MCP Guidelines for Preparing Manuscripts Describing Research in Clinical Proteomics

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BRN Symposium Workshop: Development of Biospecimen Reporting Criteria for Publications
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NATIONAL CANCER INSTITUTE

On the Road to Molecular Medicine…

OBBR Office of Biorepositories and Biospecimen Research

…the biospecimen is the center of the universe

- **Molecular characterization of the host**
  - Disease susceptibility
  - Treatment efficacy (e.g., pharmacogenomics)
- **Molecular characterization of the disease**
  - Molecular classification of tumor
  - Characterization of tumor heterogeneity / therapeutic targets

Multiple pre-analytical variables can affect the molecular integrity of the biospecimen

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Variables (examples):

- Antibiotics
- Other drugs
- Type of anesthesia
- Duration of anesthesia
- Arterial clamp time

Time 0

Variables (examples):

- Time at room temperature
- Temperature of room
- Type of fixative
- Time in fixative
- Rate of freezing
- Size of aliquots

Patient | Medical/ Surgical Procedures | Acquisition | Handling/ Processing | Storage | Distribution | Scientific Analysis | Restocking Unused Sample

Pre-acquisition **Post-acquisition**

Biospecimen reporting for publications

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- **Why?**

  The various steps taken from the patient sampling to placement of the sample in a freezer should be considered as potential sources of artifacts in any experimental design.

  - Biospecimens may be acquired or handled differently between different experimental runs
  - Different SOPs and deviations from those SOPs may be associated with different collection sites and over different time periods
  - Storage over long time periods

- **What should be reported?**

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- **Appropriate informed consent obtained and tracked**
- **Conditions of biospecimen collection and processing**
- **Quality Assurance / Quality Control Standard Operating Procedures**
- **Information Management: Annotation, Inventory Control and Tracking**
- **Storage conditions**
- **Distribution conditions**

- ***Extent of detailed information to report?***
  - *Collection conditions?*
  - *Elapsed times between collection and stabilization?*
  - *Tube types?*
  - *etc.*

NEW: Guidelines for Preparing Manuscripts Describing Research in Clinical Proteomics

These guidelines for preparing manuscripts describing research in clinical proteomics were originally formulated by the group of experts listed below at a two day workshop held in Copenhagen, Denmark, April 24-25, 2008, that was sponsored by the American Society for Biochemistry and Molecular Biology. Following a period of public comment, several changes and alterations were incorporated by this panel. They now appear here in their final form and have been adopted by *Molecular and Cellular Proteomics* as part of their Instructions to Authors. They are meant to ultimately help standardize the presentation of findings in this very important area. As with all parts of the MCP guidelines, they are subject to continued modification as the field advances. Comments and suggestions are always welcome and should be sent to editor@mcp.asbmb.org.

