Telling the Research Impact Story of COVID-19

June 10, 2020

Panelists:

Tanju Karanfil, Vice President for Research, Clemson University

Melur (Ram) Ramasubramanian, Vice President for Research, University of Virginia

James Luther, Associate Vice President of Finance & Research Compliance Officer, Duke University

Moderator:

David Kennedy, Costing & Financial Compliance, COGR



Telling the Research Impact Story of COVID-19

June 10, 2020

Estimating COVID-19 research losses;

Addressing "Faculty and research effort due to the national emergency" (aka, idle time);

Establishing Communication and Training channels to address research status in a coordinated manner;

Telling the story in the RPPR;

Decision-making under uncertainty, with no guarantee of supplements.



FINANCIAL ANALYSIS OF COVID-19 ON UNIVERSITY RESEARCH ENTERPRISE

COUNCIL on GOVERNMENTAL RELATIONS

Tanju KARANFILVice President for ResearchClemson University

June 10, 2020



Objectives

- 1. To develop a financial model for the assessment of COVID-19 on the research enterprise of the University
- 2. To analyze different scenarios with the model FOR INTERNAL USE ONLY

Guidelines and Assumptions

- 1. Model only covers university research enterprise (excludes academic affairs, athletics, etc.)
- 2. Model parameters were determined for Clemson University
- 3. Major cost categories are included
- 4. Data collection relies on Clemson's accounting and management systems, although some uniform data (NSF HERD) may be used
- 5. Actual expenditures are used to continuously update and improve model projections
- 6. The model identifies costs by research category but does not identify mechanism to cover costs

MODEL PARAMETERS

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EXPENSES

- E1. Payroll charges for personnel on sponsored projects with low or no productivity
- E2. Replacement costs for expired materials and supplies and for donations during COVID-19 (PPEs, reagents, etc.)
- E3. Unreimbursed cancellation expenses (travel, conferences, etc.)
- E4. Repair and recommissioning costs for research infrastructures, including equipment and instrumentation, animal models, cell lines, etc.
- E5. Costs during research ramp up (extra cleaning of research spaces, additional protective gears, re-hiring and retraining personnel)

MODEL PARAMETERS

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EXPENSES (CONTINUED)

- E6. Additional administrative support for management of COVID-19 applications and modifications in submission deadlines by sponsors
- E7. Reduced number of Post-docs and RAs for Sponsored Projects in the Fall 2020 and Spring 2021 semesters

MODEL PARAMETERS



Revenue Loss

- Loss of revenues at various research units (core facilities, departmental service units, clinical or field trials, reductions in commodity sales and program at agriculture research and education centers)
- 2. Termination of (industry) contracts and service agreements
- 3. Unreimbursed or lost tuition

MODEL IMPLEMENTATION – OPTION 1: <u>APRIL 1-SEPTEMBER 1, 2020 PERIOD</u>

	Estimate (\$)	Data Source
E1. Payroll Charges		
T/TT Faculty	\$XX,XXX	FY19 Exp., Grants & Contracts Admin. (GCA)
Res. Faculty	\$XX,XXX	FY19 Expenditures, GCA
Post-docs	\$XX,XXX	FY19 Expenditures, GCA
Graduate Students	\$XX,XXX	FY19 Expenditures, GCA
Staff	\$XX,XXX	FY19 Expenditures, GCA
Others	\$XX,XXX	FY19 Expenditures, GCA
E2. Replacement of Materials		
Unusable	\$XX,XXX	Colleges
COVID-19 Donations	\$XX,XXX	Emergency Operations Center (EOC) & Chief Financial Officer (CFO)
E3. Cancelation Expenses	\$XX,XXX	FY19 Expenditures, Colleges
E4. Repairs and Recommissioning Expenses	\$XX,XXX	Colleges, CFO
E5. Research Ramp Up Cost	\$XX,XXX	EOC, CFO, & Colleges
E6. Additional Administrative Support	\$XX,XXX	Research Division
E7. Reduced Research Personnel	\$XX,XXX	Colleges
L1. Loss of Revenues	\$XX,XXX	Core Facilities, Colleges, Research and Education Centers (RECs)
L2. Termination of (Industry) Contracts	\$XX,XXX	GCA, Office of Industry Contracts
L3. Unreimbursed or Lost Tuition	\$XX,XXX	FY19 Exp., Sponsored Programs & Graduate School

APPROACHES FOR MODEL IMPLEMENTATION: CLEMSON (PER \$100M EXPENDITURES FY2019)



APPROACHES FOR MODEL IMPLEMENTATION: CLEMSON (PER \$100M EXPENDITURES FY2020 Q3)



APPROACHES FOR MODEL IMPLEMENTATION: CLEMSON (PER \$100M EXPENDITURES Analysis Period April 1 – September 1)



