

***"I could never do your job....  
I love animals too much"***



**I think you meant to say:  
Thank you for your service**

- ❖ ***Keeping me and my loved ones healthy.***
- ❖ ***Ensuring that laboratory animals are well cared for.***
- ❖ ***Supporting development of new discoveries.***



# Compassion Fatigue and Building a Compassion Resilience Culture

Thursday, September 1<sup>st</sup>, 2022

10:00-11:30AM (PDT)



**J. Preston Van Hooser**

Review Scientist & Compliance Manager

Office of Animal Welfare, University of Washington

Co-Chair, Dare 2 Care (D2C) Compassion in Science Program

Member, UW IACUC

NWABR Board Member

# Acknowledgments

## D2C Committee Members:

Kathy Andrich  
Rita Bellanca, Vice Chair  
Chris Braunger  
Amber Fuller  
Kelly Heffernan  
Holly Nguyen, Co-Chair  
Francesca Perrotta  
Christina Pettan-Brewer  
Conner Sessions  
Sally Thompson-Iritani, Executive  
Sponsor  
Danielle Wiegel  
Melinda Young

## Past D2C Committee Members:

Yuki Aoki  
Dominic D'Urso  
Jane Elliot  
Anthony "Tony" Gray  
Sara Kerner  
Carolyn Malinowski  
Amy Martinson  
Tony Nguyen (ad hoc)  
Adeline Warsen

## University of Washington:

- Leadership
- Office of Animal Welfare
- Washington National Primate Research Center
- Department of Comparative Medicine
- Environmental Health & Safety

## Public Responsibility in Medicine and Research (PRIM&R):

Sharon Shriver      Scott Rule  
Olivia Forman      Ashley Savannah Silva

**Marian Esvelt**, University of Texas  
Southwestern Medical Center

**Teresa Flood**, R&R Research

**Ken Gordon**

**Shawn Hooper**, The Jackson Laboratory

**Anneke Keizer**, Compassion Fatigue  
Support Programs

**Bruce Kennedy**

**Cindy Pekow**, VA Puget Sound  
Healthcare System

# Webinar Objectives

After attending this webinar, you will be able to:

- Review the importance of identifying Compassion Fatigue in the laboratory animal research setting
- Strategize around developing an institutional compassion in science program
- Identify the IACUC's role in fostering healthy compassion in an animal care and use program



# Webinar Agenda

- Define compassion fatigue and the significance of the human-animal bond
- Examine compassion fatigue and its impact on the laboratory animal care and use community: animal caregivers, IACUC members, research faculty & staff, vets, vet techs, and trainers
- Evaluate stressors that promote compassion fatigue
- Develop and implement a sustainable compassion fatigue well-being program
- Addressing compassion fatigue on an institutional level, and the IACUC's role in such efforts



# Compassion Fatigue and Its Impact on the Laboratory Animal Science Community



# What is Compassion Fatigue (CF)?

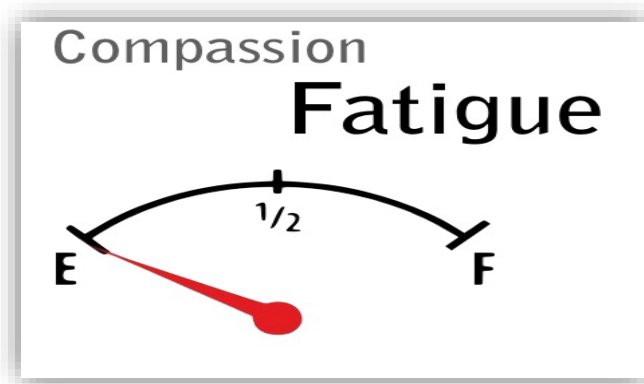


- Cumulative physical and emotional effects of providing care
- “Cost of Caring”



# What is Compassion Fatigue in the Laboratory Animal Science Community?

In an animal care setting, Compassion Fatigue is a combination of **physical, emotional** and **psychological depletion** associated with working and caring for animals and their well-being in a captive environment.



*It's the negative aspect of our work. It may be related to providing care, working with colleagues, beliefs about self, system failure, burnout and/or any work-related trauma.*

# Risk Factors

- Forms stronger bonds with animals
- Ethical or moral dilemmas
- Placing needs of others before yourself
- Lack of personal boundaries
- Poor communication
- Unresolved trauma in life



# Support Systems

- Huge risk factor – lack of support systems



# Intrusive Symptoms

- Intrusive thoughts and images
- Obsessive desire to help
- Inability to let go of work
- Feelings of inadequacy



# Arousal Symptoms

- Increased anxiety
- Increased frustration and anger
- Sleep disturbances
- Physical ailments



# Avoidance Symptoms

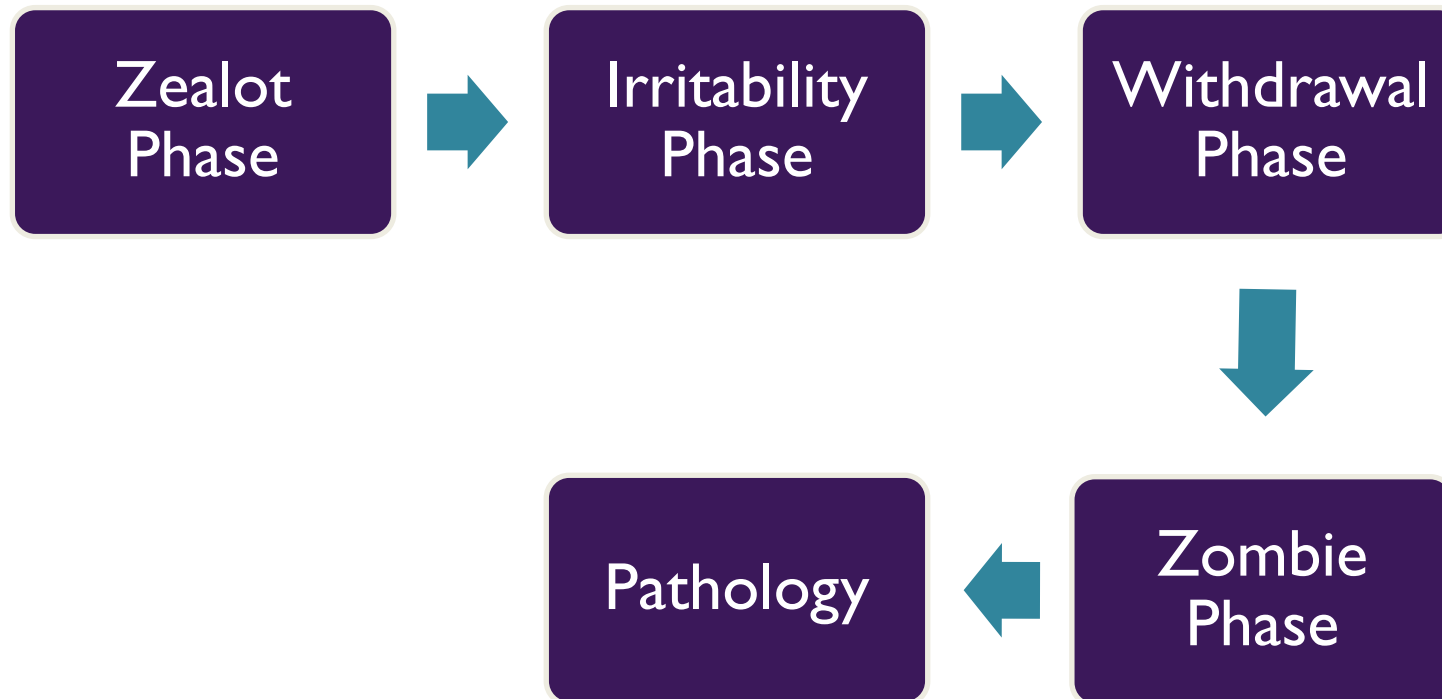
- Apathy
- Decreased energy
- Loss of sense of competence
- Isolation
- Self-medication or addiction



# Symptoms

Mental changes	Physical Changes	Behavioral Changes
Aggression, depression, anxiety	Weight loss or gain	Sleeping too much or too little
Apathy	Headaches	Increased/decreased appetite
Crying easily	GI upset/issues	Isolation
Inability to focus	Muscle tightness	Indulging
Forgetfulness	Back or neck pain	Addictive (drug use, gambling)
Irritability	Jaw pain (clenching or grinding teeth)	Increased alcohol/cigarette use
Paranoia	Exacerbation of existing ailments	Fighting/arguing

# Compassion Fatigue Trajectory

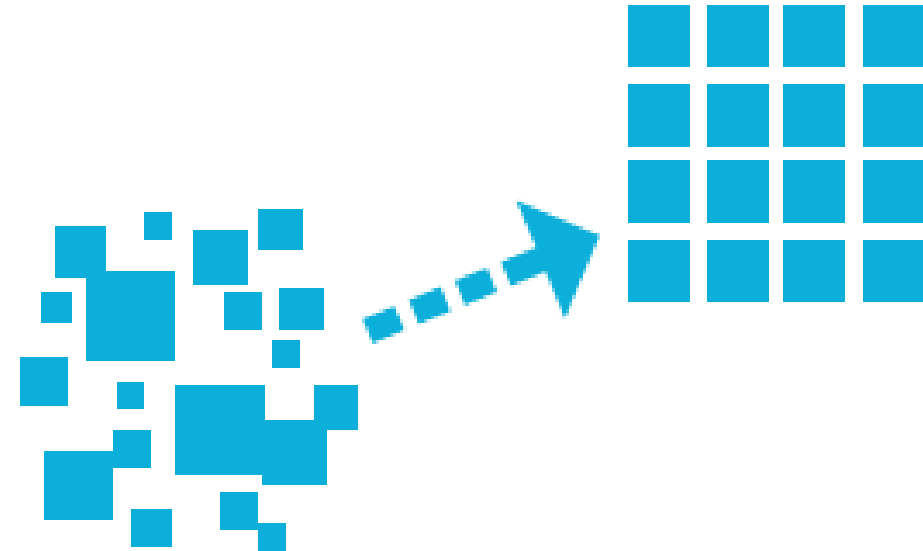


Jan Spilman, MEd, RCC



# Transformation

- Pathology & Victimization
  - Overwhelmed
  - Somatic Illness
  - Suicide\*
  - Leave the profession
- Maturation & Renewal
  - Resilience
  - Transformation



# We All (can or may) Experience It!

Not only do the individuals that work directly with the animals, but IACUC members, administrative support staff, vendors and facilities services personnel may indirectly experience compassion fatigue.

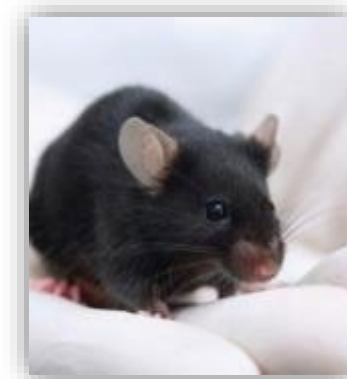


*We don't get compassion fatigue because we are weak, can't handle the work, aren't "cut out" for it, etc.  
We get compassion fatigue because we care, deeply. And we ignore our own needs.*

# The Cost of Caring

“The expectation that we can be immersed in suffering and loss daily and not be touched by it is as unrealistic as expecting to be able to walk through water without getting wet.”

