

Project Report

Stem cells – Research and ethical aspects

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Experts in team
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Introduction:

Early in the spring semester 2011 six persons came together to form a group in the village “Stem cells studies: Research and Ethical Aspects.” (TBT 4850). The members of this group were Yonathan Aklilu Redda, Ida Marie Wold, Thea Norveel Semb, Henrik Waldal Holen, Silje Gustad Utkleiv and Knut Hildenes.

Together we decided to make a magazine. Through this medium we wanted to create awareness around stem cells. The main goal was that the magazine could be read and understood by the average person and at the same time appeal to people with interest in learning more about stem cells. The main challenge would then be to make the content easy readable, and at the same time not compromise the quality. The idea was the magazine to have the same theme as the village - “Stem Cells: Research and Ethical Aspects” – and that the content of the magazine would touch different subjects within this theme.

Our group also realized that the magazine would not create awareness if nobody got a hold of it, and therefore, we wanted to get at least one article published, preferably the whole magazine.

Why a magazine?

The group consisted of team members with background from biotechnology, computer science and media science. We thought that a magazine would be a good way to use and develop all the skills within the group. Our different backgrounds would function as a backbone for the progress and quality of the product; the biotechnology background support the quality behind the articles; the computer science background would be helpful in learning new program languages, which were to be used in the layout; and the media science background would help the group in the general making of the magazine. In addition, the magazine format would give us the opportunity to be creative and give each of us freedom in how we would solve the structure and content of the articles.

Goal

Our overall goal was to enlighten the average person about stem cells through easy readable articles in a good-looking magazine, along with comics, crosswords, a glossary and astonishing pictures. The content additional to the articles was to function as a break for the reader; after all there are a lot of new terms and knowledge the reader would have to digest. Even though the articles were to be easy to read, we wanted them to be informative with as few simplifications as possible.

To ensure that the magazine would appeal to even persons without special interest in biology, we needed to have someone to read through and point out words and sentences that could be improved or elaborated more in detail. It was therefore a major advantage that we had members without biology background in the group, so that this control could be done internally.

Action plan

In the first three weeks of the semester our group laid the foundation for the work and made an action plan.

Finish main articles:	1.Mars
Start on the layout:	1.Mars
Start on the process report:	1.Mars
Finish the magazine (ship it off to printing):	13. April
Finish the process report	13. April
Deliver the product and the reports within:	2. May

Even though the date for the submission of the project was the fourth of May, we decided on a final deadline before Easter, preferably within the final presentation on the thirteenth of April. The reason for this change was because some members would not have time to work on the magazine and reports after Easter, and we regarded it as a major advantage to be able to meet regularly at the end of the project. We also regarded it to be important to get direct feedback on our end product, so that things could be changed if needed. In addition our group thought that we would benefit from presenting our finished product at the presentation before Easter.

Our initial strategy

The decision to make a magazine was done on one of the first village days. Our group was aware of the fact that the layout of the magazine would be as important as its content. Therefore, we also decided to start on the articles right away. The articles would be the most important part of the magazine and define its magnitude and quality. Each one of our members had one main article each for which they had the full responsibility of the written content.

We understood that we did not have many weeks on finishing the project, so we agreed on finishing the main articles within a few weeks. We were to present the first draft within one week, and the others were to comment on each others work. With the initial timeline the first and second drafts of the articles were to be finished within two-three weeks. By finishing an article early, each one of our members would gain valuable experience and knowledge about stem cells and about writing an article. This knowledge and experience would benefit the group when the members read and made comments on each others articles.

Other reasons for finishing an article early were to kickstart the project and get all our members working. Also, the project accounted only for half of the grade. The initial plan was to finish our articles and the main content of the magazine by the end of February, which would give us the opportunity to mainly work on the layout of the magazine and the content of the process report after first of March.

Within the group we agreed on being ambitious and to “reach for the sky”. We figured that even if we broke our deadlines we would push each other to perform and work. Also, we thought this would make our product better than if we lowered our goals.

In the making:

When we met on the first village day we had a very limited knowledge about what stem cells are, and the surrounding ethical dilemmas. As already mentioned, each team member had the responsibility for one main article. The theme and content of the articles were discussed in the group, but ultimately left to each member to decide. The first task was to gather information and choose a theme. One of the first village days our group members attended a crash course in information seeking at the library, so we were all familiar with different search tools. The main resources we actually used in the information gathering were the pubmed library and google. They were easy to use and quite educational.

