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Tips for effective poster presentations

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This editorial is a follow-up of an earlier article (E. Bulska ‘Good oral presentation of scientific work’ Anal Bioanal Chem 385:403–405) on strategies for effective oral communication. The previous discussion highlighted some of the differences in communicating results via formal written manuscripts and oral conference presentations. A scientific poster presentation is in many ways a hybrid format, sharing similarities with both journal manuscripts and research talks.

In many respects, the poster presentation is an ideal venue for the novice, providing a less intimidating entrée to conference presentations than the more formal oral presentation format. However, at many scientific meetings, particularly those with limited invitation only oral presentations, poster presentations are also valued by seasoned professionals as a mechanism to disseminate their research results and engage in scientific dialog with colleagues with similar research interests. This opportunity for extended personal dialog between the poster presenter and interested colleagues is one of the primary benefits of poster presentations.

The poster session format, in which posters are hung for viewing for several hours or several days with the author in residence for only a few hours to answer questions, means that the poster has to effectively communicate your message on its own. The first challenge in a large poster session is to attract attention to your poster. The most important factors in drawing visitors are a research topic of significant current interest, a catchy title, interesting

abstract and a visually appealing poster. Because time at a conference is limited, scientists will focus on viewing those posters that are most relevant to their own research. Therefore, in planning your poster presentation think about the most exciting trends in your research area and try to capture these ideas in your title and abstract. When faced with a large group of posters, it is natural for people to be drawn to the posters that are most attractive. The following section describes what you can do to create a poster that will attract viewers and hold their attention long enough to learn about your research.

Poster organization

The first step in creating your poster is to review the instructions for authors to determine the space allotted for your presentation. Depending on the venue, this can vary from 3×3 feet to 8×4 feet. Obviously you want to plan your poster to make the most effective use of the space you will have. The poster can be set up to flow in one of two ways, by rows or columns. Although both schemes can work, in a crowded poster session organization of the poster in columns will allow viewers to read each column, gradually moving left to right.

Your poster should be organized in a manner similar to that of a written manuscript, in sections that include an introduction, experimental details, results and discussion, conclusions, references and acknowledgements. As space permits, you may want to include your submitted abstract at the beginning of your poster. A brief introduction (one or two paragraphs) will place your research into a larger scientific context. The introduction should explain your goals and objectives and convey why your work is important. An experimental or materials and methods section generally follows the introduction and is similarly brief. This section should present only information required for the reader to appreciate and understand your research. Unlike a journal manuscript, it is not necessary that the experimental section of a poster presentation convey information sufficient to allow someone to repeat

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your work. The results and discussion section is the main focus of your poster presentation, and you should organize the results so that a clear story emerges. The text of this section should guide the reader through the figures and tables, explaining how the results were obtained and why they are significant. Number your figures and tables and refer to them in order in the accompanying text. A succinct caption should describe each figure. A viewer may not have the time to read your poster from start to finish, but may instead focus solely on the figures and their captions, so these should stand alone. Significant conclusions can be summarized in the brief conclusions section. While space does not permit exhaustive referencing, you may wish to include a few of the most pertinent references to your work. In selecting the references, it is wise to consider citing authors who are likely to be in attendance at the meeting where you will be presenting your poster. The acknowledgements section should thank the funding sources that enabled your research and acknowledge collaborators and others – for example, members of your research group, who assisted you in your research.

Prior to generating the final, conference-ready version of your poster, you may wish to solicit criticism from members of your research group and other friends in your department. A mock poster session is a great way to find typos and get feedback about the poster organization and the clarity of the figures and text. It can also help you to prepare for discussion of your poster by practicing explaining your research and answering questions.

Creating a visually appealing poster

Because you will be competing with all of the other poster presenters for the attention of viewers, it is important that your poster is eye-catching. There are two common poster formats. The traditional format for poster presentations involves printing the poster on individual pages of “normal” size (A4 or 8.5×11 inch) paper and backing these individual pages with a border of colored paper. Large single sheet posters are becoming more common. They are attractive and are easier to create and hang, but are more cumbersome to transport. Whichever format you use, it is a good idea to display your title as a banner in large print across the full width of your poster to attract viewers.

Although pictures look best printed on glossy photographic paper, a matt-coated paper is the safest choice for your poster as you have no control over the venue and may find your poster opposite a sun-lit window. While color

increases the visual appeal of your poster, it is a good idea to keep the color scheme simple. Choose a single background color to add contrast to text, figures and tables. For text, black print on a white background is preferred for readability. Use a simple font with a size sufficient for the poster to be read at a distance of a meter. This typically means 24 pt. font as a minimum, with a larger font for section headings.

Once your interesting title and eye-catching layout have drawn viewers to your poster, you want them to stay for several minutes and learn about your research. Effective figures provide the opportunity for you to interest the viewer and communicate your research results. Compared with a printed manuscript, a poster presentation has more figures and less text. Like your text, the figures should be sufficiently large that they can be read from a distance of 1 m. Consider the use of color to make your figures more attractive and easier to understand. For example, instead of using different symbols to distinguish lines choose different colors. You should also consider using pictures to illustrate aspects of your experiments. For example, the individual steps in a procedure – such as complex sample preparation schemes like extractions or digestions – can be effectively illustrated with a few photos.

Preparing for discussion

The best feature of poster presentations is the chance for in-depth discussion of a research area. As an author, you will be expected to “stand guard” at your poster during an assigned period determined by the conference organizers. Chances are that you will have a range of visitors. Some will have read your poster ahead of time and will arrive with specific questions. Other viewers, however, will appear ill-prepared and may ask you to “walk them through the poster”. You should respond by providing a succinct overview of your experiments and findings, referring to your poster figures. It is a good idea to bring with you single page versions of your poster that you can distribute to interested viewers. This will remind them about your work, even after they have left the meeting and may even lead to new collaborations. Similarly, you should take advantage of the chance to network with people who visit your poster by providing them with a business card containing your contact information. The final advice is to have fun, enjoy meeting new people and discussing your research and be sure to visit other posters at the meeting, especially those closely related to your own research.

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