(Remen, 1996)



## Compassion Fatigue: The Cost of Caring

Human emotions that lead to burnout and compassion fatigue

The human-animal bond exists in many forms. Emotional and sensory ties between humans and animals are powerful and reciprocal. Practices of gentle handling, compassion, and patience serve to build the bond between humans and animals. The development of the human-animal bond can improve animal welfare by increasing stress, enhancing a sense of safety and security, and reducing pain. Close contact with animals can create feelings of satisfaction and affection in those who care for the animals.

People in the field who experience compassion fatigue may find it difficult to maintain the same level of care and attention for their animals. This can lead to a decrease in the quality of care and a loss of interest in the animals. It is important to recognize the signs of compassion fatigue and seek help when needed.

Compassion fatigue is a state of emotional exhaustion and reduced empathy for others. It is often caused by prolonged exposure to traumatic events. People who experience compassion fatigue may find it difficult to maintain the same level of care and attention for their animals. This can lead to a decrease in the quality of care and a loss of interest in the animals. It is important to recognize the signs of compassion fatigue and seek help when needed.



<https://www.aalas.org/education/educational-resources/cost-of-caring>

# The Human-Lab Animal Bond

- The human-lab animal bond exists in many forms, and it can improve both human and animal welfare.
- Close contact with animals can create feelings of satisfaction and affection.



*“Every technician I interviewed for this study experienced some form of attachment to a laboratory animal at least once in his or her career.” ~Arnold Arluke*

# Human-Lab Animal Bond

- Animals depend on us: a contract
  - Food/water/housing/environment
  - Interaction
  - Enrichment
  - Humane treatment
- Animals seek out contact



# Human-Lab Animal Bond

- Animals have
  - Personalities
  - Distinct attributes
    - Friendly, intelligent, courageous, amusing, quirky
  - Ability to distinguish among people
- Many are long-term
  - Close, frequent contact



## We all know...

- Most research animals will be euthanized
  - Protocol needs
  - Illness
  - Unsuitable
  - Not needed



# Evaluating Stressors that Promote Compassion Fatigue







## In the mid-1990's

- When I started to work in the field of laboratory animal science, I was overwhelmed by emotions.
- Nobody told me about the feelings of
  - Guilt...
  - Sadness...
  - Regrets...

*And nobody told me (or warned me) how difficult it would be to talk about my work/research.*



<https://uwkills.wordpress.com> › facilities-and-staff › iacuc

[IACUC | UW Kills Animals](#)

J. Preston Van Hooser IACUC Review Scientist, Manager of Training Operations and Compliance Officer Phone: 206-616-8417 [jpvh@u.washington.edu](mailto:jpvh@u.washington.edu).

## Laboratory Animal Professional Roles and Triggers of CF

### Animal Caregivers

- Negative media
- Animal Rights Activists
- Long hours
- Manual labor
- Hazardous conditions
- Isolation
- Euthanasia
- Observed morbidity and mortality
- May develop animal allergies
- Self-blame
- Sadness over the loss of a particular animal
- Nothing to show for work
- Hard to talk about work

### Research Faculty and Staff

- Long hours
- Regularly witness or induce disease in animals
- Euthanasia
- Self-blame
- Isolation
- No one to talk to
- May develop animal allergies
- Desensitization
- Targeted by animal rights activists
- Hard to talk about work

### IACUC Members and Administrative Support Staff

- Protocol Reviews
- Protocol/Grant Congruency Reviews
- Post-Approval Monitoring
- Animal Numbers
- Program Size / Complexity
- System Failure
- Ethical Decisions
- Misperceptions
- Hard to talk about work

### Trainers/Training Staff

- Volume of animals euthanized for training purposes
- Workload
- Lack of discussion/support
- Mistakes (trainees)
- Failed euthanasia
- No formal program to help prepare newcomers or employees on managing CF
- Hard to talk about work

### ***Possible Results of CF***

- *Belief that no one is going to listen/care*
- *Attitude that nothing will change*
- *Low morale*
- *Poor attendance*
- *High job turnover*
- *Poor job performance*
- *Callous or uncaring attitude*
- *Belief that the work is not of value*
- *Nothing to show for it*
- *Unexpected research outcomes*
- *Negative Media/Animal Rights Activism*
- *Desensitization*

# It Affects the Entire System

- Research Staff
- Lab staff, student helpers, and volunteers
- Veterinary Staff
- Trainers
- Husbandry Staff
- IACUC, AUTS, OH&S, EH&S, Animal Purchasing
- Building Management
- Facility Services
- Vendors
- Professional Transportation Services
- Government/Company

## Research Animals

- Numerous interactions throughout its life in a laboratory
- 100's of people involved in direct interaction and/or oversight of the animals

# It is important

To provide Lab Animal Professionals (LAPs) with proper training, guidance, and care because this will also have an effect on the animals.

## Mental Health needs



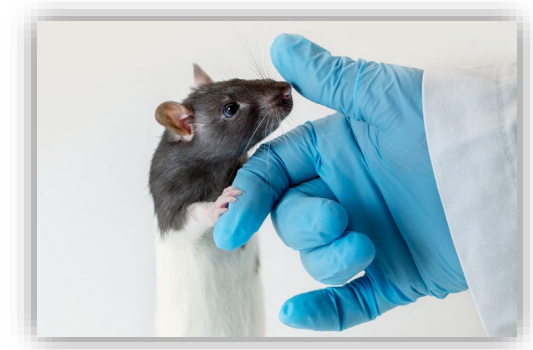
# Typical LAP Employee Training



- Bites, scratches, kicks, physical trauma
- Ergonomics, noise
- Zoonoses, allergens, blood-borne pathogens
- Caustic, infectious, radioactive, toxic agents
- Sharps, hot surfaces, physical hazards
- Public safety, facility and computer security
- Disaster plans, fire, flood, bomb threat
- Harassment, discrimination, whistleblower

# Typical Animal Use Training Courses (Online)

- Essentials for UW IACUC Members
- Animal Use Laws & Regulations Training
- Rodent User Course
- Non-Rodent User Course
- Working with Mice
- Working with Rats
- Introduction to Rodent Surgery
- Introduction to Surgery (Non-Rodent, USDA-Covered Animals)



# Animal Use Training at UW (In-person)

- Mouse Hands-on Lab
  - Rat Hands-on Lab
  - Hands-on Training for Species of than Mice and Rats
  - Certification\*
  - Lab-Managed Animal Care and Records
  - Lab-Managed Sick Rodent Recognition
  - Lab-Managed Animal Care and Records: Aquatic Animals
  - Surgery Lab Part IA
  - Surgery Lab Part IB
  - Surgery Lab Part II
  - 6<sup>th</sup> Floor Facility Orientation
  - 6<sup>th</sup> Floor Facility Behavior Room Orientation
  - T-wing Facility Orientation
  - K-wing Facility Orientation
  - Animal Research and Care Facility Orientation
  - Foege Facility Orientation
  - Harborview (HR&T) Facility Orientation
  - South Lake Union (SLU) Brotman Facility Orientation
  - South Lake Union (SLU) 3.1 Facility Orientation
  - Guthrie Facility Orientation
  - Roosevelt Facility Orientation
  - CHDD Facility Orientation
  - North Lake Diesel Facility Orientation
  - ABSL<sub>2</sub> Room Orientation
  - ABSL<sub>3</sub> Room Orientation
  - Gnotobiotic Animal Core (GNAC) Orientation
- 
- **Mental health training on emotional involvement?**



# Organizational Effects

- Decreased
  - Morale
  - Productivity
- Increased
  - Absentee rates
  - Job turn-over
  - Worker comp claims
  - Inter-departmental or team dysfunction



## How it Affects the Workplace

- Decreased compassion
- Low quality of care
- Loss of productivity
- High job turnover
- Low morale
- Poor attendance
- Poor job performance
- Increase in errors
- Callous or uncaring attitude
- Leave the profession



