August 2015

Dear (Name),

The BioCoR newsletter has taken on a slightly new look as we migrate to a new email system. Thank you for your continued readership and support!

This issue contains:

- Discussion of recent accidental warming events
- New BioCoR resources
- And more!

BioCoR is a national resource focused on advancing the science, technology and practice of preservation based at the University of Minnesota. 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.

For more information, visit our BioCoR website at www.biocor.umn.edu, or contact us at biocor@umn.edu.
Mitigating the risk of accidental warming of your samples

There have been high profile incidents in which storage units have failed. Read article: "Freezer failure at brain bank hampers autism research."

Sensors and control systems, in general, have a relatively short lifespan. When used at low temperatures, that lifespan can be even shorter. Failure of the sensor or control system can lead to accidental warming of the unit.

Mitigating the risk of accidental warming most often involves using a second independent method of detecting temperature or other metrics of function. These secondary measures should be connected to alarm/monitoring systems as well.

For liquid nitrogen storage units, common measures include:

- Manually measuring the level of liquid nitrogen in the tank
- Using a second, independent temperature measurement system to measure temperature at a given location in the tank.

For mechanical freezers, common measures include

- Using a second, independent temperature measurement system to measure temperature at a given location in the freezer
- Measuring voltage across the compressor as a measure of function.

If the sample being stored is critical/difficult to replace or if there is a high-risk location (prone to flooding, power failure, etc.), the sample should also be divided and a second sample stored at a different location.

This topic is being discussed on the BioCoR LinkedIn group. Please join the conversation.

What is new in the BioCoR resources?

We have updated two pages on our BioCoR Resources section of our website. Take a look at these updated pages:

- Resources for Biobanking - short courses, articles, protocols and more.
- Resources for Preservation of Cellular Therapies - accreditation, articles, short courses, and more.
**Ask BioCoR**

**Question:**
Do you know of a local mover that can help us move a single -80 degree C freezer and its contents safely between these two places? I've heard that there are some movers that have the capacity to keep the freezers running during the move.

**Answer:**
Moving the unit may not be the best option for you to consider. First of all, moving the contents (and not the entire unit) may give you an opportunity to discard samples that are not identified or are no longer useful.

Secondly, a -80 degree C freezer has a lifespan of 8-12 years. I would check on the age of your unit and replace it (rather than move it) if it is too old. I would replace a unit that is more than five years old. The cost of moving the unit could be rather high and it may be a wiser choice to replace.

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**BioCoR education program**

Please stay tuned for more details on two new developments in our education program:

- **Recorded lectures and course material** from Preservation of Molecular, Cellular and Tissue Biospecimens and Preservation of Cellular Therapies short courses will be made available online. Links to online registration will be coming in our fall newsletter.
- **Hands-on training in cryopreservation** is coming this fall! We have received funding for this program and will be posting information soon.

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