



**The 3Rs Collaborative's  
Strategic Plan  
2023 to 2027**



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# Executive Summary



In the past 3 years, the 3Rs Collaborative has experienced exponential growth in terms of staffing, volunteers, and outputs. During this time, the global COVID-19 pandemic has brought a new appreciation and knowledge of scientific research to the public eye. It also elevated the ability of scientists to cooperate across diverse locations. Additionally, the 3Rs concepts are seeing increased attention with the passage of the FDA Modernization Act, shortages of key animal models (i.e., non-human primates and dogs), and continued public concern for translational science.

In response, we have completed strategic planning to give us direction and priorities through long-term goals and objectives. Based on this document, yearly implementation plans can be designed. We have revised our mission, formally defined our vision and values, and refined our scope to the United States. In turn, we have rebranded and simplified our name to "**The 3Rs Collaborative.**" The 3RsC strategic plan provides a framework for strengthening the quality of science—to the benefit of both people and animals. We will continue to enact our core values of evidence, collaboration, and impact through initiatives that unite scientific excellence and animal welfare.

This strategic plan formally outlines our plan to focus on 3 key areas of promoting: the 3Rs broadly, specific 3Rs strategies, and knowledge of our organization. To promote the 3Rs broadly, we will provide comprehensive 3Rs training, promote a culture of care, and facilitate general 3Rs presentations and resources. To promote specific 3Rs strategies, we will strategically choose 3Rs techniques that are high-impact, evidence-based, and practical. After creating collaborative working groups, we will then work to understand the status quo and accelerate implementation. Finally, to promote our organization we will foster collaboration and expand our outreach efforts. We remain committed to balancing our efforts across all 3Rs: refinement, reduction, and replacement.



# Key Principles



## MISSION

### Advancing better science—for both people and animals.

We facilitate collaborative 3Rs opportunities to make a positive impact using evidence-based science for people and animals in research and teaching. We work to:



**Refine:** Improve the lives of animals used in research and teaching.



**Reduce:** Minimize animal numbers while maximizing scientific output.



**Replace:** Promote the widespread adoption of non-animal models.

Our work is grounded in real world, practical experiences to initiate the most evidence-based progress in the shortest amount of time.



# Key Principles



## VISION

### Uniting scientific excellence and animal welfare.

We strive to create a future where:



All research animals consistently receive the best care possible throughout their lifespan to maximize their welfare – regardless of size or species.



All animal experiments and science-related breeding programs are designed to maximize quality, including reproducibility and translation, while minimizing the numbers of animals required across the research pipeline.



All scientifically valid replacement technologies are consistently implemented whenever appropriate throughout the scientific and teaching pipeline so that animals are only used when absolutely necessary.



All individuals working in animal research and teaching feel supported to do their best work for their research animals and scientific progress.

Ultimately, science, knowledge, and respect for all beings is advanced.





# Key Principles

## VALUES



### 1. Evidence:

We make decisions based on high-quality, data-driven, evidence-based science.



### 2. Collaboration:

We work across disciplines and incorporate information from different backgrounds. The output of the group is greater than that of one.