# Developing and Implementing a Sustainable Compassion Fatigue Well-Being Program

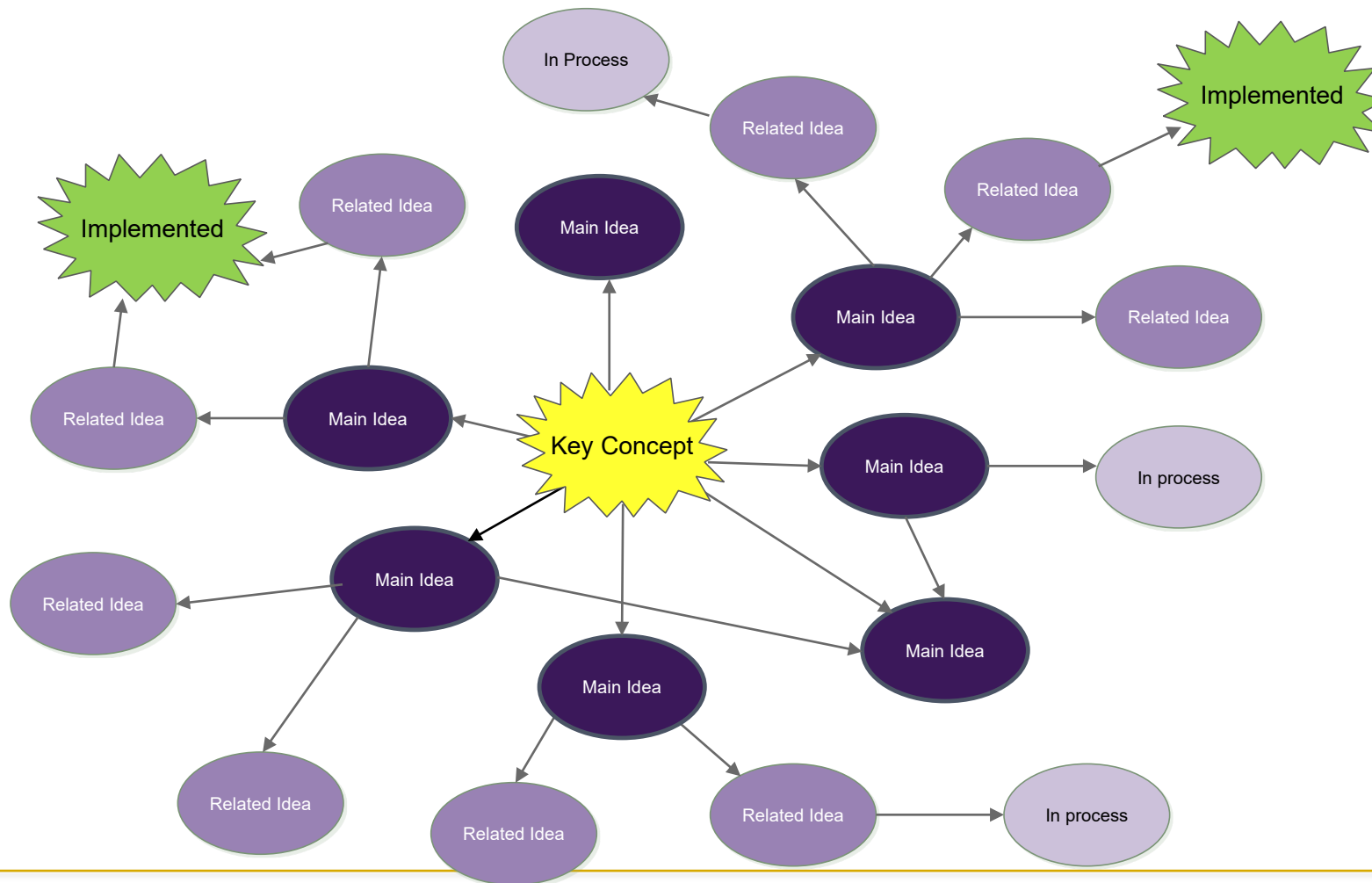


# Sharing UW's Experience: How did we get here?

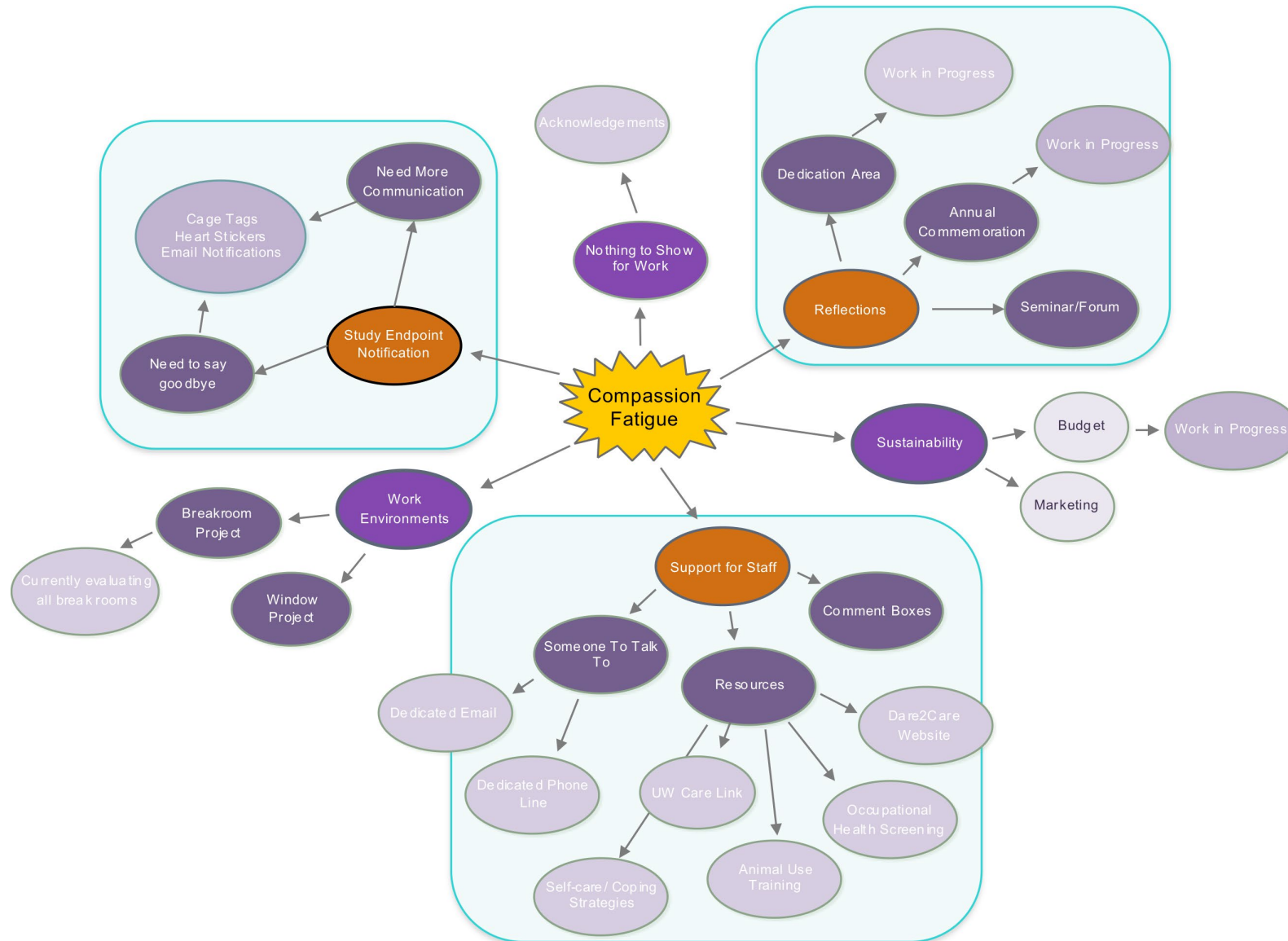
- Identify the Need
- Assess the Potential Demand
- Anneke Keizer, Founder, COPE+
  - Small company specializing in counseling services for people working with laboratory animals
- Needs Assessment (July 2016 & June 2017)
  - Interviews, one-on-one interactions, focus groups



# Example Concept Map



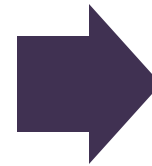
# Compassion Fatigue at UW



# Defining Moment



# Dare 2 Care (D2C) Compassion Fatigue Committee





# Developing a Compassion Fatigue Program

## Management



Those who say  
it cannot be done  
shouldn't interrupt  
the people doing it

# UW D2C Program Mission Statement

Assist all members of the research team to recognize compassion fatigue and raise awareness, provide tools, strategies and resources for managing human emotions in working with and caring for laboratory animals.



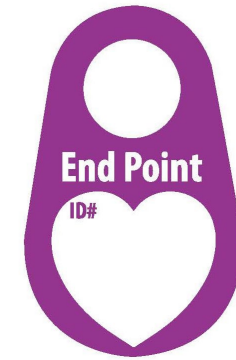
# Identify Initial Target Objectives and Other Program Related Objectives



- **Study Endpoint Notification**
- Support for Staff
- Reflections
- Recognition (Animal Caregivers)
- Work Environments/Breakroom Enhancements (Animal Caregivers)

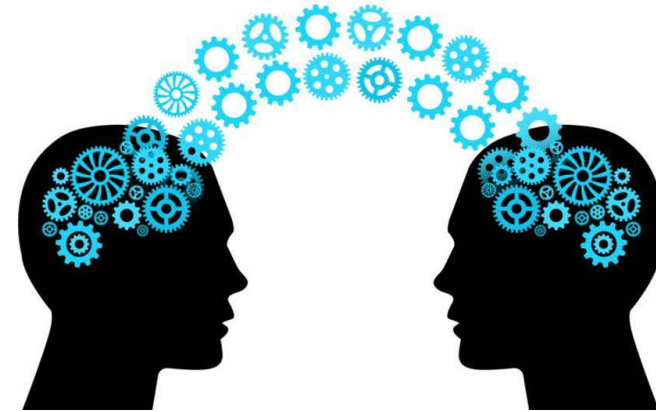
# Need to Say Goodbye

- WaNPRC CF Subcommittee formed 2017
- Heart Stickers / Cage Tags
  - Heart stickers WIP at DCM Vivaria
  - Decided not to pursue at WaNPRC



# Need More Communication

- E-mail Notification (NHP)
  - *Endpoint Distribution List*
  - *E-mail Templates*



**Acknowledge high levels of humane care**

**Acknowledge the greater purpose the animal served**

Hi everyone,

All animals in room \_\_\_\_ will reaching their endpoint soon.

Our animals are all part of a large study titled \_\_\_\_\_. We often refer to it as our \_\_\_\_ study.

This study's goal is to \_\_\_\_\_. As part of the study design, critical endpoint samples must be collected. The scientific knowledge gained in terminal tissue collections and analysis will further the understanding of targeting and eradicating viral reservoirs. In order to thoroughly investigate we will need to humanely euthanize the animals for terminal collections. The pathologist and research staff will carry out this important procedure.

We have worked with these 24 animals for a long time and they are certainly the most vocal, rowdiest group of monkeys we have encountered. Despite that, they have been a pleasure to work with. We have grown to love each of their individual personalities and will miss and remember them all. Endpoints will start \_\_\_\_ and end \_\_\_\_\_. If you would like specific endpoints for any animals please let me know.

Most everyone has had an important role in this large study. We want to thank all the people that have made this very important study successful. In particular we would like to thank the animal care staff for providing wonderful care for the animals. This is a very vocal group that loves food and treats and you can clearly tell from the animals' response that they prefer the husbandry technicians to anyone else. These animals were housed at Western and ARCF throughout their study and received excellent care. BMS did a great job ensuring the animal's behavioral needs are maintained. (They) setup the pairs which have remained stable throughout the study despite a few room changes. The clinical staff provided therapeutic support during the study and are continuing to do so in the most critical part of the study. Research support and surgery staff have also played a large role in this study. They've helped up performed \_\_\_\_ surgeries/tissue collections during the course of the study. All 24 animals have progressed through this intensive study and have had no major health issues. We thank the vet staff for keeping close watchful eye on them.

I would also like to make a special thanks to the Kiem lab research staff (particularly Erica and Kelvin) in conducting ethical and compassionate research for our non-human primate patients. This has been a long, difficult study and these animals are all still healthy and happy thanks to the dedication of the research staff making sure their needs are met.

If you would like please take some time to stop by the animal's cage prior to the dates listed above.

Best regards, \_\_\_\_\_ Lab

# Pre-Endpoint (Research) Example

Dear colleagues,

For quite some time we have been working on the \_\_\_\_\_ study titled \_\_\_\_\_  
This study investigates the interaction of \_\_\_\_\_ treatment to enhance vaccine responses against \_\_\_\_\_ infection. As part of the study design, critical endpoint samples must be collected. The scientific knowledge gained in terminal tissue collection and analysis will further the understanding on how the \_\_\_\_\_ plays important role in \_\_\_\_\_ infection. In order to thoroughly investigate this, we will need to humanely euthanize the animals for terminal collections. The pathologist and support staff will carry out this important procedure.

On behalf of the principal investigator, I would like to inform you that we have reached important study endpoints for the following animals:

##### (Animal #/ Date)

We want to thank all the people that have made this very important research study successful. In particular, we would like to thank the animal care staff for providing humane care for the animals, BMS for ensuring the animal's social and behavioral needs are met, clinical staff in providing therapeutic support during the study, research staff in conducting ethical and compassionate research for our non-human primate patients and pathology staff for ensuring the endpoint is humane.

If you would like, please take some time to visit the animal prior to the date listed above.

Best regards

\_\_\_\_\_ Team



# Post-Endpoint (Clinical) Example

Hello all,

##### was humanely euthanized yesterday afternoon due to her clinical condition,

\_\_\_\_\_.

On behalf of the veterinary staff, I would like to thank the animal care staff, veterinary technicians, research support and BMS for your care and attention to this animal during her time at the center.

Thank you,

\_\_\_\_\_, Veterinarian

## Information to Include at the bottom if desired:

You can find out more information about the D2C Compassion in Science program here: \_\_\_\_\_ including a dedicated phone line, as well as a list of personnel you can reach out to if you want to talk about the loss of a particular animal.

- Study Endpoint Notification
- **Support for Staff**
- Reflections
- Recognition (Animal Caregivers)
- Work Environments/Breakroom Enhancements (Animal Caregivers)

# Peer2Peer (P2P): Someone To Talk To



# Dedicated D2C Phone Line and Email



# UW D2C Website



## DARE 2 CARE (D2C)



One of the great challenges for laboratory animal professionals is acceptance and management of the demanding emotional effects from working with animals within the research field. The term that has been coined to describe this emotional toll is Compassion Fatigue (CF).

