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The term biohacking is getting more and more popular these days. Original concepts of biohacking derive from the hacker ethics and are based on the idea that sharing and having access to information is a beneficial good for society. Biohacking, also known as “Do-it-yourself Biology” (DIY Bio), is a social movement that involves people who are interested in the field of life sciences, like students or any kind of individual, forming their own communities. There is no single definition of the term biohacking because different communities try to accomplish different goals. This abstract wants to give an overview about the philosophy of the biohacker community in Graz.

For us, biohacking is the idea of finding alternatives to conventional and expensive working methods used in laboratories and strives to make applied science accessible to more people. Typical biohackers are interested in life sciences and are highly motivated to work with biological material, using innovative technologies and work on their own projects, by themselves or forming an interdisciplinary team. To do that in a safe environment, some students of molecular biology founded their own laboratory in 2013, the “Open bioLab Graz Austria”, short O.L.G.A.

As an open biolab, the main focus lies on molecular biology, but the laboratory is also equipped for other fields of life sciences like microbiology, biotechnology, biochemistry, biology, organic chemistry, analytical chemistry and even genetic engineering. Everybody who is interested in doing science and creative research as a hobby, is invited to do so here. You are also welcome if you are just curious about life sciences and biohacking itself or want to connect with the biohacker community. The O.L.G.A. is part of the non-profit association “realraum” (r3), an open hacker and maker space, which is independent from other institutions and financed by membership fees and received funding. We share the same idea of a safe place, where people have access to tools and equipment. In the case of O.L.G.A., these are chemicals, reagents, glassware, lab devices, microorganisms, genes and enzymes. Also the learning, making (the “actual doing”) and talking about science and technology as a part of society is important for the open hacker space community.

Our goal is to enable free and creative research on a free time basis by providing the basic working material and a safe place to put theory into practice. We stand for an exchange of knowledge and for thinking about alternatives for expensive devices and methods used in common laboratories. We also think it is important to learn how to discuss specific topics with others, how to develop reasoned opinions based on scientific facts and how to reflect our own work. These are good qualities which we need as we bear a certain responsibility because we got the permission for genetic engineering on biosafety level 1 (BSL1) from the Austrian Federal Ministry of Health in 2014. We wanted to work with genetic material and genetically modified organisms for several reasons, first of all because they are essential tools in molecular biology. 2017 we started to work with CRISPR/Cas9 and discussed about genome editing, potentials and possible risks within the biohacker community, in a greater context (events, ORF broadcast). Another project we established this year was the basic research with Bacteriophages. We want to express our interest for raising the awareness of antibiotic resistant bacteria, with the main focus on accelerating the growing interest and acceptance, for the promising Phagetherapy, in Austrian society, politics and healthcare.

Responsible biohacking, in the mind of the biohacker community in Graz, stands for a way of thinking beyond your own level of knowledge and looking at things from different perspectives. Furthermore it stands for getting the information one needs in advance and planning to work with the minimum of risks. It is important to think about the consequences of your actions before you start your projects in order to keep things safe. Having fun with science does not mean to work on everything you can, but with everything you want. And what we want is a safe place used by society and future generations.

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