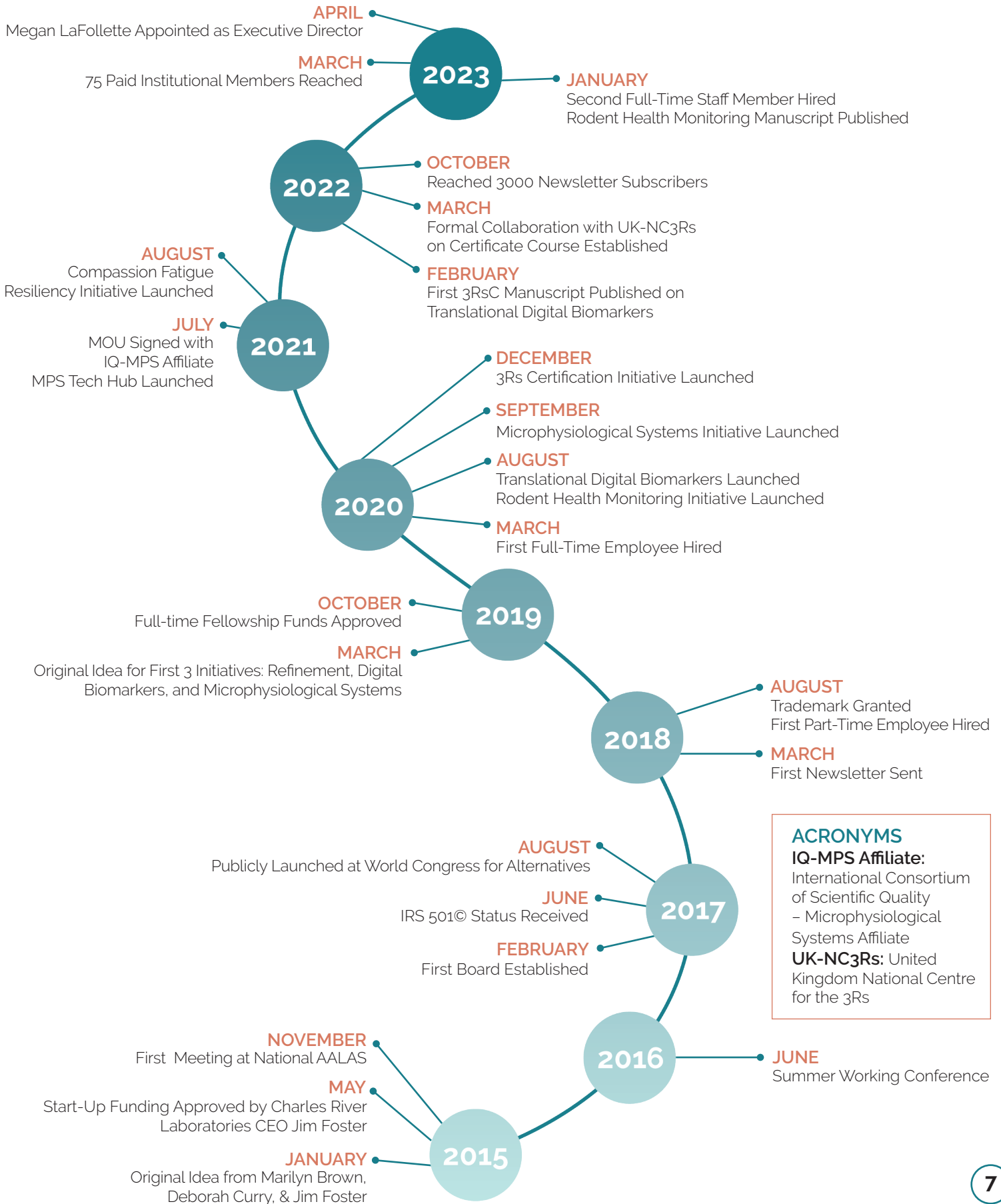


### 3. Impact:

We make an impact through the 3Rs on scientific research. We are outcome driven, constructive, and practical.



# Introduction to the 3Rs Collaborative



# Introduction to the 3Rs Collaborative

## Background and History

The 3Rs Collaborative was started by a group of professionals who asked themselves, "What are we doing for the 3Rs community beyond our institution?" Although they and others had done the work to advance the 3Rs internally, it was difficult to make widespread national progress especially in a balanced manner across both industry and academia. Other countries had national 3Rs centers to coordinate activities and progress, but that support was lacking in the USA.

In 2015, Jim Foster (CEO of Charles River) announced a directive for all employees to step up their 3Rs efforts. He thought Charles River should not just be a leader in the industry, but also in the 3Rs. Marilyn Brown (Corporate Vice President of Animal Welfare) dreamed of a 3RS non-profit overseen by notable 3Rs leaders. So, when Deborah Curry (Senior Director, Event management) approached Marilyn for ideas of what they could do together to support Jim's directive, they knew just what to do. Deborah rearranged her budget to provide \$200,000 in funding to jump-start the dream and supported the board members to make it a reality.

After gathering key 3Rs experts and having discussions, the organization was formally launched in August 2017 at the World Congress for Alternatives in Seattle. The first board members all spoke at the conference: Marilyn Brown (President), Deborah Curry (Treasurer), Norman Peterson (Secretary), Mary Ann Vasbinder (Director), and Natalie Bratcher (Director). Now in 2023, we will be back presenting at the World Congress on Alternatives as well as numerous other events.



**Deborah Curry**



**Marilyn Brown**



**Mary Ann Vasbinder**



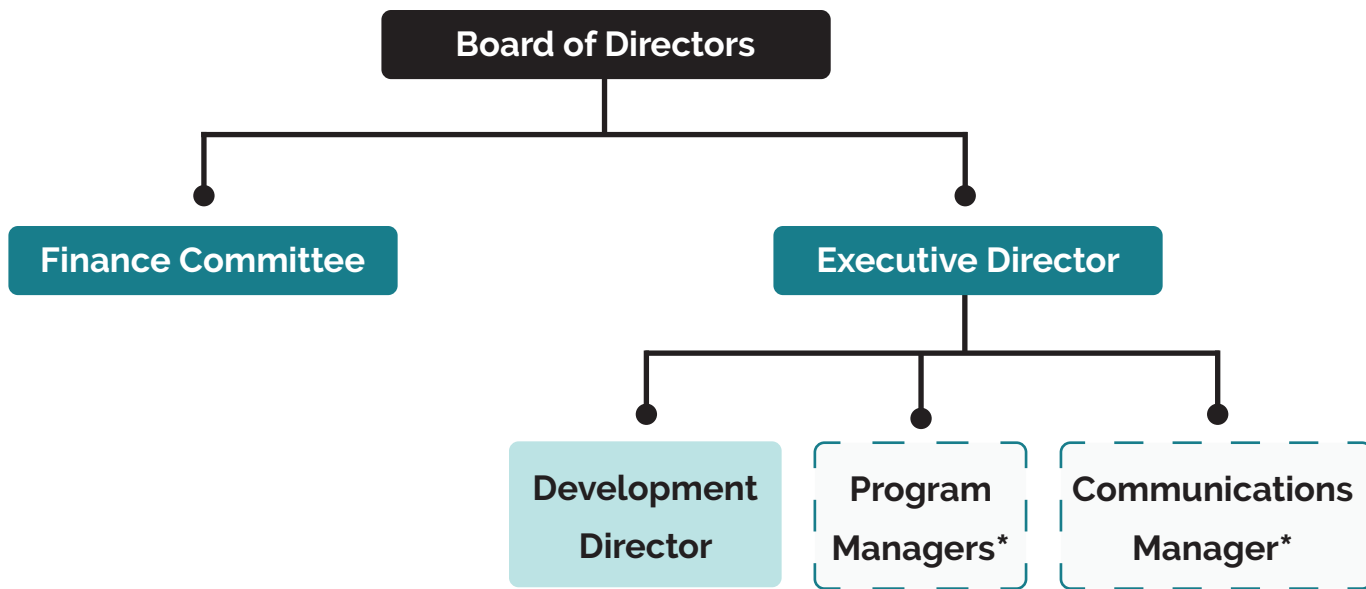
**Norman Peterson**



**Natalie Bratcher**

# Introduction to the 3Rs Collaborative

## Organizational Structure



\*Dashed line border indicates a future position

Our volunteer and staff base has grown with our organization to support our goals. As of 2023, our board of directors and volunteer roster includes over 200 individuals from over 100 institutions. These individuals span across roles from animal technicians, veterinarians, managers, researchers, IACUC members, animal welfare officers, CEOs and more. In turn, our staff has grown from one part-time employee in August 2018, to 2 full-time staff members and 3 part-time consultants in January 2023.