The chosen theme was then presented to the other members in the group who gave feedback and suggested ideas around the theme. Reviewing each other’s work and giving feedback was from the start a major importance to ensure the quality and progression of the project. Every Wednesday the group would be briefed about what each member had done since the last time, and the group in turn would give feedback on the work, and come with ideas. We had agreed that the Wednesdays were to be used for group work.

After the first couple of village days we realized that we had to keep each other up to date on what we were working on, and we agreed that our work were to be posted on a project group we made on It’s learning. We set a deadline to post our work by Mondays at 6pm, so everyone could review each others work. We also decided to make a short term action plan at the end of each village day. The action plan after each village day was posted on It’s learning, and we held a briefing of our progress in the beginning of each village day.

It was important for us to actually print the magazine. If no one read the magazine it would not have any impact and create awareness. Our initial thought was that we could pay for a couple of copies to distribute on campus. After getting a price estimate in the end of February we realized that without significant financial support we could not afford to print it. Luckily, the institute of biotechnology at NTNU took interest in our project and wanted to finance fifty copies. Additionally, Silje had some connections in the printing industry and got a good price proposal at Øien & Indergaard AS.

In the beginning of March our group started to learn to use Indesign and make the layout. Indesign is an acknowledged tool in the media industry, and suited our needs well. Yonathan’s computer background helped a lot here, and in the making of the layout Adobe photoshop was quite important in the work to retouch the pictures that were chosen.

When we finished the main articles we wanted to make the magazine a bit more personal and lighter. Therefore we went out to talk to real people, and made “Four about stem cells” and two

interviews. In “Four about stem cells” we asked four random persons about what they knew about stem cells, this would capture the public opinion and knowledge about stem cells. The interviews with Professor Arne Sunde and the Mormons touched both the ethical aspect and the professional aspect that we have tried to capture in the magazine. In addition we added crossword and comics to let the reader get a break from all the new expressions and knowledge he would have to digest.

A list of the main methods and resources employed in the process are presented below:

- Pubmed library
- Wikipedia
- Google
- It's learning
- Action plan
- Wordpress
- Briefing and feedback each Wednesday
- Institute of Biotechnology
- Øien & Indergaard AS (printing)
- Indesign
- Adobe photoshop

Result and summary

Thanks to the work of all of our team members the magazine is finished and fifty copies are printed. Attached to this project report you will find one copy of the printed edition. In addition, you can find an online edition of articles with the sources at this webpage; <http://stemcellswbzine.wordpress.com/>.

The magazine has 52 pages and contains eight articles, two interviews and additional comics, crosswords, four on the street and pictures. This is more than we expected. Initially we thought that the magazine would be around 32 pages. Even though this is twenty pages more than expected we feel that the quality of the magazine is not compromised and that the content holds a high standard.

The public benefit of this magazine depends on its distribution. If nobody gets a hold of a copy, the magazine will have no impact. The information in the magazine is easy accessible through the articles, interviews, comics etc. We think a lot of readers and the stem cell research community will benefit from the magazine if they are presented to it. At this point, the magazine is accessible through our webpage (<http://stemcellswbzine.wordpress.com/>), and a printed version is available at the institute of biotechnology, NTNU. We think this distribution is significant, and we are grateful that they believed in us and sponsored the fifty printed copies.

To get further publication sample articles could be distributed to different organizations with interest in stem cell awareness, this could for example "Bioteknologinemda". Since the magazine is written in English more international organizations could be interested in the magazine.

The magazine could also be improved by further revision. As of now it is a product made and corrected by students. The quality of the content could be ensured by having an expert on the field of stem cells read through and revise it. If the magazine was then approved by a recognized person in the field it would improve the chances of further publishing of the magazine.

Overall the project has been very educational for the members of the group and we are proud of our product. There is room for improvement, but with regards to the credits given for the course we think the quality of the product is more than satisfactory. The goals we had set us are reached. The magazine looks good, and the persons we have showed it to were quite impressed, and we have gotten a lot of positive feedback.