Compassion Fatigue is a manifestation of stress that presents as emotional, physical, and spiritual exhaustion associated with chronic exposure to stressful situations when working in the challenging environment of using animals in the research field. Laboratory animal professionals are at a high risk for CF due to the daily care they provide for research animals. Symptoms of CF range from depression, anxiety, cynicism and physical ailments to isolation, absenteeism, helplessness, substance abuse, and even suicide.

As Compassion Fatigue is a normal consequence of caring, this project of building the Dare 2 Care (D2C) Compassion in Science Program at the University of Washington has been designed to assist all members of the research team in understanding and coping with this common concern by managing the emotional challenges resulting from the care and use of laboratory animals.



### NEWS AND UPDATES

- J. Preston Van Hooser will be at the MWARR Annual IACUC Conference on April 4th at 8:15 am presenting D2C updates. Come visit DARE 2 CARE at Booth #5 for fun giveaways and to purchase our newest D2C 32 oz Nalgene bottles where 100% of proceeds are given right back to D2C!
- D2C Boxes for The Box Project are currently being placed in vivaria and other locations- all are welcome to utilize these.



Impact! October 2019

6,897 visitors | 39 countries | 491 cities

Impact! August 2022

21,967 visitors | 97 countries | 2,141 cities

<https://sites.uw.edu/d2c>



# Occupational Health (OH) Screening

- Annual Health Assessment for husbandry staff / animal users administered by UW Employee Health
- One of the first institutions to implement CF assessment as part of OH screening for Laboratory Animal Professionals



University of Washington CAMPUS HEALTH SERVICES

**UW Employee Health****ANIMAL CONTACT HEALTH QUESTIONNAIRE***Confidential*\_\_\_\_ *Initial*      *Periodic*

Name (Last, First, MI):    Employee ID Number:    Male Female  
 Job Title:    Box Number:    Work Phone:  
 Department:    Supervisor/PI:  
 Work location:    How many years have you worked in this position:  
 Email (required): Birthdate:    Today's Date:

**STATEMENT OF DECLINATION**

***IF YOU CHOOSE TO DECLINE THE MEDICAL SCREENING, SIGN BELOW AND DO NOT COMPLETE THE REST OF THE FORM.***

I, \_\_\_\_\_ (*Type or print name*), decline to participate in the Occupational Health program for animal contact workers. I realize that declining could lead to unforeseen medical concerns. I also understand that I can change my mind about participating by contacting the Employee Health Center.

**SIGNATURE:    DATE:**

**Send To: Employee Health Center, Box 354410, Office  
206-685-1026 Fax 206-221-5110**

**I. LABORATORY ANIMAL USE** *Check all boxes that apply to your work situation.*

I am working with live animals.

I do husbandry (care of animals) and/or veterinary services.

I do not work with animals, but work in an animal area.

**VI. ADDITIONAL HEALTH CONCERNS**

Yes  I have health or workplace concerns not covered by the questionnaire (**e.g. Compassion Fatigue**) that I feel may affect my occupational health and would like to discuss with the Employee Health provider.

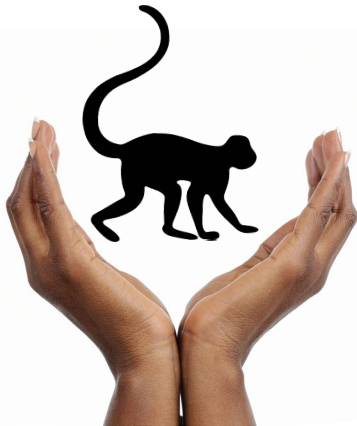
Yes  I have reproductive concerns that I would like to discuss with the Employee Health Provider

Yes  I have answered the questions truthfully and to the best of my recollection.

**VII. SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_**

## Dedication Area (In Progress)

- Physical tribute
- Peaceful retreat where staff can go to reflect



## Annual Commemoration (In Progress)

- The entire UW community can gather
- Acknowledge contributions to biomedical research and animal welfare



# Annual Commemoration / Dedication Area

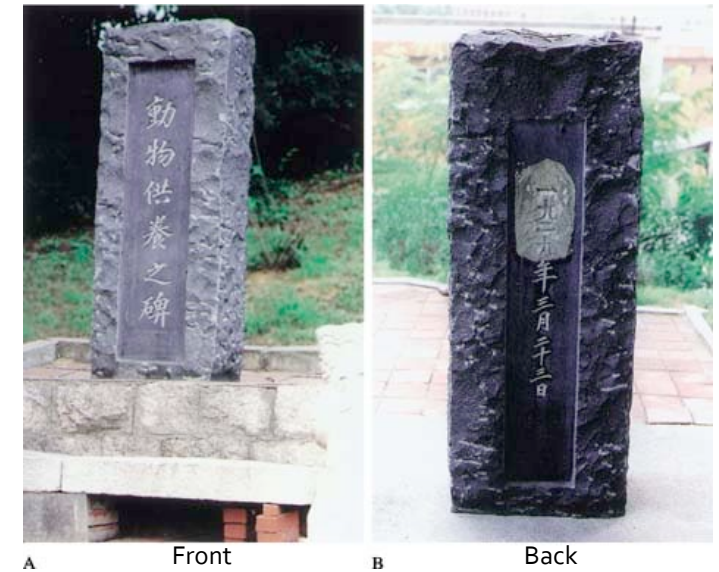


University of Rochester School of Medicine  
Bronze casting, in place since the 1920's

In tribute  
to research animals  
whose contributions have  
saved millions of human  
and animal lives and  
reduced suffering  
worldwide.

From the animal technicians,  
supervisors, managers,  
veterinarians and research  
scientists who care for  
research animals.

Merck Research Laboratories



A Front B Back

Korean FDA, Seoul  
Pagoda, site of annual ceremony

ILAR Journal V43(1) 2002, Iloff An Additional "R": Remembering the Animals

# Annual Commemoration / Dedication Area



TO ACKNOWLEDGE AND REMEMBER ALL THE ANIMALS THAT HAVE BEEN USED IN OUR RESEARCH FACILITY, FOR THEY HAVE CONTRIBUTED TO A BETTER UNDERSTANDING OF SCIENCE AND ENABLED MEDICAL ADVANCEMENT.



AND TO ACKNOWLEDGE ALL RESEARCH PERSONNEL WHO HUMANELY CARE AND USE ANIMALS; YOUR DEDICATION TO ANIMAL WELFARE AND TO SCIENCE IS ADMIRABLE.



Hospital for Special Surgery, Manhattan

# Animal Use Training (Online)

UNIVERSITY OF WASHINGTON

## Animal Use Training Program

- Home
- Contact Us
- Training Requirements
- Online Courses
- In Person Courses
- FAQs
- Forms
- Links
- Courses Material

### University of Washington: Animal Use Laws and Regulations Training: Compassion Fatigue

**Other Lessons:**

[Dropdown menu]

#### What is Compassion Fatigue?

Compassion fatigue is a form of burnout that manifests as emotional, physical, psychological and/or spiritual exhaustion. It can result when we are repeatedly exposed to emotionally challenging and stressful situations that call for our empathy and compassion towards another person or animal.

Laboratory Animal Care Professionals are at high risk for compassion fatigue due to the fact that they work with and care for the animals, and their well-being, on a daily basis for weeks, months and sometimes years, and then ultimately having to euthanize them.

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### University of Washington: Animal Use Laws and Regulations Training: Compassion Fatigue

**Other Lessons:**

[Dropdown menu]

#### Dare 2 Care

The UW's Compassion Fatigue Committee is rolling-out a new program, Dare 2 Care (D2C), to introduce the topic of Compassion Fatigue and identify symptoms and recognize, raise awareness and provide tools and strategies to help laboratory animal professionals cope and manage the emotional challenges of lab animal research. While compassion fatigue is a normal consequence of caring, we can learn ways to become more resilient and avoid becoming overwhelmed, shutdown or leaving the work/profession altogether. For more information, please visit the [UW Compassion Fatigue Program website](#).

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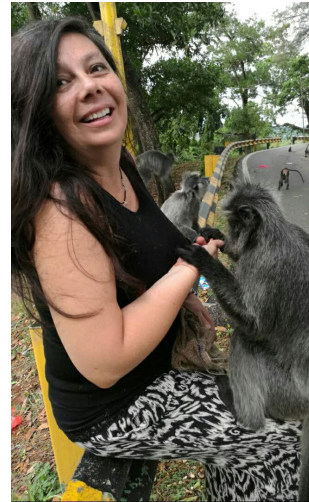
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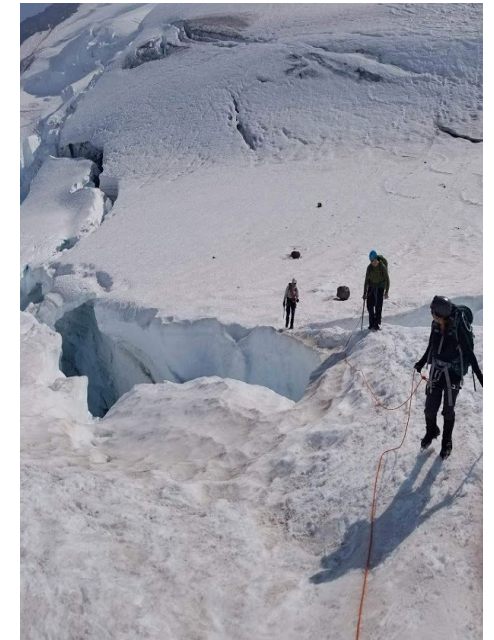
# Self-Care Strategies