# Introduction to the 3Rs Collaborative

## Scope, Stakeholders, & Partners

In our first five years, in a response to a known need, the 3Rs Collaborative aimed to support the entire North America region: United States, Canada, and Mexico. However, in practice, most of our efforts were directed at the United States with limited recent expansion to Canada. As a new and small non-profit, our operational capacity was simplified to support the activities focused on making an impact. Therefore, during 2022 strategic planning, our board of directors formally decided to refine our scope to focus primarily on the United States. Of note, we will not abandon the progress we've made in Canada thus far, but rather use this scope to define our reach in future efforts. This decision was made to reflect the current reality of operations and help us make bigger impacts faster. Furthermore, this scope does not exclude individuals from other countries from participating as animal research is a global arena. We will continue to engage with research professionals across the globe.



The primary stakeholders of 3RsC are the individuals and institutions that work in science with animals or replacement to animals. This includes academics, biomedical researchers (e.g., pharmaceutical companies and contract research organizations), agrochemical companies, cosmetics, government researchers, and more.

The primary partners of 3RsC include 3Rs, scientific, or governmental organizations that are supportive of animal research and the 3Rs. Currently the 3RsC has 3 ad hoc board members from leading non-profits: UK's NC3Rs, Swiss 3RsCC, and the Federation of American Societies for Experimental Biology (FASEB). We have a memorandum of understanding in place with the International Consortium for Innovation and Quality in Pharmaceutical Development (IQ Consortium) MPS Affiliate. We work closely with several other non-profits including New Jersey Association for Biomedical Research, Northwest Association for Biomedical Research, Americans for Medical Progress, Massachusetts Society for Medical Research, and the Standards Coordinating Body. From the government, we have a USDA representative as a voting board member. We have regular meetings with representatives from the U.S. National Institutes for Health (NIH) Office for Laboratory Animal Welfare, the U.S. Department of Health and Human Services National Toxicology Program (NTP) Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM), and the U.S.'s Food and Drug Administration Alternative Methods Working Group.

# Introduction to the 3Rs Collaborative



## Distinction & Importance

The United States is a superpower for science, leading the way in many key areas. As the collaborative is headquartered and focused on the United States—but also collaborates internationally especially in Canada and Europe - this allows us to make impact both in the United States and global arena. As the 3RsC is balanced across all 3Rs this attracts more major players in the scientific arena to work with us – as most of these institutions have used animal models in the past and continue to do so. Furthermore, our collaboration across institutions, industries, and scientific focuses also makes us a powerful leader, poised to make great impacts. Finally, our primary focus on implementation instead of basic research is critical for widescale, large impact as even excellent primary research can get lost in translation.

## 3Rs Horizon Scanning

The 3Rs in application and study are advancing rapidly. Over the last 5 years, several new 3Rs centers have been established or have grown significantly. An increasing number of institutions outwardly recognize the importance of the 3Rs in their policies. Furthermore, there has been significant progress in the use and understanding of technologies such as microphysiological systems and artificial intelligence.

Despite this forward progress, there has been slow uptake of many 3Rs techniques even in those that have strong scientific evidence or widespread implementation in other countries. In general, there are several barriers that remain. This includes lack of positive attitudes & confidence, awareness, and accurate knowledge of new techniques, lack of professional or regulatory pressure, and lack of targeted training and practical resources. Additional barriers may include lack of infrastructure and concerns of data comparison from traditional methods.

Beyond these general factors, there are other relevant landscape factors to consider. Since the covid-19 pandemic there has been increased public awareness of animal research while public criticism remains. Simultaneously the United States of American Research Openness Initiative is gaining momentum. In late 2022, the FDA Modernization Act was passed which brings federal regulation into practice by acknowledging alternatives including microphysiological systems and in silico techniques. Finally, very recently there have been some difficulties in sourcing both non-human primates and beagles.

Together, all these factors indicate that the time is right to grow and expand the 3Rs Collaborative. By focusing on creating both a general research landscape supportive of the 3Rs and focusing on increasing implementation of key techniques we will be able to make great impact. Our strategy takes a leadership role in the 3Rs field and works in collaboration with partners both nationally and internationally.



# Progress & Impact

Beginning in 2020, the 3Rs Collaborative has focused on 6 key initiatives that meet our criteria of having strong scientific evidence, opportunity for large impact, and ultimately are practical to implement in the status quo. By focusing on these areas, we have already been able to deliver results in a relatively short time.

## Refinement



April 2020



**31** Experts from  
**23** Institutions



To increase implementation of evidence-based animal welfare enhancing strategies, especially refined mouse handling



- 16 open access resource pages

- 10 presentations, posters or workshops reaching over 1300 individuals



- Expand the refined mouse handling hub
- Publish baseline & longitudinal benchmarking data

- Launch a certification course with NC3Rs
- 12 additional presentations or workshops

## Rodent Health Monitoring



July 2020



**23** Experts from  
**18** Institutions



To help institutions replace soiled bedding sentinels with environmental health monitoring



- Resource hub with social proof, SOPs, slide deck, presentations, FAQs, sanitation info, and more
- 8 presentations reaching >2500 participants

- 1 publication of baseline benchmarking survey >6 institutions changed practices replacing >8000 animals per year



- Year 3 benchmarking
- Cost Analysis
- Systematic Literature Review
- 3 More Presentations

