

I have been appointed BSO
What on earth am I supposed to do?



Annual BSO Event - Sylviane Moss - 14 May 2019



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FAITH OSIER: Step out of your comfort zone

Malaria immunologist at the Kenya Medical Research Institute–Wellcome Trust Research Programme in Kilifi.



Vitaliy Raskalov | mail@ontheroofs.com

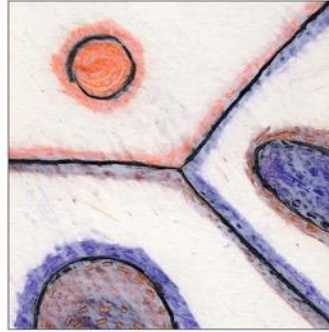


My background

- PhD in Plant Physiology
- 11 years post-doc
- Dec 2010: Lab manager at the Gurdon Institute
- Oct 2013: approached by senior core team
- Feb 2014: appointed BSO
- Oct 2014: Specialised Facilities Manager – BSO
- Jun 2017: Safety and Compliance Manager

Gurdon

INSTITUTE



“Studying development to understand disease”

- 200+ scientists
- purpose-built laboratories (2004)
- “projects ranging from breast cancer and brain development to liver regeneration and leukaemia”
- yeast, worms, fruit flies, frogs, mice, human/mammalian cell lines and organoids
- CL1 and CL2 labs, GM work, human tissues, pathogens

Biological / GM Safety Committee

- Influential chair
- Mixed levels of seniority (Group Leaders, Postdocs, Academic-related)
- Mixed levels of expertise
- Reasonable turn-over

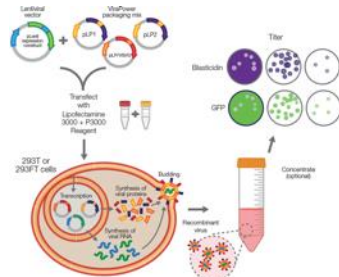
The obvious: risk assessments (GM / COSHH)

What I do is not dangerous, I don't need a risk assessment



I don't need a RA for CRISPR, everybody does CRISPR.

WPRE???



Viral Service / Lentivirus



Viral Service: Lentivirus

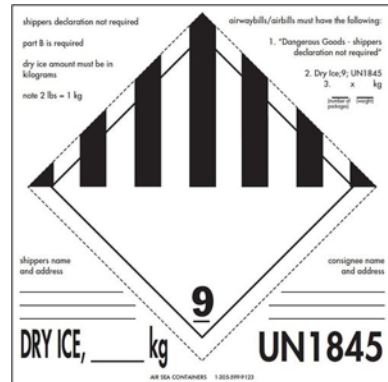
Addgene's lentiviruses are made from plasmids that are currently in our repository.

 **addgene**
The nonprofit plasmid repository

The glamorous: Waste disposal



The tedious: transport



The studios: staying on top of policies etc

“I would expect you to be familiar with the University’s Health and Safety Policy”

Genetically Modified Organisms (GMO) (Contained Use) Regulations 2014

Genetically Modified Organisms (GMO) (Deliberate Release) Regulations 2014

Control of Substances Hazardous to Health Regulations 2002

SACGM guidances

The Approved List of biological agents (ACDP)

The suspicious: containers labelled “TTX waste”

biotechne®



Date: 14th April 2016

Re: Purchase Order PR2286132

The Anti-terrorism, Crime and Security act concerns the storage and supply of the following compounds; Tetrodotoxin citrate (Cat.No.1069), Tetrodotoxin (Cat.No.1078), ω -Conotoxin MVIIC (Cat.No.1084), ω -Conotoxin GVIA (Cat.No.1085), α -Conotoxin MII (Cat.No.1340), α -Conotoxin ImI (Cat.No.3119), α -Conotoxin AulB (Cat.No.3120), α -Conotoxin PIA (Cat.No.3121), Conantokin-T (Cat.No.3122), α -Conotoxin PnIA (Cat.No.3123), α -Conotoxin EI (Cat.No.3124), Conantokin-R (Cat.No.3125), ACV 1 (Cat.No.3205) and Conantokin-G (Cat No 4136).

