Minutes of the

7th MIRAGE Meeting

Sapporo, Japan

22 and 23 August 2016

by

René Ranzinger and Carsten Kettner

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Participants

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Absent, unfortunately

- Sanjay Agravat, Emory University, Atlanta, GA, USA

- Catherine Costello, Boston University, USA

- Anne Dell, Imperial College London, UK

- Stuart Haslam, Imperial College London, UK

- Daniel Kolarich, MPI for Colloids and Surfaces, Potsdam, Germany

- Yan Liu, Imperial College London, UK

- Milos Novotny, Indiana University, Bloomington, IN, USA

- Ryan McBride, The Scripps Research Institute, La Jolla, CA, USA

- James Paulson, The Scripps Research Institute, La Jolla, CA, USA

- Miguel Rojas, Gothenburg University, Sweden

- Pauline Rudd, NIBRT, Dublin, Ireland

- David Smith, Emory University, Atlanta, GA, USA

- Michael Tiemeyer, University of Georgia, Athens, GA, USA

- Lance Wells, University of Georgia, Athens, GA, USA

- William S. York, University of Georgia, Athens, GA, USA

- Joseph Zaia, Boston University, USA

Program

Monday, 22 August

9.00   Welcome and Opening, Objectives of the meeting, Approval of the agenda
Carsten Kettner

9.30
- Reconciliation of the milestone list as negotiated in Galway
- Summary of the vendor contacts
- Summary of the Journal contacts
- Review of the status of guidelines-in-progress

Report and Discussion

Carsten Kettner

10.30   CE Guidelines

Report and Discussion

Erdmann Rapp

11.30   Bioinformatics: Data exchange formats for MS data

Report and Discussion

Matthew Campbell and Kiyoko Aoki-Kinoshita

12.30   Lunch

13.30   Strategies for Improving the Usability of the MS-Guidelines

Introduction, building break-out groups, break out meetings

Carsten Kettner

Strategies for Improving the Usability of the MS Guidelines

Reports from the Rapporteurs and Discussion

Carsten Kettner and René Ranzinger

17.00   Conclusions and Close

Carsten Kettner

17.30   Group Dinner at Sapporo Beergarden

Tuesday, 23 August

9.00   Opening

Carsten Kettner

9.30   Reconsideration of yesterday's outcomes

Strategies for Promoting Guidelines

Introduction, building break-out groups, break out meetings

Carsten Kettner

12.30   Lunch

13.30   Strategies for Promoting Guidelines

Reports from the Rapporteurs and Discussion

Carsten Kettner, René Ranzinger

15.00   Outlook for the following 10 months

Plans and Milestones (e.g., working packages, next meeting, guidelines for additional techniques, etc.)

René Ranzinger

17.00   Conclusions and Close

Carsten Kettner

Results

Report last years activities

- MIRAGE is at biosHaring.org
- DOI registered for existing guidelines, allows citation and tracking of use

  Sample Prep. Guidelines   doi:10.3762/mirage.1

  MS Reporting Guidelines   doi:10.3762/mirage.2

  Glycan Microarray Guidelines   doi:10.3762/mirage.3

- Array guidelines are close to finished and paper is in preparation
- Sample preparation is done and paper is in press
- Several talks on MIRAGE
  - ACS meeting (Carsten)
  - SFG meeting (Dave)

Status CE guidelines

- work with Matthew and Daniel on the common parts
- review of the changes suggested during the meeting

Status LC guidelines

- Currently working on the manuscript
- Integrate latest changes
- Done in the end of the year

Status BioInformatics

- Slides
- Will work on reviewing the MS guidelines
  - Collect a bunch of high quality papers in a google document
  - Use this to review the guidelines for minimum information
  - Share the results with the none present MS experts
- {https://docs.google.com/spreadsheets/d/1BoFVSySi2xXfUIYhWY_WySAkolT3eQy4m0M6L7lY7Q4/edit#gid=605389204 List of meta data] terms that need ontologies

Making MS guidelines more useable

The MIRAGE MS Guidelines is a document of more than 13 pages. Thus, it is rather questionable whether such guidelines gain broad acceptance by the community. Not least because of violating one of the major principles, i.e. practicability apart from sufficiency. Therefore, there are strong needs to make the MS guidelines useable for the community unless the machine-stored data are available and accessible.

The major question was:
- What do we aim at? (understanding or reproducibility)
- Three options:
    (1) Evaluate the guidelines with current papers and see what authors accept minimum
    (2) Have generic and detailed guidelines
        - Level 1 (Understanding): generic such as sample prep
        - Level 2 (Reproducibility): detailed as MS guidelines
    (3) Improve the guidelines as they are

Strategy: We need generic MS guidelines to have get them accepted by journals

Discussion and Todos:
- (Khoo): to have a web version that takes my meta data and makes a PDF
- (Khoo+Niclas): The data part (outcome) of the MS guidelines is very complex and not doable manually - we need software support, which needs help from the instrument vendors
- Split the MS guidelines in the meta data part and the results/annnotation part
- keep the meta data part as minimum, have Excel or google stuff templates for people to fill ⋯⟩ Kiyoko will work on this
- the annotation part - can that be separated or make it optional, (BioInformatics: different file from the meta data) ⋯⟩ optional

Promotion of Guidelines

The MIRAGE group has or is going to publish three guidelines for reporting glycan data. Although the guidelines have been made public in journals such as *Glycobiology* and *MCP* and available through the MIRAGE website (http://www.beilstein-mirage.org) there is still the demand to make the glcomics community aware of these guidelines, and, even more, to convince the community to report experimental finding in compliance with these guidelines.

This session took place to discuss about the several ways of promoting the guidelines. Please note that his is just a simple brain-storming list of potential tasks without having made final decisions on single tasks. The reason for that is that the group believed to be too small for making decisions that would affect the entire Commission.

Breakout meetings, three groups, suggestions:

- Group 1 (reporter: Nicki)
    - Glycocommunity is small, we need to reach a bigger community (Proteomics etc.)
    - Missing tools for analyzing data (similar for proteomics)
        - more data will be produced and become available if tools are there
        - missing support for tools
        - Prerequisite for acceptance of guidelines
    - Pharma may be interested in standards for glycomics for FDA
    - Pressure from Journals required

- Group 2 (reporter: Niclas)
    - Reach out to GlycoChemists, Mass spec society
    - Funding agency need to be informed about available resources (GlyTouCan, UniCarb*)
    - FAIR - if possible
    - Add in the paper: "this data was published in accordance to MIRAGE guidelines"
    - Youtube videos giving instructions on guidelines
    - Publish tutorials in PLOS One (education section)
    - Training session for students and PhDs to show them how to publish MIRAGE compliant (talk with Parastoo Azadi about training)
    - Approach "outside" journals (Carbohydrate Research, Nature)
    - Need to have a representative "face" of MIRAGE
    - Need Poster to show at every meeting
    - Create a own society (MIRAGE society) and use the fee to hire Tony Merry
    - social media presence

- Make one good paper following the guidelines + get one paper for free (supplement material + some explanations)
- Group 3 (reporter: Carsten)
  - Key is to convince the journals
  - Find ways to convince journals
    - Software support for meta data upload
    - Future, but probably not possible by Beilstein
    - Recommendation
  - Members
    - Present MIRAGE slides during their talks
  - SFG mailing list – SFG, Canadian network, Japanese society
    - Send from famous person (e.g. president of society)
  - Flyers + Posters for convergences
  - Funding agency
    - Scientific leading experts from the Commission could contact NIH people

TODOs

Harmonize guideline format