# Progress & Impact



## Translational Digital Biomarkers



July 2020



**23** Experts from  
**18** Institutions



To advance the application of impactful home cage monitoring technologies and translational digital biomarkers



- 1 peer-reviewed article reviewing implementing home cage monitoring technologies for preclinical drug discovery & development

- 4 presentations reaching over 250 individuals



- Technology Hub for translational digital biomarkers
- 5 additional presentations

- Manuscript on validation and verification

## Microphysiological Systems



September 2020



**92** Experts from  
**45** Institutions



To accelerate adoption and regulatory acceptance of Microphysiological Systems (MPS)



- Technology hub for MPS
- MOU with IQ MPS
- Webinar & Workshop series (liver, blood-brain-barrier, kidney, neuro, and vascular models)

- 11 presentations reaching over 1200 individuals
- Good relationships with regulators and end-users



- 6 additional presentations or workshops
- Paper on perspectives on regulatory acceptance from developers

- MPS Resource Hub

# Progress & Impact

## 3Rs Certificate Course



December 2020



23 Experts from  
22 Institutions



To create accessible, reputable, and engaging 3Rs content for all stakeholders



- Fully drafted a 5-hour course with sections on an Introduction and History of the 3Rs, Replacement, Reduction, Refinement, and Applications
- Drafted activities for engagement and assessment questions



- Launch the certificate course
- Formally evaluate the certificate course
- Expand to credentialing program or creating guidance for institutional 3Rs programs

## Compassion Fatigue Resiliency



August 2021



28 Experts from  
21 Institutions



To promote workplace wellness and compassion fatigue resiliency in individuals and institutions



- Institutional starter pack that includes a printable poster, budget, committee forming advice, team activities, culture of care, leadership buy-in advice, and more
- Online resource hub for individuals including presentations, publications, self-care, and more
- 8 presentations reaching over 500 individuals



- Revise & expand institutional starter pack
- 12 additional presentations
- Publish longitudinal data evaluating institutional compassion fatigue programs
- Publication on baseline data linking retention & workplace wellness
- Expand initiative to culture of care

# Strategic Plan Overview

**GOAL 1 — Promote the 3Rs Broadly:** Creating a research landscape that is knowledgeable and supportive of the 3Rs

	STRATEGY	OBJECTIVES
1.1	<p><b>Promote Broad Knowledge &amp; Implementation</b> of the 3Rs across stakeholder roles through 3Rs certificate courses, credentialing, and institutional programs</p>	<p><b>Launch 3Rs Certificate Course:</b> Launch a North American centric 3Rs certificate course to increase general knowledge and support for the 3Rs across stakeholders</p> <p><b>Assess 3Rs Certificate Course:</b> Implement a 3Rs certificate assessment to identify impact, gaps, &amp; opportunities</p> <p><b>Plan for 3Rs Credentialing and Programs:</b> Conduct strategic planning to determine the appropriate format for 3Rs credentialing and institutional 3Rs programs</p>
1.2	<p><b>Support Culture of Care</b> and compassion fatigue resiliency programs that enhance research personnel's professional quality of life</p>	<p><b>Create and Improve Compassion Fatigue Resiliency Programs:</b> Create, disseminate, evaluate, and improve an institutional compassion fatigue resiliency program that addresses stakeholder concerns across various roles in the research environment</p> <p><b>Expand to Culture of Care:</b> Strengthen and enhance the concept of a culture of care that emphasizes the combined importance of animal welfare, scientific quality, staff wellness, and openness</p>
1.3	<p><b>Foster Continuing Education</b> on up-to-date 3Rs knowledge.</p>	<p><b>Host or Give Presentations or Symposia:</b> Facilitate learning and discussion about the 3Rs across stakeholders through innovative presentations, workshops, and conferences</p> <p><b>Create and/or Disseminate General Resources:</b> Create and disseminate practical enabling resources that originate from either within or external to the 3RsC</p>

# Strategic Plan Overview

**GOAL 2 — Promote Specific 3Rs Strategy:** Advancing implementation of specific, high-impact, evidence-based and practical 3Rs techniques

STRATEGY	OBJECTIVES
<p><b>2.1</b></p> <p><b>Choose &amp; Create Initiatives</b> by fostering collaboration and communication between subject matter experts, commercial technology providers, potential end-users, and regulatory agents</p>	<p><b>Choose the Right Initiatives &amp; Leaders:</b> Establish processes and steering groups to determine which specific 3Rs techniques deserve targeted efforts</p> <p><b>Create the Right Groups:</b> Create working groups of diverse stakeholders with experience in specific 3Rs techniques that can strategically guide our efforts towards high impact</p>
<p><b>2.2</b></p> <p><b>Understand the Status Quo</b> via focus groups and benchmarking surveys to determine current implementation, barriers, and promoters</p>	<p><b>Conduct Longitudinal Surveys:</b> Conduct longitudinal benchmarking surveys grounded in human behavior change theory and key assessment metrics to help guide our strategy and assess our effectiveness</p> <p><b>Facilitate Discussions:</b> Engage with current and future users of key 3Rs techniques to understand challenges, solutions, and key successful change tactics</p>
<p><b>2.3</b></p> <p><b>Accelerate Widespread Implementation</b> via creating targeted, practical resources that provide general education, address barriers, and highlight successful use cases</p>	<p><b>Create General Resources:</b> Accelerate the transition to new 3Rs techniques by creating key resources such as universal SOPs, training certificates and presentations, and user-friendly technology hubs</p> <p><b>Demonstrate Social Proof:</b> Leverage principles of human behavior change theory by championing early adopters and providing social proof of successful changes</p> <p><b>Address Misconceptions and Operations:</b> Combat key barriers to 3Rs change by directly addressing misconceptions about key techniques, core operational concerns such as time and money, and encouraging research where necessary</p>