Open the guidelines document

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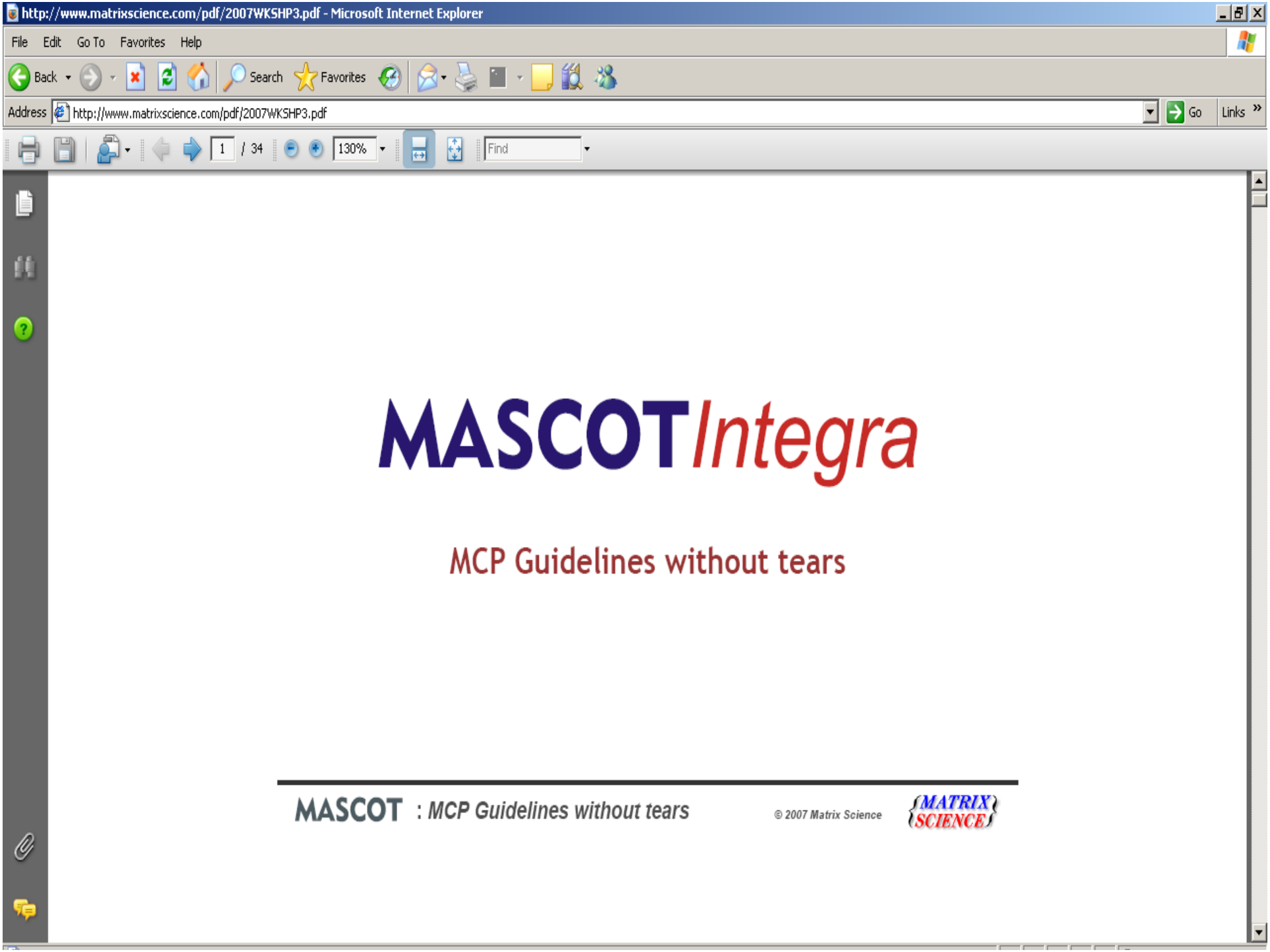
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Proteomics Team to Publish Guides Aimed At Helping Researchers Interpret Mass Spec Data

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During a National Institutes of Health workshop last week covering standards in proteomics, Steven Carr, a researcher at the Broad Institute of Harvard and MIT, outlined a series of guidelines for researchers and journals to follow when publishing papers about proteomics experiments.

Carr, an associate editor of the journal *Molecular and Cellular Proteomics*, developed the guidelines in collaboration with a group called the "Working Group on Publication Guidelines for Peptide and Protein Identification Data." The guidelines were originally published in the April 8, 2004, issue of *MCP*.

The guidelines'd authors include Carr, Ruedi Aebersold of the Federal Technical University in Switzerland; Michael Baldwin and Al Burlingame of the University of California San Francisco; Karl Clauser of Millennium Pharmaceuticals and Alexey

In this issue of ProteoMonitor

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- **PDF**

Biospecimen reporting for publications: MCP workshop April 2008: Tissue

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- **Indicate, if known/applicable:**
  - Average time to tissue acquisition and processing (initial stabilization step), and the longest time recorded
  - Type of processing, e.g. formalin, ethanol, method of freezing, embedding medium
  - Average storage temperature, and mean and longest duration of storage
  - Post-cutting fixation for frozen tissue
  - Methods of enrichment for relevant component(s) of biospecimen (e.g. micro dissection)
- **Describe any histologic review of biospecimens used in experiments.**
- **If immunohistochemical staining, or other testing, was done on tissue, indicate if pathology review was blinded and if agreement between reviewing pathologists was obtained.**
- **If known, provide information regarding shipping of biospecimens to central repository, e.g., time, temperature.**
- **Note: Supplemental (digitalized) histology may be requested by the reviewers and/or editors.**

Biospecimen reporting for publications: MCP workshop April 2008: Blood / fluids

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Reference published SOP if used – if not indicate:

- Method of collection
- Tube type (and size if known) used for collection and storage
- Additives such as anti-coagulants, preservatives, and protease inhibitors, if used
- Processing conditions including the time interval between collection and separation, centrifugation conditions, temperature of processing, collection volume, time interval between processing to freezing
- If known, provide any information regarding shipping of biospecimens to central repository, e.g. time, temperature
- Storage temperature and length of storage
- Number of freeze thaw cycles
- Indicate if there were any variations in collection and processing across biospecimen set(s)