

ICG PRESS INFORMATION

March 2012

ICG roadmap workshop on glasses for pharmaceutical applications

....ICG invited experts from the glass and pharmaceutical industries to Berlin to discuss their future R&D needs

"Unbreakable and chemically resistant glass especially developed for pharmaceutical applications" was identified as an ideal goal for the future by one of the participants of the ICG roadmap workshop which took place on March 12, 2012 in Berlin. Experts on glass surfaces and pharmaceuticals met for one day to develop their initial thoughts on a roadmap for future R&D in that field, it being perceived as one of the most important future glass applications. The invited experts came mainly from industry and had a broad range of competencies. This expert workshop continued a series of meetings organized by the ICG since 2008 on the "hot spots" in glass R&D; results from the previous meetings have been published recently in a booklet "MAKING GLASS BETTER": An ICG roadmap with a 25 year Glass R&D horizon" edited by Klaus Bange and Marion Weissenberger-Eibl.

To initiate and stimulate the discussion, each expert had a time slot of one hour, split into a 30 minute presentation followed by 30 minutes for discussion. The speakers were asked to include in their presentations clear but provocative statements of the types of activities that will be essential in their field. In particular a series of questions were formulated that included: "What result would be presented as an exceptional success between now and 2025?", "What are the future key challenges (till 2025) in this specific field of expertise?", "What topic is expected to become a real bottleneck for future developments?" and "What would be the key breakthrough and when is it likely to occur?"

The meeting started with an overview of "Glass as primary packaging material: current issues, a personal perspective", given by Georg Rössling, President of the PDA (Parenteral Drug Association) Europe. He presented an introduction to that field based on over 20 years experience and described the *status quo* from the perspective of the pharmaceutical industry. In the next talk the "Future needs for glass in the pharmaceutical industry: an end user's perspective" were described by Ronald G. Iacocca; in particular he addressed the future efforts needed to improve the properties of the glass itself.

The position of the glass converting industry was presented in different talks. Presentations on "How can we meet customer expectations on glass containers for pharmaceutical packaging?" by Volker Rupertus and "New topics in a pharmaceutical glass conversion facility" by Daniele Zuccato illustrated two facets of the various activities in the glass industry. The presentation on "Glass-drug interactions. Overview on delamination: its root cause, early prediction and future perspectives" by Emanuel

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Guadagnino described the current scientific understanding of the interactions with the glass interface. More production relevant aspects were discussed in the talk “Surface modification and production process improvement to address future market requirement”, by Bruno Reuter. The last contribution was entitled “Case studies – glass container closure systems and interactions with formulations”, in which Wigand Weirich summarized the key learnings from the application of glasses from different sources.

In the closing discussion, the main results obtained during the day were summarized and the time frame needed to research adequately the different topics was considered. Better understanding of the interaction of the glass surface with pharmaceutical products, including delamination phenomena, adsorption effects and the influence of big molecules, was seen as short term projects (2015). Topics such as the variability of glass quality, extractable and leachable metal ions, and lubricants, were also seen as solvable in this timeframe. Longer term themes (2020) were considered to be: the fragility of glass which creates problems in handling and device usage, transport and also particle contamination but the effect of silicon oil and the de-activation of large molecules.

To initiate greater exchange between the glass and pharmaceutical communities, Volker Rupertus, member of the CTC of the ICG presented the main results of the workshop the next day at the PDA Parenteral Packaging Conference, which also took place in Berlin, Germany, but on 13 and 14 March 2012. An additional outcome of the workshop was that the participants recommended the ICG to create a TC on glasses for pharmacy.

Pictures: No

About the International Commission on Glass (ICG)

ICG is a non-profit international GLASS SOCIETY consisting of 37 national organizations in glass science and technology. The aim of ICG is to promote cooperation between glass experts. ICG organizes [Technical Committee](#) (TC) work (laboratory round robins, publication of scientific and technical papers). ICG organizes the International Congress on Glass every three years. (For more information: www.icglass.org)

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