# Strategic Plan Overview

## GOAL 3 — Promote Our Organization: Expanding awareness of 3RsC resources and programs

	STRATEGY	OBJECTIVES
3.1	<p><b>Foster Collaborations with Key Stakeholders</b> in the academic, governmental, and industry communities</p>	<p><b>Collaboration through Events:</b> Increase awareness and impact of 3RsC's programs through workshops, conferences, and presentations</p> <p><b>Collaboration with Other 3Rs Centers:</b> Engage with other 3Rs centers to identify key areas of collaboration, cross-promotion, and gaps</p> <p><b>Collaboration to Specific Organization:</b> Conduct outreach to key scientific institutions including industry, academia, and governmental organization</p>
3.2	<p><b>Expand Outreach to Research Professionals</b> to raise awareness and dissemination of 3RsC-supported resources and programs</p>	<p><b>Outreach Activities:</b> Connect with the research community through outreach activities such as workshops, meetings, presentations, social media, newsletter, and website</p> <p><b>Outreach to More Individuals:</b> Strengthen marketing and outreach of 3RsC programs to raise awareness and expand user pool</p> <p><b>Outreach on our Impact:</b> Promote the success and accomplishments of 3RsC programs to the scientific community, emphasizing the importance of these accomplishments for the 3Rs</p>

# Goal 1—Promote the 3Rs Broadly

## Promote the 3Rs broadly by creating a research landscape that is knowledgeable and supportive of the 3Rs

The 3Rs of animal research play an essential role in humane experimental technique. Furthermore, they can enhance scientific quality and public trust. However, some personnel can see the 3Rs as abstract concepts that are difficult to apply in the real world, especially considering the speed at which knowledge advances. To effectively and broadly implement the 3Rs, research personnel must be both knowledgeable and supportive of the principles.

The 3Rs Collaborative provides critical infrastructure for the scientific community by providing 3Rs education and implementation support. We will invest in resources that promote the 3Rs as a general concept and provide necessary support for the people who must be responsible for their implementation. The 3Rs Collaborative will also ensure that continuing education on a wide variety of 3Rs knowledge is disseminated across the U.S..

### Strategy 1.1: Promote broad knowledge and implementation of the 3Rs across stakeholder roles through a 3Rs certificate course and credentialing program

The 3Rs Collaborative supports general knowledge and recognition of 3Rs support across stakeholder roles. These stakeholders are diverse and include students, researchers, animal technicians, managers, IACUC members, and veterinarians. Although many institutions include brief reference to the 3Rs in training courses, in-depth guidance on practical implementation is lacking.

Since late 2021, the 3Rs Collaborative has been working to launch a North American centric 3Rs certificate course to address these issues. We will launch this course in 2023 aiming to get broad implementation. To ensure its continued success and development, the 3RsC will implement an assessment of this certificate course to identify its impact, gaps, and opportunities. Ultimately, we wish to turn this into a credentialing program to provide even more knowledge about the 3Rs and recognition of professionals committed to these concepts. Furthermore, we wish to develop resources to assist institutions in establishing institutional 3Rs programs. To promote broad knowledge and implementation of the 3Rs across stakeholder roles, the 3RsC will:

- **Launch a North American centric 3Rs certificate course** to increase general knowledge and support for the 3Rs across stakeholders
- **Implement a 3Rs certificate assessment** to identify impact, gaps, and opportunities
- **Conduct strategic planning** to determine the appropriate format for a 3Rs credentialing program and institutional 3Rs program support



# Goal 1—Promote the 3Rs Broadly

## Strategy 1.2: Support culture of care and compassion fatigue resiliency programs that enhance research personnel's professional quality of life



Ultimately, the implementation of the 3Rs is dependent on stakeholders working in the scientific research field. Although working in the field can be full of reward and meaning, there are also real challenges as well. These challenges can include more typical workplace concerns such as work-life balance and staffing, as well as field specific concerns such as social stigma and viewing distress in animals necessary for research. Although awareness and support for workplace wellbeing is increasing, more is necessary to accelerate the care of research professionals.

Since 2020, the 3Rs Collaborative has been working on promoting compassion fatigue resiliency in the field. We have developed individual and institutional resources, but broader implementation and assessment of these resources is necessary to ensure they reach their potential. Furthermore, we plan to expand our work focused on compassion fatigue resiliency to a broad Culture of Care for even greater impact in the field. To support enhanced research personnel's professional quality of life, the 3RsC will:

- **Create, disseminate, evaluate, and improve an institutional compassion fatigue resiliency program** that addresses stakeholder concerns across various roles in the research environment
- **Strengthen and enhance the concept of a culture of care** that emphasizes the combined importance of animal welfare, scientific quality, staff wellness, and openness.

## Strategy 1.3: Foster continuing education on up-to-date 3Rs knowledge

Knowledge around evidence-based, high-impact 3Rs techniques is always growing as scientific knowledge is expanding. This knowledge and relevant resources can come from efforts within the 3Rs Collaborative as well as from external sources, such as other 3Rs centers or individual researchers. Therefore, the ongoing continuing education of professionals is necessary to ensure personnel understand techniques, strategies, and resources that are applicable to their work. Such training promotes animal welfare, good experimental practices, and translation of research findings. As part of its training efforts, the 3Rs Collaborative will:

- **Facilitate learning and discussion about the 3Rs across stakeholders** through presentations, workshops, and conferences
- **Disseminate practical enabling 3Rs resources** in diverse forms and forums.