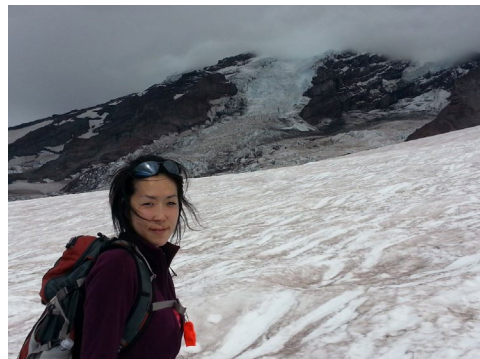
Rita & Zombie, Kayaking



Christina, volunteering  
One Health in Malaysia



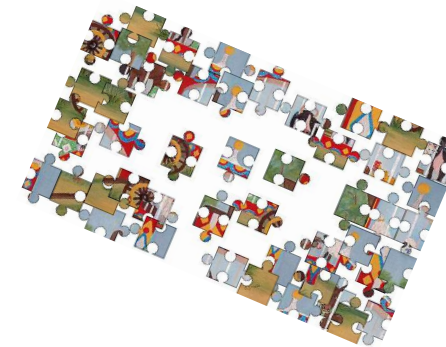
Holly, climbing Mt. Baker



Yuki, hiking to Camp Muir



Sara & Amber, at dog agility class



# Non-negotiables of Self-Care

## Eat Well



## Exercise and Fresh Air

## Rest

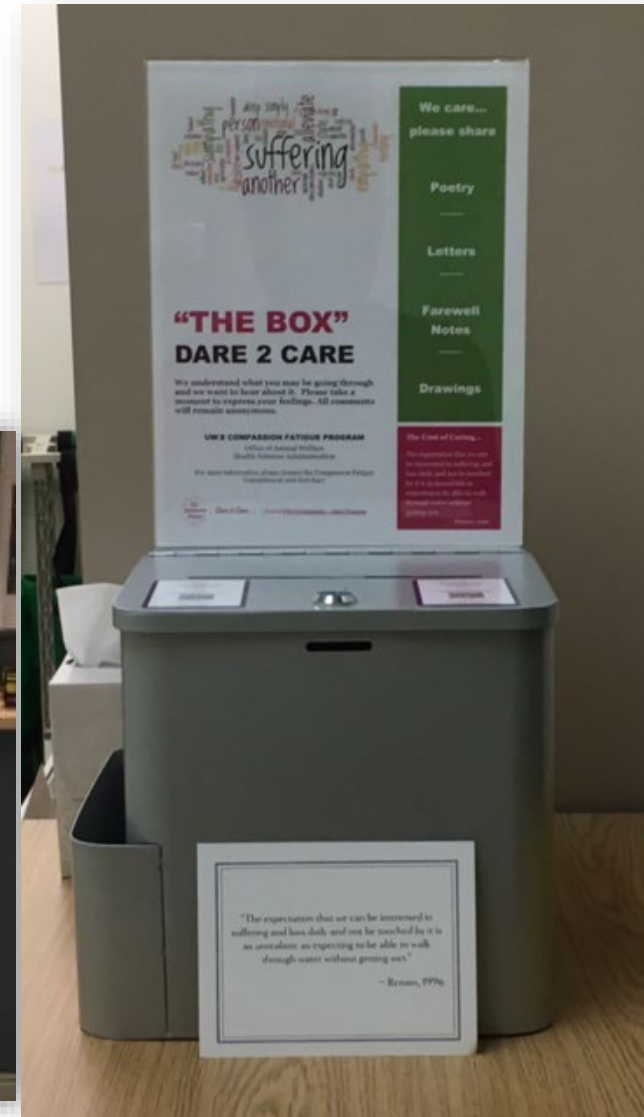
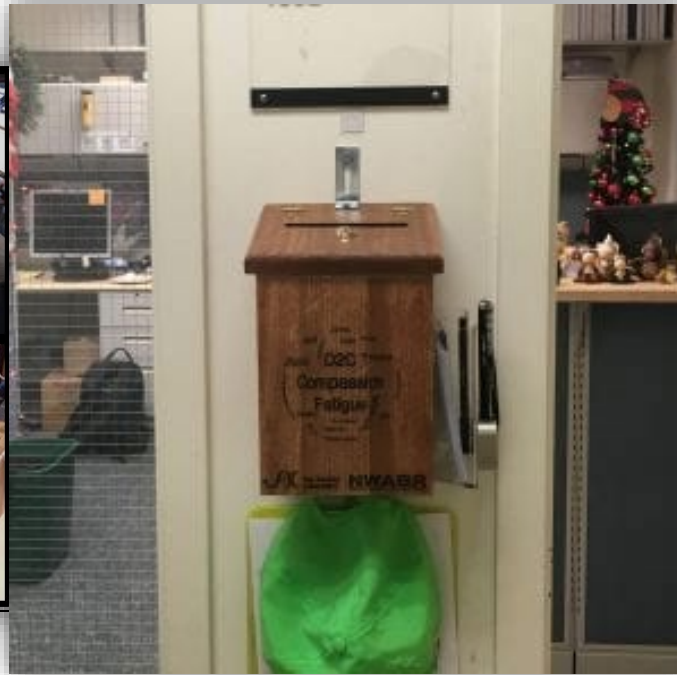


## Connect with others



## "The Box Project"

An innovative way to encourage staff to express themselves anonymously



- Study Endpoint Notification
- Support for Staff
- **Reflections**
- Recognition (Animal Caregivers)
- Work Environments/Breakroom Enhancements (Animal Caregivers)



# Reflections

- Provide an opportunity for individuals to come together in one place to pay tribute to our research animals and each other.



**Martin K. (Casey) Childers, DO, PhD**  
 Professor  
 Rehabilitation Medicine  
 University of Washington



**Paul Frase**  
 NFL Veteran  
 Co-Founder, Joshua Frase Foundation

- Guest speakers share their research and acknowledge the contributions provided by Laboratory Animal Professionals
- Open to all animal caregivers, research faculty and staff



## “REFLECTIONS” DARE 2 CARE

**A World Without Biomedical Research?  
 Why Transparency is Vitally Important!**



presented by  
**Ken Gordon**  
 Executive Director  
 Northwest Association for  
 Biomedical Research

*Please join us for the next “Reflections” hosted by the Dare 2 Care (D2C) Compassion in Science Committee and the Office of Animal Welfare (OAW). The purpose of this reflection is to provide an opportunity for individuals to come together in one place to pay tribute to our research animals and each other, and better understand the benefits of the research at our institution. We are honored to have Ken Gordon, Executive Director of MWABR, as our invited guest speaker. All are welcome!*



light refreshments will be provided

<https://sites.uw.edu/d2c>



**DATE:**  
 Tuesday,  
 October 22, 2019

---

**TIME:**  
 1:30 - 3:00 PM

---

**LOCATION:**  
 Turner Conference  
 Room  
 HSB E-202

---

**CONTACT:**  
 (206) 616-2386

**The Cost of Caring**

The expectation that we can be immersed in suffering and loss daily and not be touched by it is as unrealistic as expecting to be able to walk through water without getting wet.

- Ramen, 1996

- Study Endpoint Notification
- Support for Staff
- Reflections
- **Recognition (Animal Caregivers)**
- Work Environments/Breakroom Enhancements (Animal Caregivers)



# THE PROSTATE CANCER RAPID AUTOPSY AND DEVELOPMENT OF PATIENT-DERIVED XENOGRFT MODELS

Nguyen HM, Morrissey C, Corey E  
Department of Urology, University of Washington; Seattle, WA



## INTRODUCTION

- Prostate cancer (PCa) is the second most common malignancy diagnosed in men and led to almost 27,000 deaths in 2017 within the United States.
- PCa is widely heterogeneous with differences in mutations/genomic alterations, gene expression, sites of metastases, rate of proliferation, survival pathways, and therapeutic escape mechanisms.
- A significant limitation in the understanding of PCa, and evaluating novel therapeutic strategies is the lack of pre-clinical models that closely replicate the diversity of the disease seen in man.
- To overcome this limitation, we have established over 40 advanced PCa Patient-Derived Xenograft (PDX) lines.

## OBJECTIVES

- Rapid Autopsy Program**
  - To collect human PCa specimens (primary prostate, visceral and metastases) for investigation on advanced PCa biology.

- LuCaP PDX Series**
  - To establish and characterize PDXs of advanced PCa.

The emergence of new drug resistance is associated with altered phenotypes. Continuous collection of tissues is important to capture the biology underlying treatment responses and resistance.

PDXs provide a valuable resource to generate clinically relevant data with translational potential. PDXs demonstrate molecular features resembling patient tumors, tumor heterogeneity observed in patients, preserve tumor-microenvironment architecture, and provide clinically-relevant treatment responses.

## MATERIALS AND METHODS

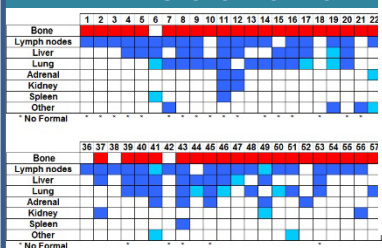
### Rapid Autopsy Program

- 1996-2018: 196 rapid autopsies performed.
- Metastatic tissue is acquired within 4-8 hours of death.
- 16 different bone sites collected in addition to grossly evident metastases.

### LuCaP PDX Series

- Samples of advanced PCa obtained from primary prostate & metastases collected at rapid autopsy are implanted into immunodeficient mice to establish PDXs.
- Established PDXs are propagated in vivo.
- Genomic, transcriptomic, and STR profiles are generated.
- Responses to novel therapies are studied.
- Frozen tumors, paraffin blocks, and TMA containing 40 LuCaP PDX lines.

### RAPID AUTOPSY—SITE OF METASTASIS



### ASSESSMENT OF BONE RESPONSE IN CRPC

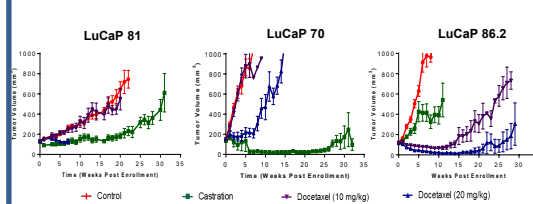


## LuCaP PDX CHARACTERISTICS

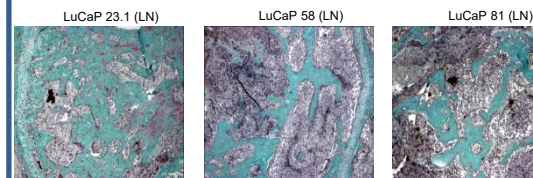
LuCaP	Tissue Type	AR	PSA	Response to CX	LuCaP	Tissue Type	AR	PSA	Response to CX
23.1	LN	WT	High	HR	86.2	Bladder	WT	Mod.	NR
23.1CR (EXP)	WT	Mod.	NA	86.2CR*	(EXP)	WT	Mod.	NA	NA
23.12	Liver	WT	High	HR	92	LN	WT	Mod.	HR
35	LN	WT	Low	HR	93*	TURP	NA	NA	NR
35CR (EXP)	WT	Low	NA	96	TURP	WT	Mod.	HR	HR
49*	Omental Fat	NA	NA	NR	96CR	(EXP)	WT	Mod.	NA
58	LN	WT	Low	NR	105	Rib	WT	Mod.	IR
70	Liver	WT	Mod.	HR	105CR**	(EXP)	WT	Mod.	NA
70CR (EXP)	WT	Mod.	NA	136	Acites	WT	Low	IR	IR
73	Prostate	MUT	Mod.	HR	136CR	(EXP)	WT	Low	NA
73CR (EXP)	MUT	Mod.	NA	141	TURP	WT	Low	HR	HR
77	Femur	WT	Mod	IR	145.1*	Liver	NA	NA	NR
77CR**	(EXP)	WT	Mod	NA	145.2*	LN	NA	NA	NR
78	LN	MUT	Mod	HR	147	Liver	MUT	Low	NR
81	LN	WT	High	NR	147CR**	(EXP)	MUT	Low	NA
81CR**	(EXP)	WT	High	NA	167	Liver	ND	Mod.	HR

Characteristics	AS vs CR pairs	Mutated AR	AR vs 6,7
Number of Models	11	2	1
Characteristics	TMPRSS2/ERG	PTEN-negative	Neuroendocrine
Number of Models	4	13	4
Characteristics	RB Deletion	Osteoblastic	DOC resistant
Number of Models	2	7	6

## HETEROGENEITY OF RESPONSES



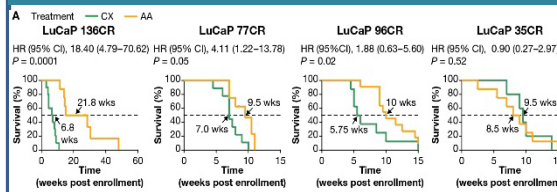
## OSTEOBLASTIC BONE RESPONSES



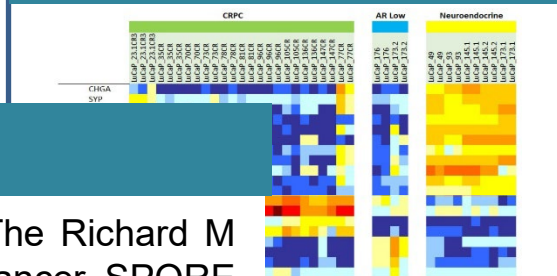
## CLINICALLY RELEVANT TO EVOLVING PHENOTYPE

New treatments and development of resistance results in alterations of tumor genotypes/phenotypes. In order to understand mechanisms of resistance and develop new therapies for the resistant tumors, PDXs representing these new tumor phenotypes are urgently needed.

