March 2014

Dear Allison,

In this month, we continue our series on quality systems in preservation, more tips to help you maintain your equipment and run your facility properly. There is still time to sign up for the short course!

BioCoR is a national resource focused on advancing the science, technology and practice of biospecimen preservation. We are dedicated to developing biopreservation protocols, improving preservation and storage technologies, establishing standards and guidelines and training individuals and institutions in the science and technology of biopreservation.

More information can be found on the BioCoR website: www.biocor.net. Or you may contact us now at biocor@me.umn.edu.

Human resource in quality systems

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The second step in quality system essentials relates to human resources and human resources are key to the success of any operation. To maintain a quality operation, a facility must have enough staff to perform and manage all the duties expected, in the expected timeframe and to a level that protects the staff, stakeholders, any non-staff individuals involved in the process (donors) and the end user.

Before appropriate resources can be hired, a written and approved job description that is up-to-date, comprehensive and reflects required qualifications and what is expected of the individual(s) filling that position, must be on file and available to staff. Personnel expected to perform critical functions must be qualified by education, experience and/or training (as required by regulations) to perform the specified function(s). Staff must be appropriately trained to perform all processes and procedures defined in their job description; it is unfair and unsafe to expect a person to perform a function for which they have not yet been trained. The facility must have a process in place to identify all training needs and assure that training is performed and documented. Training records should be audited for accuracy and completeness on a specified schedule.

Once trained, the staff must demonstrate documented competency for all critical
functions they perform prior to performing them unsupervised. Competency must be documented and reevaluated at intervals specified in the facility’s policies and compliant with current regulatory and accreditation requirements. When competency cannot be demonstrated, the facility must take action to retrain and reassess competence or have a mechanism in place to prevent the person from performing the related procedure(s). A personnel record for each employee must be maintained by the facility. This file should contain proof of the required qualifications for the position, copies of any mandatory licenses or certifications, as well as all training records and documentation of competence. The personnel file is also a good place to maintain records of continuing education. In addition, for those staff authorized to perform critical functions, a record of names, signatures, initials and inclusive employment dates must be maintained and up-to-date.

By meeting all the above requirements, a facility should be able to operate efficiently and effectively under normal operating conditions. Succession planning and contingency planning should be a part of all resource development to handle any unanticipated events.

**Helping you keep your equipment and facilities working well**

Biorepositories tend to deal with a lot of different types of equipment: controlled rate freezers, mechanical freezers, liquid nitrogen storage units, robotic sample retrieving systems, liquid handling systems, and so forth. Understanding proper maintenance for this equipment can be difficult. The following are a listing of resources to help you.

- Temperature monitoring systems ([temp monitoring](#))
- Storing in a -150 C mechanical freezer versus liquid nitrogen ([link](#))
- Understanding your freezing curves ([freezing curves](#))
- Moving liquid nitrogen storage units ([moving units](#))
- Keeping your -80 C freezer happy and health and its expected lifespan ([Mechanical Freezer](#))

Keep in mind:

- ISBER, AABB, AATB, best practices contain a lot of information on equipment, monitoring and maintenance.
- Your equipment manufacturer should have a website or even a monthly newsletter with technical hints.
  - Sign up for the newsletter.
  - Bookmark the pages on the website with technical information.

Since the day that we started BioCoR, we have been getting emails from individuals who come in on a Monday to find out that their mechanical freezer has failed on a Friday and their samples warmed up or who find out that the storage temperature for their samples was not what they expected.

We would love it if we would **no longer** get these types of email.
Proper maintenance and monitoring of equipment prevents major headaches down the road. If you don’t, you are indicating that you are willing to lose all of the samples in a given unit.

There is still time to register for the upcoming short course!

**Registration deadline: May 5, 2014**

The course has been endorsed once again by ISBER

Preservation of Molecular, Cellular and Tissue Biospecimens
Minneapolis, MN
May 7-8, 2014

**Topics covered**

- Establishing a biobank
- Budgeting and cost recovery
- Scientific principals of preservation
- Protocol development
- Daily best practices in the collection, processing and storage of biospecimens
- Informed consent
- Stabilization of nucleic acids
- Quality control programs for biobanks
- Designing a storage facility
- Sustainable biobank processes
- Protein stabilization

**Lecturers**

- Andrew Brooks, PhD, Infinite Biologics and Rutgers University
- Marcus Cicerone, PhD, National Institutes of Standards and Technology
- Allison Hubel, PhD, University of Minnesota
- Ian Pope, PhD, CryoAssociates, Gaithersburg, MD
- Amy Skubitz, PhD, University of Minnesota

*Can’t come to Minneapolis?*
Attend the course over the web. Lectures are available to watch live or later at your convenience. A demonstration of the webcast can be found at the following [link](#).

**Quick links:**
• a listing of lectures for the course (schedule)
• Information on lecturers (speaker bios)
• Registration fees (fees)
• Online registration (registration)
• Early registration deadline is April 7, 2014. Register early and save money!

Industrial sponsorship
The short course provides opportunities at breaks for corporate sponsorship. Lunches are sponsored and a limited number of breaks are available. Sponsorship opportunities are an excellent chance to connect with course participants and provide them with information on your products or services. Information on sponsorship can be found on the website (sponsorship information). If you are interested in sponsorship, please contact us at biocor@me.umn.edu.

Groups of two or more attending the short course from the same organization receive a discount. Please contact us at biocor@me.umn.edu for more details.

Article of interest

This article describes how iPS cells were developed from frozen dural tissue. The best results were obtained from samples in which cryoprotective agents were used but cellular outgrowth was observed in 4 of the 7 samples analyzed from dura that was preserved without using cryoprotective agents. In the discussion, the authors suggested that the generation of iPS cells from frozen (without cryoprotective agents) tissue samples in biobanks is another potential use for these biospecimens.

BioCoR would like to acknowledge the support of the
University of Minnesota
Institution of Engineering in Medicine, the College of Science and Engineering and the Academic Health Center of the University of Minnesota.