# Goal 2—Promote Specific 3Rs Strategies

## Promote specific 3Rs strategies by advancing implementation of specific, high-impact, evidence-based and practical 3Rs techniques

The 3Rs are a broad concept that can be applied in an extremely large number of ways. Even techniques with strong scientific evidence for their benefit may not be implemented at scale, across the nation. The reasons for this lack of implementation can be related to a lack of awareness or accurate knowledge, lack of professional or regulatory pressure, and lack of practical resources to help make change. However, widescale institutional-level or cross-institutional change is required to make the most impact.

The 3Rs Collaborative plays a special role in the scientific community by identifying some of the best techniques for institutional focus. To create the most progress in the shortest amount of time, the 3Rs Collaborative seeks to identify and forward specific, high-impact, evidence-based, and practical 3Rs techniques.

From 2020 to 2023, the specific 3Rs techniques of focus for the 3Rs Collaborative has included refined mouse handling, microphysiological systems, translational digital biomarkers, and environmental health monitoring. We will continue our work on these specific techniques and expand to others as needed using our previous work as a model. To advance widespread implementation of important 3Rs techniques, the 3Rs collaborative will conduct the below 3 strategies.

### **Strategy 2.1: Choose the right initiatives & leaders by fostering collaboration and communication between subject matter experts, commercial technology providers, potential end-users, and regulatory agents**

Choosing the right 3Rs techniques and the right people to champion them is a critical step in advancing widespread implementation. There are many 3Rs techniques that we could focus our attention on. Thus far, the 3Rs Collaborative has been opportunistic in our choice of initiatives. We identify potential initiatives based off stakeholder feedback, opportunities for collaboration, and the presence of a gap in the field. All initiatives should have strong evidence, big potential impact, and real-world practicality. Once an initiative is identified, we then invite groups of stakeholders with diverse experiences in that topic. We believe there is great value in creating groups with diverse stakeholders from academics, industry, subject matter experts, commercial providers, end-users, and regulatory agents. To ensure the 3RsC continues to put its valuable resources towards the right efforts, we will:



- **Establish processes and steering groups** to determine which specific 3Rs techniques deserve targeted efforts
- **Create working groups of diverse stakeholders with experience in specific 3Rs techniques** that can strategically guide our efforts towards high impact.

# Goal 2—Promote Specific 3Rs Strategies



## Strategy 2.2: Understand the status quo via focus groups and benchmarking surveys to determine current implementation, barriers, and promoters

Accurately understanding the status quo is an important step in creating change effectively and efficiently. Without accurate understanding, efforts to increase implementation may be misdirected towards simple education when more systematic barriers to application remain. Therefore, the 3Rs Collaborative works to understand current implementation levels and areas that are considered barriers versus advantages for individual 3Rs techniques. We do this through either direct conversations or formal benchmarking surveys depending on the particular technique or stage of implementation. Our surveys not only allow us to understand the status quo, but also benchmark our progress over time. To ensure that the 3RsC is directing our efforts to the right target, we will:

- **Conduct longitudinal benchmarking surveys** grounded in human behavior change theory and key assessment metrics to help guide our strategy and assess our effectiveness
- **Engage with current and future users of key 3Rs techniques** to understand challenges, solutions, and key successful change tactics

## Strategy 2.3: Accelerate widespread implementation via creating targeted, practical resources that provide general education, address barriers, and highlight successful use cases

The 3Rs Collaborative takes a comprehensive view in supporting widespread implementation of key 3Rs techniques. These efforts begin with promoting accurate awareness of the benefits of and practicality in implementing a particular technique. We create practical resources to accelerate implementation such as creating SOPs, training certificates, and technology hubs. We do all we can to make implementation as easy as possible. Furthermore, we use theories in human behavior change to champion and learn from early adopters. Finally, we ensure that any misconceptions or barriers are directly addressed in communication efforts including real world operational concerns such as time and money. Ultimately, to increase widespread implementation of key 3Rs techniques, the 3RsC will:

- **Accelerate the transition to new 3Rs techniques** by creating key resources such as universal SOPs, training certificates and presentations, and user-friendly technology hubs
- **Leverage principles of human behavior change theory** by championing early adopters and providing social proof of successful changes
- **Combat key barriers to 3Rs change** by directly addressing misconceptions about key techniques, core operational concerns such as time and money, and encouraging research where necessary.



# Goal 3—Promote the 3RsC

## Promote the 3RsC by expanding awareness of 3RsC resources & programs

The 3Rs Collaborative provides a wide range of resources—including our website hubs, posters, publications, presentations, newsletters, and social media presence—that are beneficial for understanding and implementing the 3Rs. These resources have supported a number of individuals and institutions to change practices for the better. Still, there are many more individuals and institutions that could benefit from our resources, but are unfamiliar with the 3Rs Collaborative. Even individuals that are aware of our organization may not be aware of all of our resources. Increased awareness and dissemination of our resources will accelerate implementation of the 3Rs across the national and international scientific community including the biomedical, cosmetic, and agrochemical research sectors.

### Strategy 3.1: Foster collaborations with key stakeholders in the academic, governmental, and industry communities

The 3Rs Collaborative works collaboratively across the scientific community to advance the 3Rs. This includes hosting our own presentations, workshops, or symposiums that forward the 3Rs. Additionally, we work closely with other 3Rs centers such as the NC3Rs and Swiss 3RsCC to work together where appropriate while avoiding duplication of key efforts. Fostering new connections to key individuals and institutions, as well as maintaining and expanding current contacts will help raise awareness and the impact of 3RsC programs. To foster key collaborations and optimize our impact, the 3RsC will:

- **Increase awareness and impact of 3RsC's programs** through workshops, conferences, and presentations
- **Engage with other 3Rs centers** to identify key areas of collaboration, cross-promotion, and gaps
- **Conduct outreach to key scientific institutions** including industry, academia, and governmental organization.

