generally I am very excited about the concept, this make it easier to accomplish the studies along with the work. I am expecting the summer work which will be the core of the team mission." says Katalin Sandor an ambitious 23 years old molecular biologist. Kristóf Endre Károly a medical student in UDMHSC agreeing with Katalin and adding: "I believe in continuous work and it is a great pleasure to collaborate with talented young colleagues. In my opinion

research is not only searching answers but also finding much more questions. Anyone with inquiring mind is welcome to join our team and may be of great help for the team. For me it is a great honour to represent our department and University in such a motivated program along side other talented young researchers and cooperative mentors" says Kristóf. "Moreover, I hope that our participation will be followed by others and other universities in Hungary. The team is highly motivated and fruitful yet the competition is hard, in November 2010 the teams will present their projects at the iGEM Championship Jamboree along with over 1800 participants composing about 180 teams. They will all specify, design, build, and test simple biological systems made from standard, interchangeable biological parts. Lior Malka from Israel currently fifth year student in the Medical International English program of Debrecen University saying that a global recognition for our university would be an appreciable accomplishment: "Winner prize will put the name of Debrecen beside names like Yale and Harvard, also it will encourage the university to take place in more competitions of that kind." when it come to the success Lilla Ozgyn a third year OKLDA student knows she wish: "success for me is to take part in an exciting teamwork and to carry out a project. However, for me, the working environment is very important, it is essential to have good cooperation and friendship within the team. Finally, I hope to carry out a successful project with lots of fun and fly to the Jamboree satisfied." Ophir Keret member of the team, currently sixth year Medical student in the Medical International English program of Debrecen University adding: "Successes for me would be trust and innovation. The fact that we all are pointed at the same goal will amplify our individual capabilities. This is not merely the base of a good project in my eyes, but its essence." says Ophir. "And for the future plans, as we are the first Hungarian team we wish to draw some attention. Hopefully, in the following years iGEM efforts in Debrecen will continue, perhaps hosted by different departments annually." The iGEM competition began in January of 2003 with a month-long course during MIT's Independent Activities Period (IAP). The students designed biological systems to make cells blink. This design course grew to a summer competition with 5 teams in 2004, 13 teams in 2005 - the first year that the competition grew internationally - 32 teams in 2006, 54 teams in 2007, 84 teams in 2008, and 112 teams in 2009. Projects ranged from a rainbow of pigmented bacteria, to banana and wintergreen smelling bacteria, an arsenic biosensor, Bactoblood, and

buoyant bacteria. (further read in http://ung.igem.org/Main_Page)

The supervisor of the team, Dr. Balint Balint, a senior lecturer in the department of Biochemistry and Molecular Biology, is specialized in epigenetics and nuclear receptors and coordinating the work in the Clinical Genomics Centre as head of laboratory: "I first heard about iGEM when I was contacted by Howard Wolinsky, the US correspondent of EMBO Reports and he asked me questions how I joined the "movement". He found me through about my blog (Labtutorials.org) that was promoted on a Synthetic Biology discussion forum, but I was not a member, nor a fan yet. The second time I heard about iGEM was when Malcolm Campbell from Davidson College gave a video conference for us about novel tools to teach genomics and biology in general. He stressed quite long on iGEM and what an excellent tool it is to make a change in the way we teach biology. I went to the iGEM website found some interesting interviews and the parts registry (www.partsregistry.org) then I understood that this is the LEGO of Biology, you can really do what you imagine from predesigned tools and this is really exciting." As for the expected missions Dr. Balint says "The team will have to learn new skills in administration, making decisions, manage resources using social media or building a wiki. Of course, the most important is the wet lab experience but we also have to raise the necessary funds. Since The competition itself is in Boston, flying there from Debrecen needs substantial funds we are welcoming help of any kind!" The next weeks will crucial for the team, they are working extensively. In few weeks they will have to finalize the work in the lab. As researchers aiming to explore the unknown, iGEM - UDMHSC group would like to make one thing surely known – Their University and country.

The article was written by Yakir Guri, a sixth year medical student and an editor in the university student's magazine, who is also a member of the iGEM-Debrecen team.

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