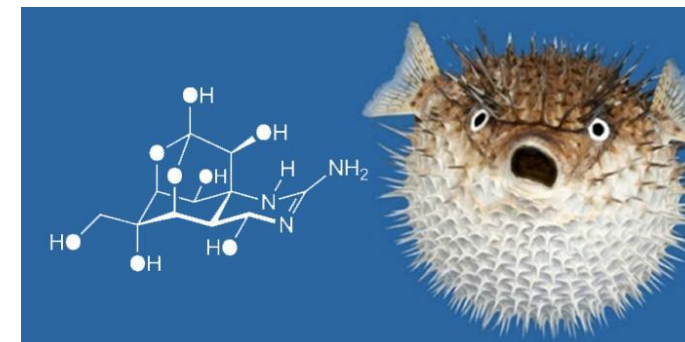
Customers who hold less than 5mg of any particular compound on site are exempt from these regulations (The security of Pathogens and Toxins (Exceptions to Dangerous Substances) regulations 2002). If your establishment is holding less than 5mg on site and are, therefore, exempt from current legislation, you are required by law to provide a signed declaration before goods can be despatched. Please complete the second page of this fax and return it to Bio-Techne. Once we have received this completed declaration we will dispatch your order.

Customers who hold in excess of 5mg of any particular compounds must contact the Home Office for additional information on current legislation and governmental requirements (pathogens@homeoffice.gsi.gov.uk). If your establishment is already registered with the Home Office and have been security vetted under the Anti-terrorism, Crime and Security act, please contact Technical Services and we will arrange for an alternative declaration to be sent.

If you have any [questions](#) please do not hesitate to contact me.

Best regards

Zoe Webb
Customer Care Team Leader



I declare that the following compound; Tetrodotoxin citrate (Cat No 1069), purchased from Bio-Techne is specifically for use in experiments related to medical research.

The experiments are to be carried out by (Name of End User): _____

At the following address: _____
Gurdon Institute
University of Cambridge
Tennis Court Road
Cambridge CB2 1QN

The amount of Tetrodotoxin citrate (Cat No 1069) at this site, at any one time will not exceed 5mg.

I certify that, to the best of my knowledge, the statements provided are true and correct.

Signed: _____

The technical: Autoclaves and Legionella

Work closely with the departmental contact responsible for pressure equipment

- “Pressure equipment must be examined under a written scheme by a competent engineer every year and this is a separate and additional safety check to any service/validation that may be carried out to ensure correct sterilisation performance.”
- “It remains **illegal for equipment to be used once it falls outside of its inspection due date.**”
- Ensure that there are suitable contingencies in place to cover waste disposal during autoclave unavailability

(SO email dated 2014)

The technical: Autoclaves and Legionella

Regularly mention Legionella to relevant people

- 1. Ensure compliance with the requirements of the Approved Code of Practice, L8;
- 2. Ensure that departmental equipment is maintained to the standard necessary for the control of *Legionella*.
- 3. Provide suitable and sufficient resources to enable compliance with the Policy document in so far as it affects equipment under their control;
- 4. Keep records of departmental equipment servicing and maintenance;
- 5. Facilitate any monitoring or inspection work;
- 6. Ensure that no modifications/alterations or additions to water systems are carried out.



(Richard Borthwick 2016)

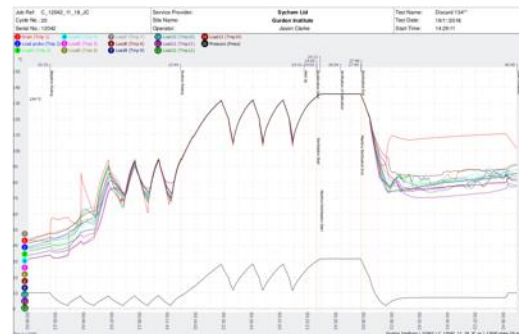
The compliant: Licenses and authorisations

- HSE notifications (CU2, CU4, CBA1)
- DEFRA – Plant pathogen nematode



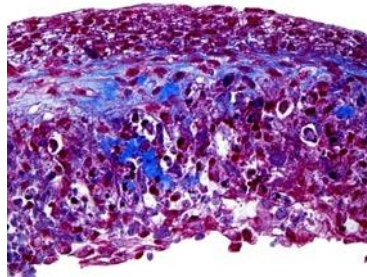
“Autoclaved - 121°C (15psi) must be maintained in the centre of the load for a minimum of 15 minutes”

“Based on the evidence you sent the new autoclave conditions are permissible”

A screenshot of an autoclave cycle log. It displays a table of parameters such as Temperature, Pressure, and Time, along with an "EVENTS LIST" section. The log is titled "Pragm DISCARD 134" and includes the name "STEELCO" at the bottom.

Occupational Health

- Work with animals (mice, fruit flies)
- Work with human tissues – Hepatitis B vaccination
 - Risk assessment while vaccination was unavailable



And all the rest

- General safety induction
- CL2 training, competency, University training courses
- Lab inspections
- Annual survey
- Attending incidents
- Local rules
- Report to the Safety Committee
- HTA, HFEA

😊 GOOD

☹ BAD

😈 UGLY





THANK
YOU