### Strategy 3.2: Strategy 3.2: Expand outreach to research professionals to raise awareness and dissemination of 3RsC-supported resources and programs

The 3Rs Collaborative fosters communication with key stakeholders in the scientific research community. We view this communication not only to be in one direction, but also seek feedback on our resources regularly. Our outreach to the research community is essential to help them understand the importance of the 3Rs Collaborative and how we can help advance implementation of the 3Rs. Our connections and relationships from this outreach are essential to the success of our mission to advance better science—for both people and animals. To increase our outreach and awareness of the 3RsC, we will:



- **Connect with the research community** through outreach activities such as workshops, meetings, presentations, social media, newsletter, and website
- **Strengthen marketing and outreach of 3RsC programs** to raise awareness and expand user pool
- **Promote the success and accomplishments of 3RsC programs** to the scientific community, emphasizing the importance of these accomplishments for the 3Rs.

# Resources Required

The strategic plan outlined in this document is ambitious but achievable. However, we can only achieve the goals we have outlined with additional help. As stated previously, this strategic plan is currently only supported by two full-time staff members. Our progress in the last few years has made it clear that highly qualified, full-time staff members are essential to furthering our mission. Our staff are an essential resource to reach our full potential as they support our working initiatives and communication efforts. For us to continue to grow and reach our goals, we need at least two additional staff members by the end of 2025.

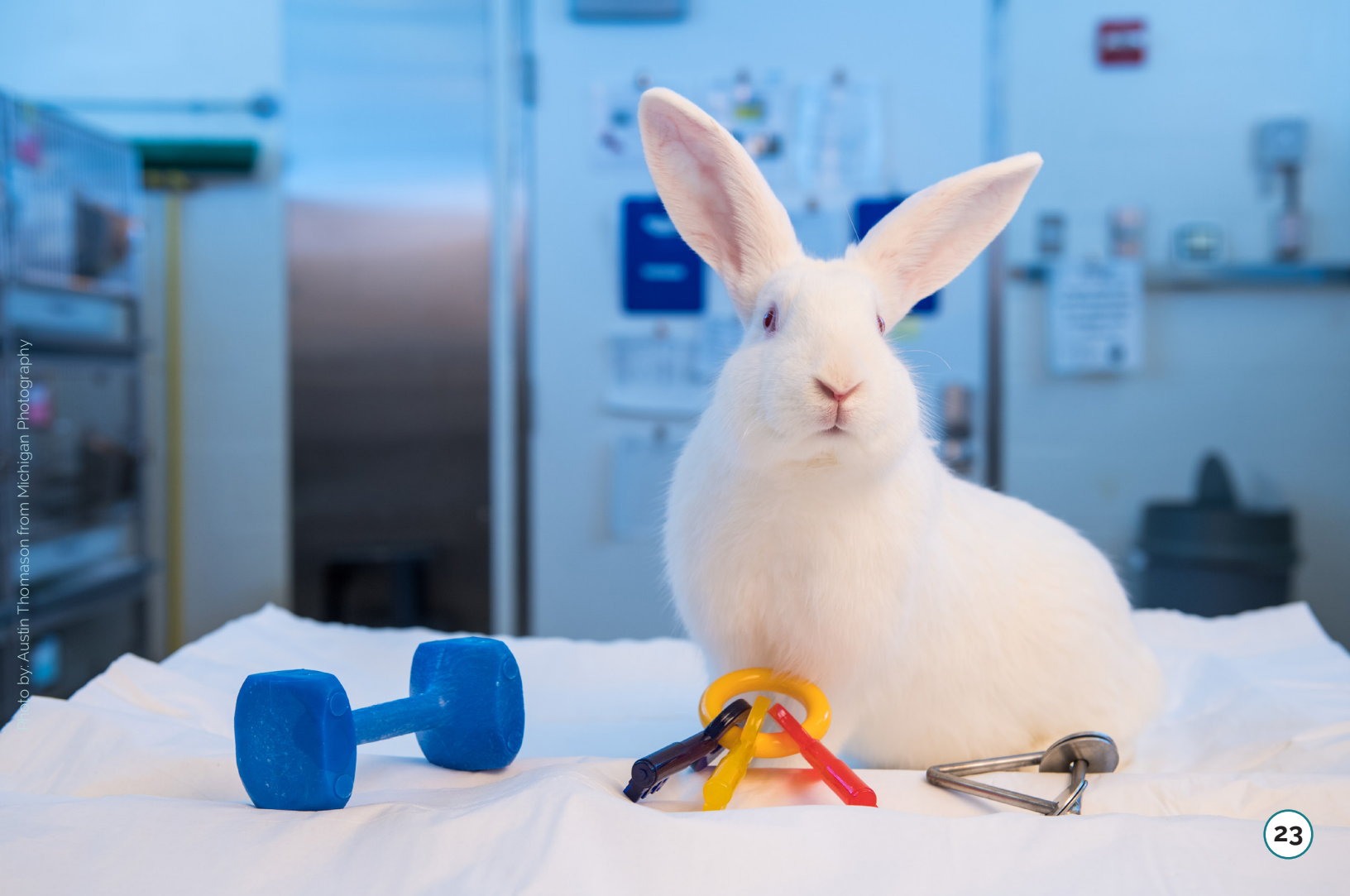


Photo by Austin Thomason from Michigan Photography



# Measuring Impact

We will continue to assess the impact of 3RsC as a whole and the impact of our specific programs to demonstrate the value, effectiveness, and reach of our work. We will collect both quantitative and qualitative information from a range of sources including surveys and testimonials. We will regularly publish this information on our website. We will use the template below (which is based roughly off the UK NC3Rs Evaluation Framework) for general assessment of the 3RsC. Each key area may have additional key performance indicators. Each specific initiative also has its own assessment framework.