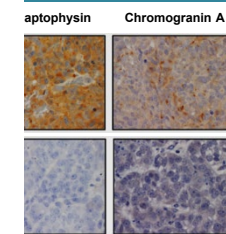
## RESISTANCE TO SECONDARY ANDROGEN THERAPY



## NEUROENDOCRINE VS ADENOCARCINOMA



## D AR- PDX MODELS



	PSA	CHGA	SYP	AR-NE+	AR-NE-
13-084	Red	Blue	Blue	Red	Blue
173.2	Red	Blue	Blue	Red	Blue

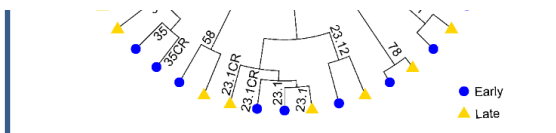
## ACKNOWLEDGEMENTS

These studies have been funded by the Prostate Cancer Foundation (PCF), The Richard M Lucas Foundation, NIH PO1 (PO1-CA163227), Pacific Northwest Prostate Cancer SPORE (P50-CA097186), the Prostate Cancer Biorepository Network (PCBN), and Movember. With great appreciation we acknowledge the patients and their families for their participation in the UW Rapid Autopsy Program, the animals who have been sacrificed to make these breakthroughs to relieve the suffering and death associated with prostate cancer for fathers, sons, brothers, and husbands around the world, as well as the exceptional daily care of these animals provided by the Animal Caretakers.

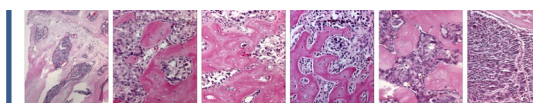
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**Figure 1.** To determine if drift has occurred in the LuCaP xenografts, we compared gene expression analysis of early and late passages of 24 xenografts. From a cluster analysis of 1000 randomly assigned genes, all 24 LuCaP xenografts clustered with their parental tumor. We determined that while some changes were observed, a limited amount of drift had occurred in the LuCaP xenograft lines. Previous limited studies showed clustering of xenografts with the clinical tumors of origin.



**Figure 2.** Radiographs and H&E stains from LuCaP xenografts injected and grown in the tibia of SCID male mice. \*: Osteoblastic; \*\*: Mixed. Additional lines showing an osteoblastic response include LuCaPs 23.1, 23.1CR, 93 and 136.



Prostate Cancer Biorepository Network (PCBN)  
<http://www.prostatebiorepository.org>



Movember



PROSTATE CANCER FOUNDATION  
Accelerating the world's most promising research

# [Molecular profiling stratifies diverse phenotypes of treatment-refractory metastatic castration-resistant prostate cancer](#)

[Mark P. Labrecque, ... , Peter S. Nelson, Colm Morrissey](#)

Published July 30, 2019

Citation Information: *J Clin Invest.* 2019. <https://doi.org/10.1172/JCI128212>.

## **ACKNOWLEDGEMENTS**

This work was supported by a Department of Defense Idea Development Award-Partnering-PI (W81XWH-17-1-0414;W81XWH-17-1-0415), W81XWH-15-1-0430, PC170431, the Pacific Northwest Prostate Cancer SPORE (P50CA97186), the Department of Defense Prostate Cancer Biorepository Network (W81XWH-14-2-0183), Department of Defense Prostate Cancer Clinical Trials Consortium W81XWH-15-2-0008, NCI R01 CA230617, NCI P01 CA163227, the Prostate Cancer Foundation, the AACR NextGen Transformative Cancer Research Grant, the Institute for Prostate Cancer Research, and the Richard M. LUCAS Foundation.

We would like to thank the patients who generously donated tissue that made this research possible. **We would also like to thank** Jennifer Conner, Michiyo Dalos, Daniel Sondheim and **the Comparative Medicine Animal Caregivers for assistance with the LuCaP PDX work.** Additionally, we would like to thank Paul Lange, Robert Vessella, Funda Vakar-Lopez, Martine Roudier, Xiaotun Zhang, Belinda Nghiem, Jennifer Noteboom and the rapid autopsy teams in the Urology and Pathology Departments at the University of Washington.

- Study Endpoint Notification
- Support for Staff
- Reflections
- Recognition (Animal Caregivers)
- **Work Environments/Breakroom Enhancements (Animal Caregivers)**

## “The Breakroom Project”

Improving break rooms was frequently requested during our Needs Assessment

“Before” and “After” video of animal caregiver breakroom with completed renovations @ <https://sites.uw.edu/d2c> under **Special Projects** page





## “The Window Project”

# Appreciation Lunches







Dear Animal Care Team,

The University of Washington's Dare 2 Care (D2C) Compassion in Science Committee would like to personally take this opportunity to recognize and thank each of you for your contributions and exemplary resiliency while our community has struggled with the COVID-19 pandemic. D2C, as well as UW Leadership, has seen how dedicated you are to your job and how you have consistently shown up to work and to care for your animals and to support critical research studies. The emotional toll that the pandemic and the ensuing quarantine has taken is apparent and we recognize your determination and dedication. The University has asked a lot of all of its staff that have to come into work and comply with the necessary physical and social distancing requirements that we are all living with. We know this hasn't been easy.

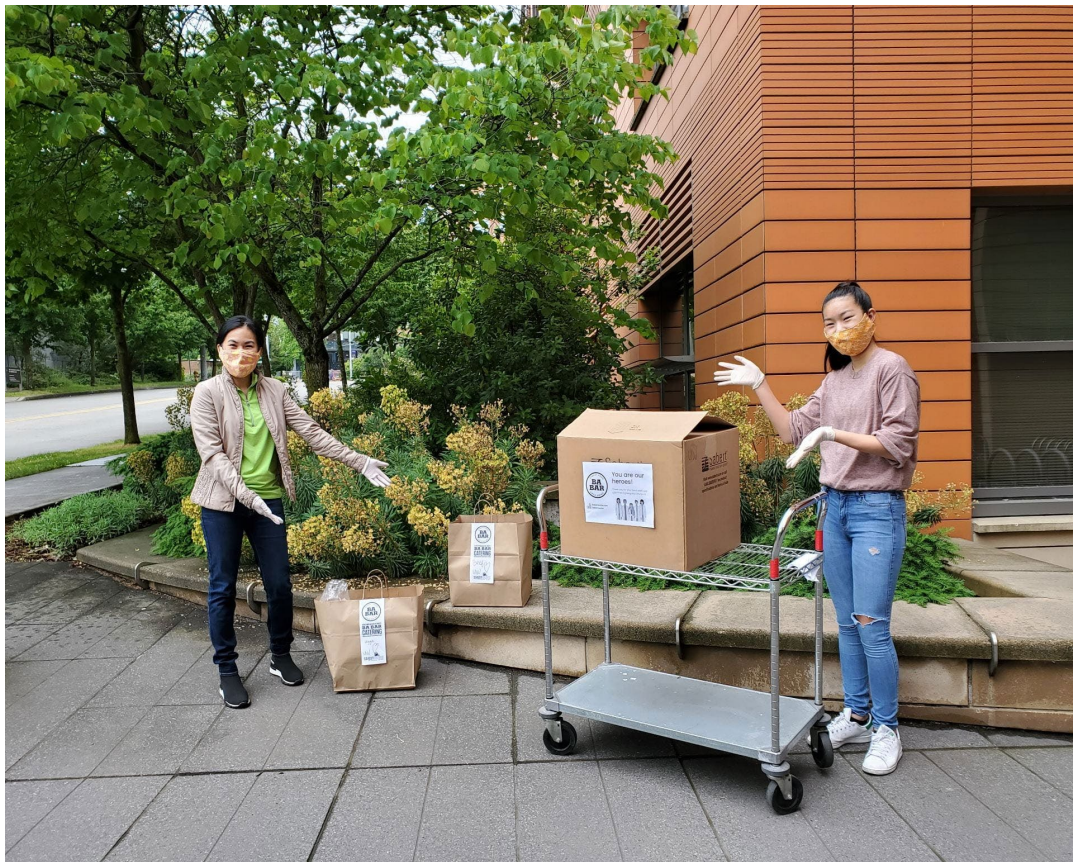
Local restaurants, The London Plane and Ba Bar, in partnership with the Seattle Science Foundation, are demonstrating their acknowledgement of the important work that you are providing every day in taking care of the animals and supporting the research by providing multiple appreciation lunches in your honor by donating over 365 lunches. We are so grateful for their support and goodwill through these challenging times. This very important recognition of your contributions is a true honor that can only be appreciated in the moment when you see our community finding ways to support one another.

Thank you for being you and going above and beyond to do your job in such a challenging time. And many thanks to The London Plane and Ba Bar in partnership with the Seattle Science Foundation.

