

Focus

The main goals of our Institute are

1. The development of a first rate research program in the biological sciences.
2. The development of an outstanding teaching program.
3. The development of shared research technologies available to the local research community and beyond.
4. Outreach to main public schools and open door events.

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In Christian Fankhauser's lab <http://www.unil.ch/cig/page8391_en.html> we are interested in the role of the environment on plant growth and development. More specifically we focus on plant responses to changes in their light conditions (e.g. shading by other plants). We study the plant photoreceptors and the mechanisms by which a signal transduction cascade is initiated by their light activation. Light perception leads to specific developmental responses. This is important for the plant to optimise its growth and its reproduction in reaction to environmental parameters. We perform our work with a small plant called Arabidopsis that is particularly well suited for the molecular genetic approach that we are using. We use sophisticated microscopes and LED-incubators

for our biological studies and the whole palette of molecular biology and biochemistry tools.

artist-in-lab

Sylvia Hostettler developed a project that really fits the scientific universe in which we are working. She eventually built a 'black box' in which the visitor can enter and where diverse objects were exposed. The main source of light was a window made of recycled Petri dishes, painted on the back to represent a giant stomata. Dispersed in the room, were shiny plastic objects representing undifferentiated plant tissues. The outside of the box was used to expose pictures that were inspired by Sylvia's work with the microscope and by her observations of galls.

Her overall project took into account different scientific topics, which are each embedded in one another. It covered the gene expression field by using the visual of a specialised program called Genevestigator and by creating quite astonishing homemade microarrays. The black box symbolizes the exchange between the outside and the inside (both literally and figuratively) by referring to a special plant structure: the stomata, involved in the gas exchanges during photosynthesis. The plastic shapes inside the box focus on the growth and development of plant tissues and their possible mutations in reference to calli (sort of vegetal tumours). The installation also enhances the importance of light for plants survival by playing with the different light sources. The black box was moreover a wink to our dark room where we perform all our experiments under controlled light conditions. Sylvia's own experimental manipulations are also displayed. She worked extensively



Sylvia Hostettler's art world (Photo: Laure Allenbach, 2008)



Lab world (Photo: CAOS, 2008)

with microscopy, taking images of small collages she made with parts of the plant we use to work with and parts of herself. Sylvia created her Petri window by collecting the used experimental dishes, washing them and painting them. She also tried different materials to research the undifferentiated calli and she worked in the microscope facility. Her preliminary project was presented to the scientists working in the CIG as an informal display and also on a poster during our retreat in Saas-Fee. Moreover people were freely invited to visit her in her art lab as often as they wanted.

The scientists were pleased about this new 'colleague' with whom they could experience a different universe. They were very curious about what would emerge from the interaction between Art and Science and were absolutely enthusiastic about her project. Her office was a breath of fresh air, especially when people wished to quit their benches, pipettes, computers and publications.

The artistic approach of Sylvia had some parallels with the scientific approach including hardship and perseverance. She was not stopped by the difficulties and if the idea was good she just went for it, no matter how long and repetitive it was to achieve it.

Another analogy could be that an idea brings another and so the project moves on step by step. Also she works by trials and improvements as we do.

Recommendations

The time of the residence was long enough for Sylvia to develop her project, but accomplishment takes a lot more time. From this point of view, she didn't have time to finish her project during her residence, but the public presentation of her artwork actually took place in March 2009. We were able to collect enough funds for its achievement, but could more grants be available for some expensive exhibitions that could not be covered by the host institute?

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