D1.6 Course Descriptions

Project Number: 641805
Project Acronym: NextGenVis
Project Title: Training the **Next Gen**eration of European **Vis**ual Neuroscientists for the benefit of innovation in health care and high-tech industry

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Over the course of the NGV program, four course modules were implemented and taught.

1. Business start-up

At the course Business start-up I in Maastricht an introduction into technology transfer and the way to the ESRs business plan (incl. team building and mentoring concept) was given by Nadine Schmieder-Galfe from Eurogrant, a business coach and high-tech startup entrepreneur. ESRs teamed up in groups of 3-4 people and came up with potential business ideas derived from their own research which they would further work on. Further ways to identifying the potential in one's research was given using the NABC matrix (Needs|Approach|Benefits|Competitors) and the business model canvas. ESRs were guided in practical work on the business model canvas addressing unique selling proposition (USP), customers and key partners/activities of their business ideas, and in the end presented a first version of their business models.

At the course Business start-up II in Copenhagen, ESRs presented and got feedback on their elaborated business models, which they worked on with the support of their mentors between the two workshops. Afterwards, they learned how to strategically decide between transferring their technology through licensing to an existing company or building up an own startup, and were introduced how a business plan and a business pitch look like. The teams applied the new knowledge to their own business ideas, before learning what kind of financing strategies (funding, investment) are available to enable technology transfer.

An overview of the teams is presented in the table below.

Team name	easy2read	ClassiFLY	Affective Pixels	Reperio
Description	Neuro-vision rehabilitation package	High throughput assay for cheap, fast, and accurate drug testing *in vivo*	Fully automatic analysis of emotional content from images	Affordable and portable diagnostic devices for visual disorders based on eye-tracking technology
Team leader	Joana Carvalho	Barbara Molz	Alejandro Hernández	Alessandro Grillini
Team members	Joana Carvalho Akhil Edadan Akshatha Bhat Peter de Best	Barbara Molz Marc Himmelberg Freja Gam Ostergaard Jan Kurzwawski	Robert Puźniak Khazar Ahmadi Azzurra Invernizzi	Alessandro Grillini Carmine Gnolo Stanislas Semeniuta Jelle van Dijk

Mentor	Raymond von Ee - Philips	Kenneth Vielsted Christensen - Lundbeck; Alex Wadw, UoYork	Fabian Stelzer - EyeQuant	Erhardt Barth - Pattern Recognition Company

At the workshop in Lübeck, all business ideas were pitched. Two business models won the business model competition and were awarded a 3.000 EUR and 2.000 EUR business model award: "Reperio" (Alessandro Grillini, Stas Semeniuta, Carmine Gnolo, Jelle van Dijk: mentor Erhardt Barth) and "Classifly" (Barbara Molz, Freja Gam Østergard, Jan Kurwatizkit, Marc Himmelberg, Mentor: Kenneth Vielsted Christensen), respectively. Meanwhile, "Reperio" is close to becoming an actual start-up company and to receive considerable funding.

2. Grant writing

The course Grant writing aimed at background and hand-on-experience in grant writing. It had two components: Grant Writing I focussed on the process of writing a proposal, while Grant Writing II focussed on refinement of the written proposal and well as oral presentations (piches) of the proposals. In Jerusalem, the Grant Writing was given by Professors Wade and Morland, who provided training in the relevant aspects of grant writing. The ESRs were given the task to write a grant application on a topic of their choice. They submitted their grant proposals to the course organisers, which were reviewed and scored by Wade and Morland in advance of the workshop. Each grant was then discussed in a feedback session so the strengths and weaknesses of each proposal could be shared with all ESRs. The mechanics of how proposals are judged in competitive funding climates were shared, and how writing to a non-expert audience is essential in gaining support for applications from grant review boards that usually comprise a broad range of expertise that do not align completely with the content of any single application. At the course Grant writing II in Lübeck the ESRs gave, based on their optimised proposals, grant pitches to a committee consisting of Professors Barth, Hoffmann and König and received constructive feedback.

3. Scientific Communication and Outreach

The course "Scientific Communication and Outreach" was held in York. A lecture on public speaking was given by Prof. Peter Thompson. The PhD students then followed a training to develop a video presentation about imaging for different target audiences (school children, elderly, and representatives of a pharmaceutical company). The videos, or alternatives to them,

were then delivered by the different groups and feedback was given by Prof. Thompson and Prof. Morland.

4. What's next? Career planning for fellows

The course on career planning was given during the workshop in Jerusalem "Eyes to the stars, feet on the ground". Fellows and participants were introduced with a broad view of career opportunities in neuroscience, via thorough presentations of the scientific work and development of leading neuroscientists in different career stages: Prof. Rafeal Malach (IL), Prof. Ehud Zohary (IL), Prof. Netta Levin (IL) , Prof. Sebastian Crutch (UK), Prof. Ari Green (USA), Prof. Galia Avidan (IL), Dr. Yoni Perzov (IL) and Prof. Amir Amedi (IL).

Each of the PIs in the NextGenVis network also gave reflective presentations on their career paths. This sharing of personal experience highlighted the many alternative ways in which an academic career can progress.

In addition, fellows and participants were introduced with the interface between scientific knowledge acquisition and medical practice via the presentation of the university medical center workplace, and with the interface between academy and industry via intellectual property (IP) development options.

5. Additional information

Remark on Project and time management for fellows

While promised as part of the NextGenVis curriculum, after consultation with supervisory board and fellows, it was decided that this course would show too much overlap with obligatory courses already given locally. For this reason, to avoid duplication of efforts, the time planned for this module was used for expanding on the other modules.

Additional network training activity

A course in fMRI visual field mapping using mrVista has been added to the local training opportunities at the University Medical Center Groningen (UMCG). The course lasted for 4 days (15th-16th of November and 6th-7th of December).