

Instructions for Abstract Preparation

An abstract for an oral or a poster presentation must include the following:

1. The **title** for your poster or oral presentation.
2. The name of the **author(s)** and their affiliation information.
The names of the author and coauthors are listed below the title. A consistent format should be used, preferably given name, middle initial (if any), and surname. The name of the presenting author should be in bold and marked with an asterisk (*). The names of the institution(s) where the work was performed should be listed after the author and coauthor names. If the coauthors are not all at the same institution or department, the institutional affiliation of each author should be indicated by numbering the institution names, and placing those numbers as superscripts after the appropriate author names.
3. The **abstract text**. Please note that the abstract should be **300 words or less** in length. An abstract layout example is shown below (Dr. Cavagnero served as plenary speaker at GRASP NMR 2012).

Sensitivity Enhancement in Biomolecular NMR by Laser-driven Approaches

Silvia Cavagnero*, Jung Ho Lee and Ashok Sekhar, Department of Chemistry, University of Wisconsin-Madison, Madison, WI

Despite its unmatched resolving power, NMR is an intrinsically insensitive technique. This limitation often precludes the application of magnetic resonance to a variety of biomolecular systems where concentration is either intrinsically low or needs to be kept low to avoid aggregation. This lecture will describe how the unprecedented large signal-to-noise enhancements arising from photo-chemically induced dynamic nuclear polarization (photo-CIDNP) in solution can be exploited to improve NMR sensitivity in the context of heteronuclear correlation spectroscopy. Resonances of both side-chain and backbone CH pairs can be enhanced in the context of free amino acids, polypeptides and proteins. Both theory and applications to the structural biology of protein folding will be described. Prolonged highpower laser pulsing during photo-CIDNP may damage the molecules of interest and reduce the effective concentration of the light-absorbing photosensitizer. This lecture will also introduce a novel trienzyme system developed in our lab to significantly overcome this challenge.

Poster Session

Abstracts will be accepted through Wednesday, October 9, 2019 for the Student/Postdoctoral award competitions and to be considered for oral presentation, and through Thursday, November 12, 2019 for inclusion in the GRASP NMR 2019 program and the poster session. Posters can be accepted on site to be included in the poster session if reviewed and then approved by a GRASP NMR organizing committee member. Poster presentations can be posted beginning at 8:00 a.m. on Friday, November 22, 2019 and are scheduled to remain on the boards until the end of the poster session at 7:30 p.m. that evening. All materials should be removed by 7:30 p.m. Friday, November 22. Any material remaining after that time will be held until Noon on Saturday, November 23, at the Registration Desk in the School of Pharmacy Atrium before being discarded.

Poster boards, binder clips and push pins will be located in the Atrium on the second floor of the School of Pharmacy Building, 2010 Becker Dr. on the KU west campus. Each poster board is 36" x 48." *If a larger size is needed, please contact us (swakefield@ku.edu) before the symposium to ensure a larger poster board is available.* Authors must be in attendance at their posters during the times indicated in the final program.