With best regards,  
D2C











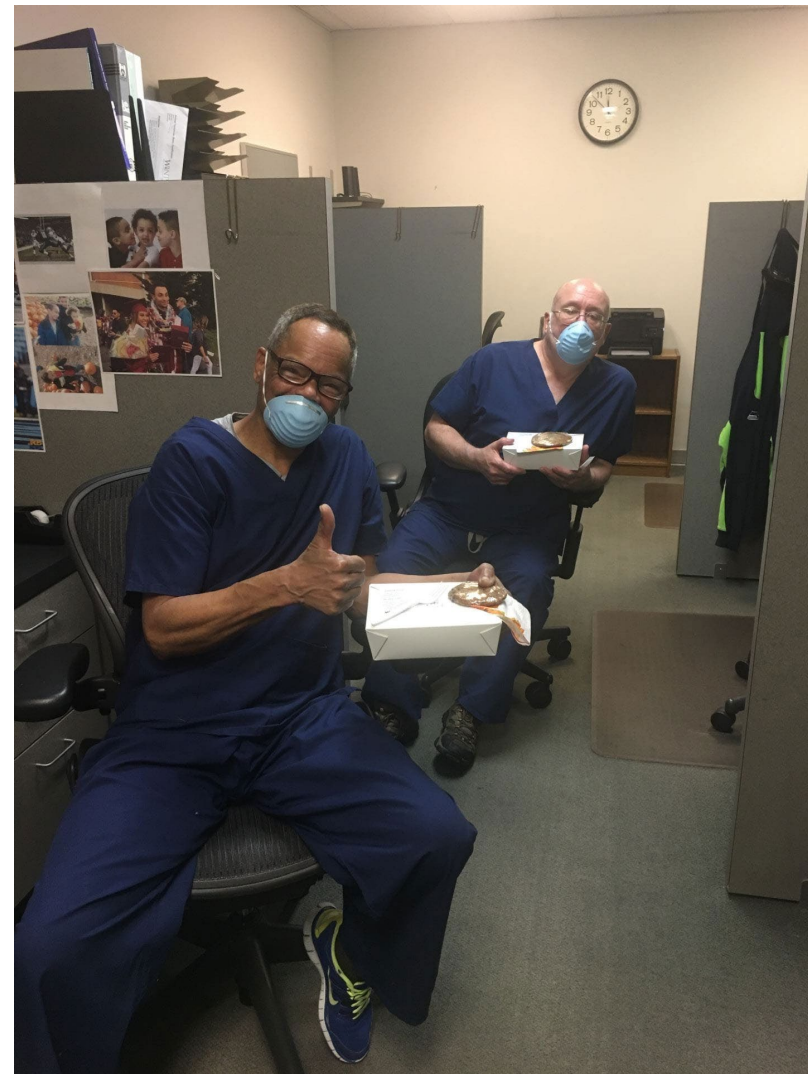


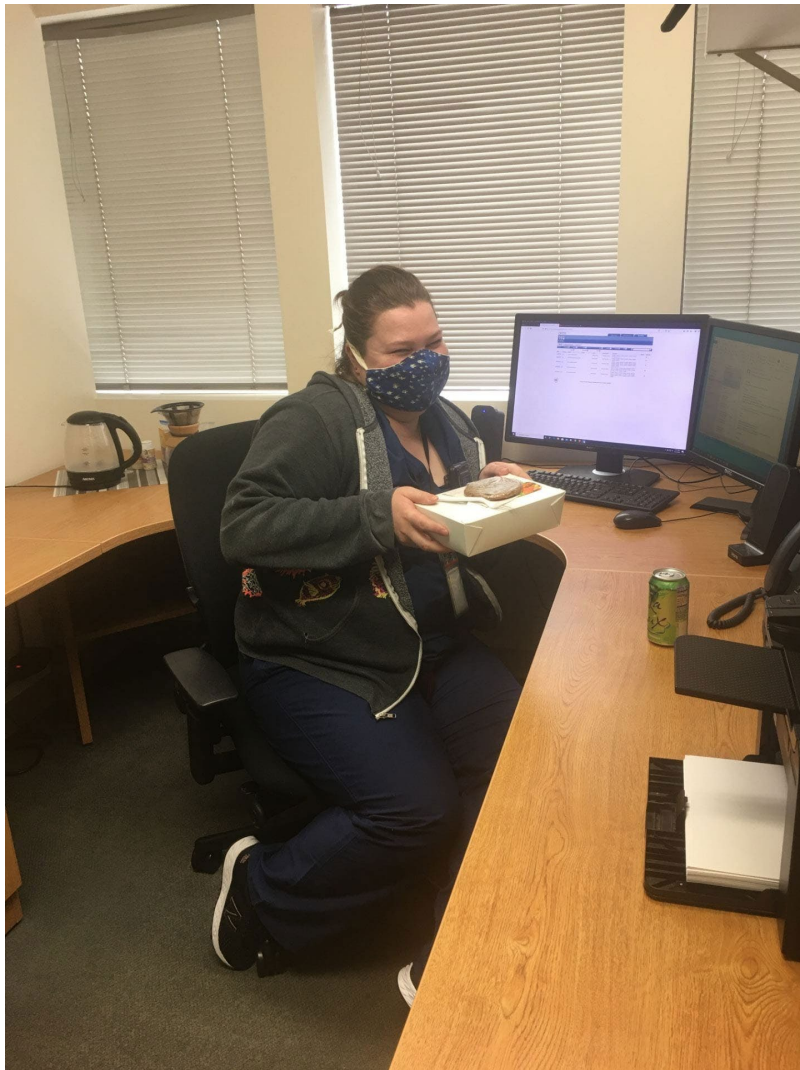
UW COMPARATIVE MEDICINE - 6TH FLOOR STAFF

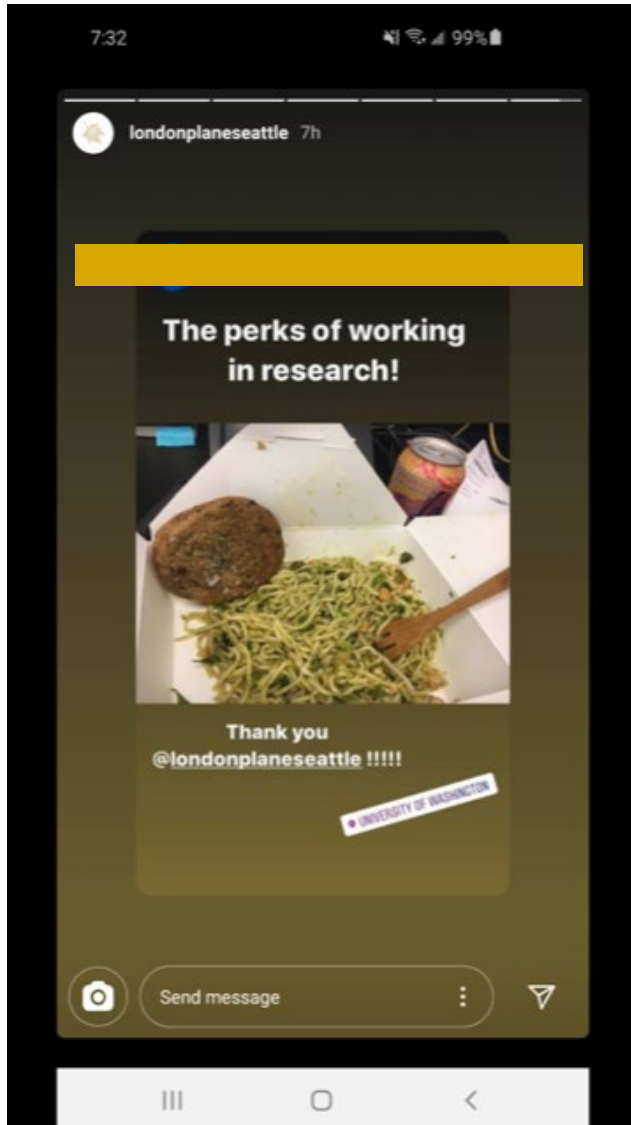












# Frontline Heroes







# Kudoboard





Dare 2 Care: Compassion in Science at the University of Washington has created a [Kudoboard](#) where we are inviting you to write a message of thanks and words of affirmation to UW's hardworking laboratory animal technicians - many of whom provide the utmost care to your research animals on a daily basis. Additionally, we encourage you to ask members of your lab and staff to also leave a note of appreciation on the [Kudoboard](#) as we recognize all the UW's animal care technicians.

# #ThanksResearch



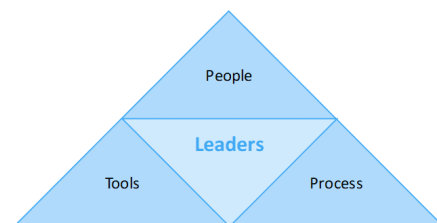


# Sustainability



# Sustainability: Leadership and Management

- Communication:
  - Essential to maintaining a sustainable Compassion Resiliency program.
  - Regular updates to program happenings.
- Support:
  - Advocate
  - Referral
- Participation:
  - Events
  - Testimonials
- Understand the management perspective:
  - Research must continue.
  - Care standards for animals must be maintained.



# Sustainability: Challenges

- Human Resources
- Culture Change
- Lack of support



- Everyone has a full-time job already
- Some staff unsure about program
- Difficult to prioritize ideas



TEXAS BIOMEDICAL  
RESEARCH INSTITUTE



SNPRC  
Southwest National Primate  
Research Center

- Scheduling
- Participation
- Find the time



THE OHIO STATE  
UNIVERSITY

## OSU Wellness Model

- Career
- Creative
- Emotional
- Environmental
- Financial
- Intellectual
- Physical
- Social
- Spiritual



14



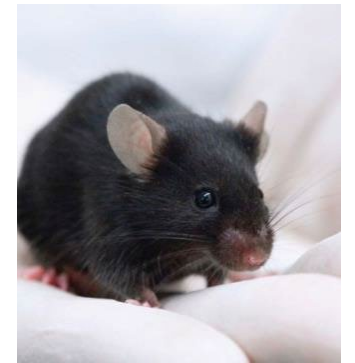
## Sustainability: Operating Budget/Resources

- Identify (and secure) possible funding sources early on.
- Review budget regularly.
- Funding and personnel available to support the program are of course helpful; however, such resources may take time to establish, so planning for actions that can be taken when resources are limited is important.
- Continue to emphasize and justify the need to the institution, so that support (funding (and personnel)) can be encouraged and sustained.



## Sustainability: Committee or Working Group

- Committee or working group should meet regularly to:
  - Discuss and review progress.
  - Establish new goals.
  - Evaluate needs.
- Continue to monitor the program and ensure that the actions are impactful is essential.
- Committee should remain independent and available to all research faculty and staff, animal caregivers, veterinary staff, and others.
- Set clear expectations:
  - Committee membership?
  - Charter?
  - Guidelines for volunteers that reach out to staff in need.
- Re-evaluation of the compassion fatigue well-being program should be considered on an ongoing basis.





## Sustainability: Measurement of Outcomes

- Baseline survey:
  - Critical to determine overall effectiveness.
  - IRB approval?
- Examples for measuring effectiveness may include:
  - Engagement. Are people showing up?
  - Discussion. Are people talking about it?
  - Inquiries. Are people reaching out when they need help?
- Possible indicators or success:
  - Increase in worker satisfaction.
  - Increased referral rate to the resource that the program offers.
- Direct measurements of well-being, such as surveys or interviews open to individuals from all aspects of laboratory animal care and use within the institution.
- Indirect measures such as error rates, can all help a program determine its needs.



Photo Credit: Oregon National Primate Research Center/OHSU; ComeSeeOurWorld.org

## Sustainability: External and Internal Factors

- Institutions should recognize that the need(s) for a CF program may ebb and flow depending on external and internal factors:
  - Committee or working group must be open-minded and willing to change the program focus depending on the needs of the personnel and with the understanding that some efforts may not result in a useful impact.
  - A successful well-being program is never done. Your team should always be open to feedback and new ideas, so the program improves.



## Sustainability: Stay Involved

- Recruit investigators to conduct informational seminars:
  - Discuss why the research is important and potential benefits of the results.
  - Explain why specific endpoints were chosen for the study.
- Encourage all forms of support:
  - Investigate partnerships with counseling providers if your institution permits.
  - Encourage individuals to build an outside support network of family and friends.
- Take an opportunity to understand the benefits of the research at your institution:
  - Remember the benefits of research advancement for both humans and animals.
  - Reflect on any personal impacts of research advancements.