## INPUTS

### Activities and Resources Provided by the 3RsC

- 1. General 3Rs Training and Resources**
  - # of general resources
- 2. Culture of Care Resources**
  - # of Culture of Care resources
- 3. Specific 3Rs Initiatives**
  - # of initiatives
- 4. Symposia, Presentations, and Other Events**
  - # of webinars
  - # of events
  - # of presentations
- 5. Collaboration with Other Organizations and Individuals**
  - # of collaborating organizations
  - # of collaborative individuals
- 6. Information Resources**
  - # of resources (total)
  - # of newsletters

## OUTPUTS/OUTCOMES

### Initial Results

- 1. Improved Understanding and Awareness of the 3Rs**
  - # of individuals at events
  - # of positive feedback mentions
- 2. Creation of New 3Rs Knowledge**
  - # of Publications
- 3. Development of Collaborative and Mentoring Networks.**
  - # of collaborations as shown by exchange of information
- 4. Dissemination Activities**
  - # of newsletter subscribers
  - # of website visits and visitors
  - # of social media followers (LinkedIn, Twitter, Facebook)

# Measuring Impact

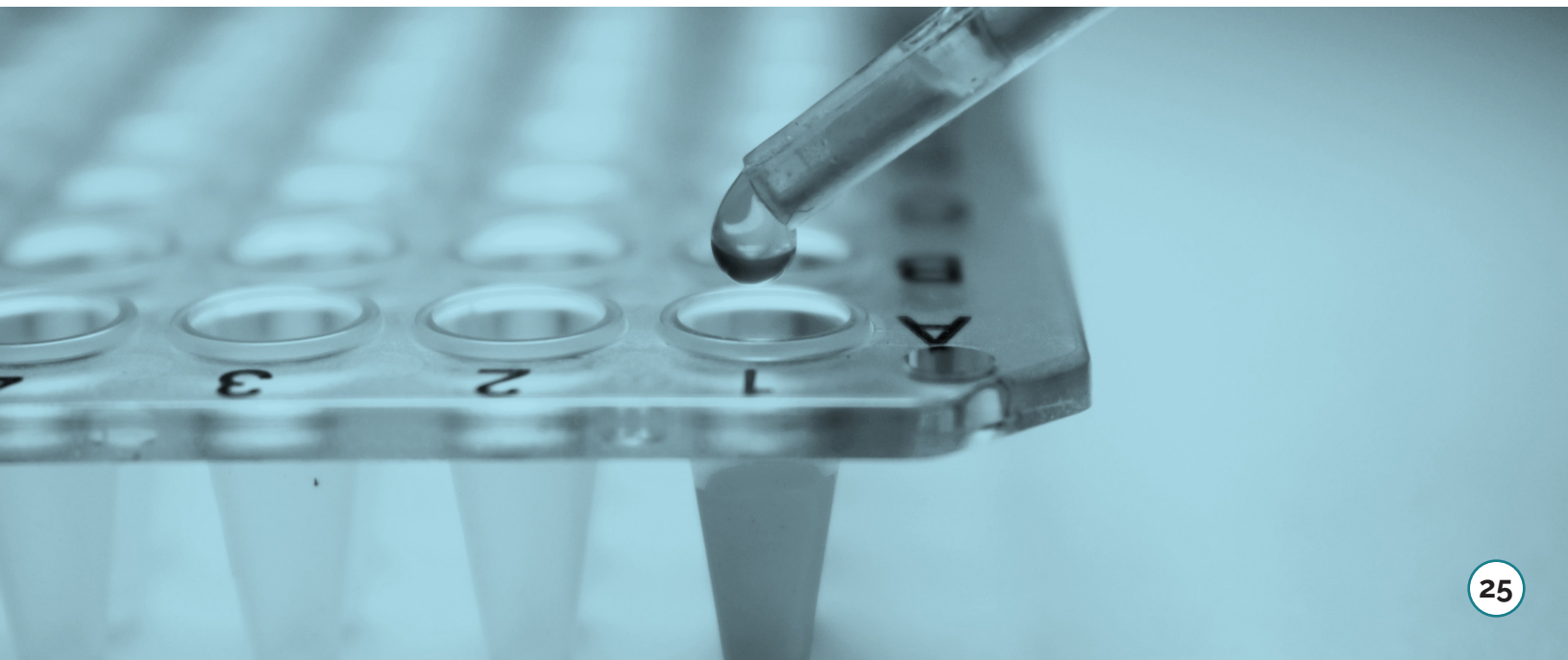
## INTERIM IMPACTS

### Changes in Perception, Policy, and Practice

- 1. Increased 3Rs Audience and Knowledge**
  - # institutions working with 3RsC
- 2. Uptake of Key 3Rs Techniques**
  - # of institutions adopting techniques promoted by 3RsC
- 3. 3Rs and Culture of Care Embedded in Institutional Culture**
  - # of institutions referencing the 3Rs and CoC in formal documentation
- 4. The 3RsC as a Trusted Source for 3Rs Information**
  - # of institutions consulting with the 3RsC
  - # of invited staff presentations
  - # of website visits and visitors
  - # of institutional members

## MATURE IMPACTS

- 1. Refinement Linked to 3RsC:**
  - Improved housing and handling
  - Objective indicators of improved welfare
- 2. Reduction Linked to 3RsC:**
  - Fewer animals used per experiment, including animals bred for that experiment, and/or more data per animal
- 3. Replacement Linked to 3RsC:**
  - Fewer animals used in the scientific pipeline
- 4. Better Science Linked to 3RsC:**
  - More predictive and translatable science.
  - More discoveries



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