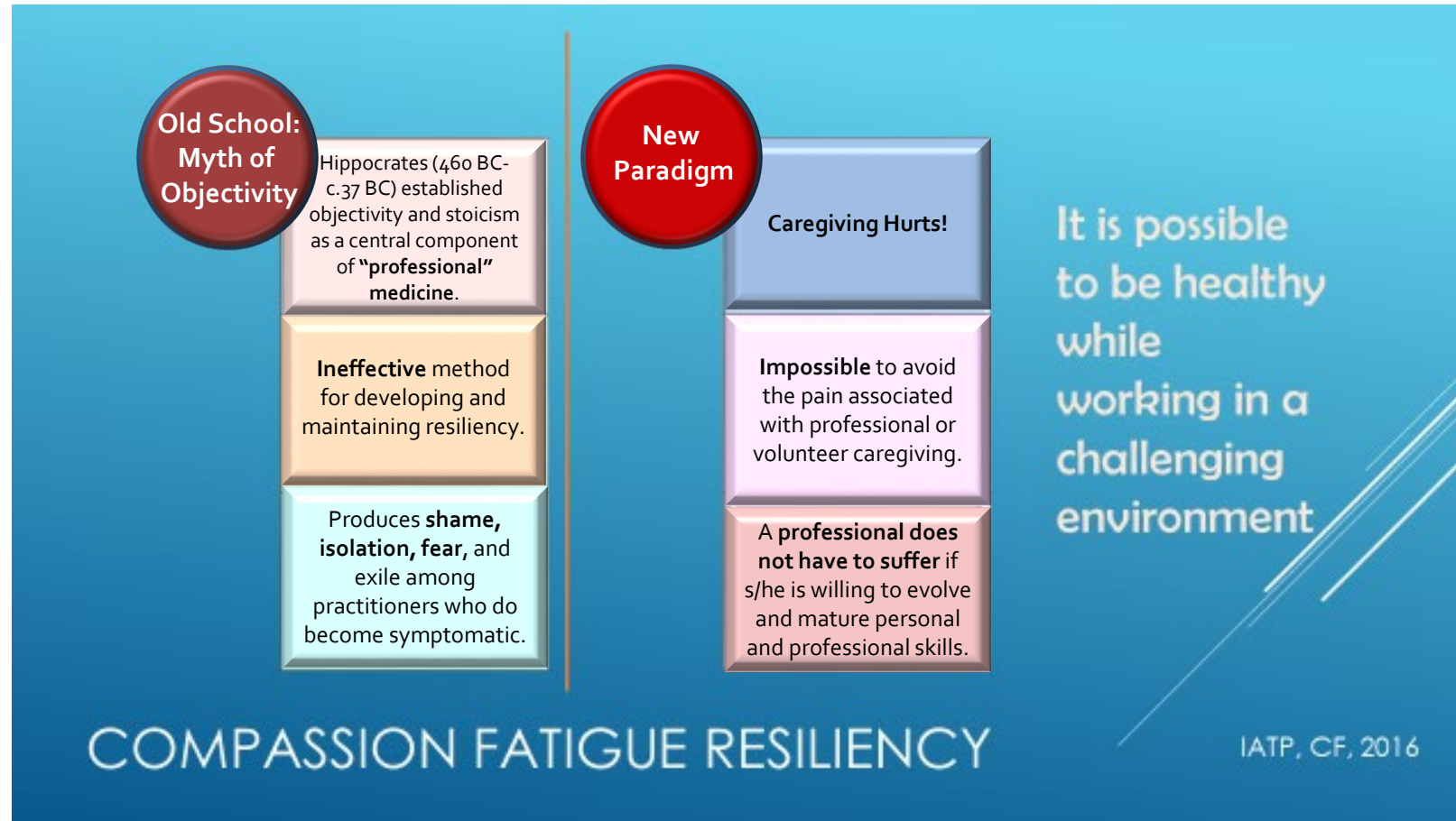
## Sustainability: Future Directions

- Future studies need to include an overall assessment of the relationship and interplay between people, animals and the environment of the work environment to better support personnel – surveys should include an overall intake of whether this information can help improve health outcomes for personnel that support animal research.
- Additionally, looking for metrics or ways to assess how improved well-being of the humans affects the laboratory animal well-being can provide evidence linking this effort to the One Health concept.

# Fostering healthy compassion in an animal care and use program



# The 'old school' vs 'new paradigm'. Why now?





**IACUC's can support programs and tools that build resiliency among laboratory animal professionals.**

## ... through avenues such as

- Semiannual inspections
- Benefits story
- Site visit incentives
- Support letters/letters of acknowledgement
- Animal adoptions
- Openness and Transparency



## What do you feel the IACUCs role is, or should be, with regards to the benefits of caring (for animal AND human welfare AND public transparency)?

I am a new IACUC member with less than one year of service. I serve as a non-scientist on the committee. As I review protocols and undertake facility inspections, I am looking to see that there is genuine care and attention to the animals being used in this work. I think that there is a moral imperative on IACUC's to ensure that the people who have the role of caring for animals, and undertaking research with animals, do everything that they can to minimize pain and distress, and to also provide enrichment. This may be simplistic, but I feel like each animal is giving us a gift and because of this we have to do the things necessary to both honor and value that gift.

In turn, we also have to recognize that this work is hard. We place a huge amount of responsibility on all staff to ensure that they do this hard work well, to reach exacting standards of precision and to also do this work whilst demonstrably caring for animals. This work comes at a cost to all staff involved – and to have a good animal care program we have to have a concomitant human care program. If we don't look after our people – they will not be able to look after the animals.

Looking after our people is a multi-faceted program. This requires good recruitment, induction, training, counselling and supervision. It also means that we need to recognize them as individuals who have lives that intrude on their work AND that the work intrudes on their lives.

The D2C program aspires to provide a way for staff to have a safe place and support so that the hard nature of the work can be both seen and understood. D2C is a core part of the overall animal care program, and I am pleased that it has its own section in the protocol review process.

~ Ken Gordon

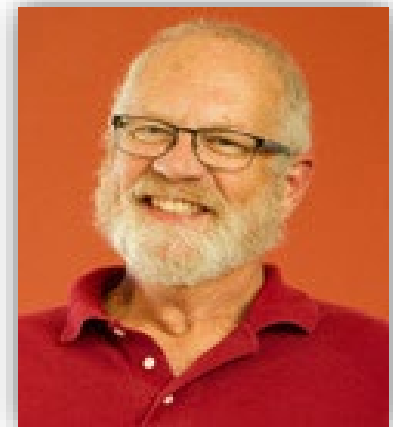


# What do you feel the IACUCs role is, or should be, with regards to the benefits of caring (for animal AND human welfare AND public transparency)?

While not directly interacting with animals used in research science, the IACUC is still engaged in tasks which contribute to the notion of compassion. The IACUC members and staff are commonly applying the principles of the 3 Rs. Hopefully, that has not become a “check the box” step. To address compassion, an IACUC would do well to consider and re-think scenarios like the following:

- The total number of animals is always a concern. Imagine, though, what might the non-affiliated or non-scientist member be thinking about when reading in a protocol that 4783 (or more!) mice are proposed for study?
- As obligated, a researcher describes that the study will make sick several groups of dogs to better understand specifics of a disease process. The IACUC members need to be comfortable and able to rationalize why that is the case. What is the institutional culture of caring?
- During facility inspections, one of the stops will typically be where animals are euthanized. The team evaluates the condition of the room and the procedures being performed. Does the environment truly provide for a humane and respectful death process (think Temple Grandin)?
- The position of being IACUC staff is significant and has grown to encompass many responsibilities. An IACUC analyst notices that a member showed some discomfort during the last meeting with FCRs. What could/should be said, even though it's not in the job description?

~ *Bruce W. Kennedy*



## Call to action....

- Low public image of animal research and stigmatization as 'dirty' work;
- Low social support and poor internal communication culture;
- Areas of conflict in daily work.

### Reference:

Culture of care in animal research – Expanding the 3Rs to include people

Fabienne Ferrara, Bernhard Hiebl, Peter Kunzmann, Florian Hutter, Freni Afkham, Megan LaFollette and Christian Gruber

# Call to action.... Culture of Care

- More awareness of the real issues surrounding work well-being
- More resources to prevent work-related mental stress
- More supportive cultures to promote work well-being

## Reference:

Culture of care in animal research – Expanding the 3Rs to include people

Fabienne Ferrara, Bernhard Hiebl, Peter Kunzmann, Florian Hutter, Freni Afkham, Megan LaFollette and Christian Gruber

# Human Well-Being...

- To combat three main causes of compassion fatigue various strategies should be employed:
  - Improving animal research personnel's social support
  - Better institutional culture of care and communication
  - Open and transparent communication with the public to improve understanding of animal research, and general support for work related stress

## Reference:

Culture of care in animal research – Expanding the 3Rs to include people

Fabienne Ferrara, Bernhard Hiebl, Peter Kunzmann, Florian Hutter, Freni Afkham, Megan LaFollette and Christian Gruber

# Openness & Transparency

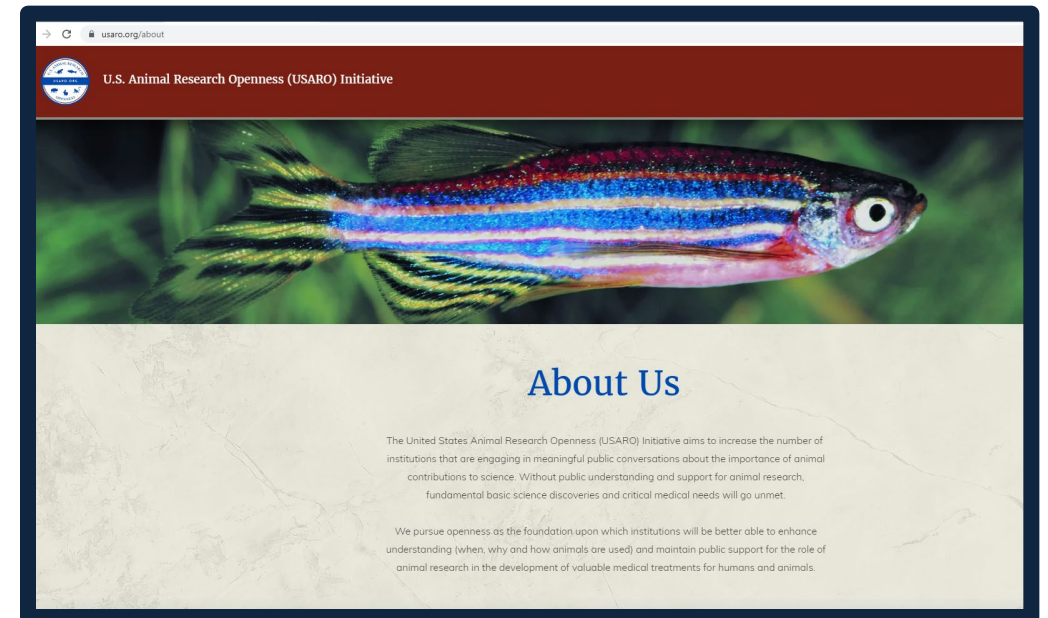
## What is Openness?

- Engaging the Public Over the Use of Animals in Research
  - Engaging - tending to draw favorable attention or interest
  - Over - to agreement or concord; win them over
- Openness vs. Transparency
  - Characterized by visibility or accessibility of information
  - Readily understood
  - Prefer to use the term openness at this point in time.

# Openness & Transparency

## In Progress

- University of Washington
- Northwest Association for Biomedical Research (NWABR)
- USARO.org



## Personal Responses to CF

“When we share our stories, what it does is, it opens up our hearts for other people to share their stories. And it gives us the sense that we are not alone on this journey.”

Janine Shepherd







**Thank you for what you do.....  
you truly make a difference!**

*It is better to have a Compassion Fatigue Program and not need it -*

*.....than to need a Compassion Fatigue Program and not have it.*

*~ Anthony Gray, 2017*