APPROACHES FOR MODEL IMPLEMENTATION: FY 19 Expenditures – Agency Payroll

National Science Foundation

DHHS/National Institutes of Health





APPROACHES FOR MODEL IMPLEMENTATION: FY 19 Expenditures – Agency Payroll

U.S. Department of Agriculture



U.S. Department of Energy



■ Visiting Faculty

Projected COVID-19	EST	MATES	ACTUAL COSTS				
Financial Impact	April – Aug. 31	Fall 2020	TOTAL COS	T April	Мау	Etc	
E1. Payroll Charges							
T/TT Faculty	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
Res. Faculty	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
Post-docs	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
Graduate Students	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
Staff	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
Others	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
TOTAL	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
E2. Replacement of Materials							
Unusable	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
COVID-19 Donations	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
TOTAL	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
E3. Cancelation Expenses	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
E4. Repairs and Recommissioning	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
E5. Research Ramp Up Cost	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
E6. Additional Administrative Support	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
E7. Reduced Research Personnel	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
TOTAL EXPENSES	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
L1. Loss of Revenues	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
L2. Termination of (Industry) Contracts	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
L3. Unreimbursed or Lost Tuition	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
TOTAL REVENUE LOSS	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	\$XX,XXX	
Org. units Financial impacts	Summary	E1 Payroll	E2 Materials	E3 Cancellation	E4 Repairs	Etc	



Top Challenges

- Uncertain timeframe: 2-3 months or a 1-2 year problem
- Widespread impact touching all University operations
- No past experience or data to guide projections of the institutional budget



Pressure on Faculty and Researchers

In March

- Convert classes to online instruction
- Scale back research and facility access schedules
- Address new family needs (childcare, elderly care)

Now

- Prepare for hybrid teaching in the Fall
- Slowly ramp up research activities
- Hiring freeze could increase teaching loads
- Uncertainty about the arrival of international students and researchers in the Fall
- Furloughs
- Potential new regulations for international students (H1-B, Optional Practical Training)



Faculty Support at Clemson

- Operating Guidance, FAQs, Funding Opportunities and other resources continuously posted to <u>COVID-19 Research Resources webpage</u>.
- Advising faculty on unique research needs and plans for each funded project to best articulate COVID-19 disruptions to sponsors and programs officers.
- Monitoring OMB and federal agency guidance and communicating accordingly



Telling the Research and Financial Impact Story of COVID-19 Estimating research losses using modeling and other methods

> Melur K. "Ram" Ramasubramanian Vice President for Research University of Virginia

Council on Governmental Relations June 10-12, 2020 Virtual Meeting

June 10, 2020

University of Virginia Estimation of COVID-19 related losses in Research

- Estimation approach with aggregate monthly expenditure data components as input
- Assumptions regarding current state (not measurable due to lag time)
- Assumptions regarding proportion of salaries and supplies and other expenses that must be reimbursed for successful ramp-up.
- Best case and worst case estimates based on assumptions of successfully receiving reimbursement from the agencies

University of Virginia

Estimation of COVID-19 related losses in Research

- 1. Compensation without work for graduate students and some "non-designated" personnel.
- 2. Replacement costs for unusable (expired) materials and supplies (sunk cost), travel for research activities and conferences that were allowed and spent without travel actually taking place.
- 3. Repair and recommissioning costs for research infrastructure including equipment and instrumentation, cell lines, and animal models that have to be recreated and shared among many projects and cannot be charged to a single project. Additional costs include general laboratory supplies such as gases, chemicals, protective gear depleted during the ramp down period and animal costs. For social science researchers, costs associated with rehiring and retraining of social workers to support research going forward.
- 4. Personnel costs during the ramp up period to get the labs fully operational before actual research activities can be undertaken.
- 5. Support costs for graduate students on contracts and grants that have expired or reneged by the sponsor to allow for students to make progress towards their degree.
- 6. Institutional F&A loss associated with all the above.

7. Lost Revenue

Expense Categories-UVA

- Faculty Salaries
- Contractual Services
- Equipment
- GTA/GRA
- Healthcare Services
- Other
- Scholarships and Fellowships
- Supplies and Materials
- Travel
- University Staff
- F&A
- Wages
- Recoveries
- Continuous Charges
- Classified Salaries

University of Virginia Data Source (scaled for \$100M research expenditures)

Comparison of Expenses for FY19 & FY20 by Expenditure Category - Normalized for a Research Expenditure Total of \$100M



Expenditure data excerpts-salaries, supplies & materials trend

Comparisons:	March FY'19/FY'20 (\$M)	April FY'19/FY'20 (\$M)	May FY'19/FY'20 (\$M)
Equipment	.9/1.3	.8/.4	.49/.19
Materials & Supplies	2.6/2.3	3.9/2.9	2.9/1.8
Faculty Salaries	7.1/7/3	6.9/7.2	7.2/7.2
GTA/GRA	1.0/1.1	1.0/1.7	1.6/1.3
Fellowships	1.0/0.77	0.8/0.8	1.2/0.9
Travel	.52/.40	0.7/0.1	0.55/0.04
F&A	6.8/7.1	6.8/7.5	7.6/6.5

UVA FY2019 Expenditures by Category



- Compensation
- Contractual Services
- Equipment
- Health Care Services
- Other
- Scholarships & Fellowships
- Supplies & Materials
- Travel
- UVa, F&A Costs



NSF Expenditures by Category



NIH Expenditures by Category

27%





- Compensation
- Contractual Services
- Equipment
- Supplies & Materials
- Scholarships & Fellowships
- UVa, F&A Costs

Travel



FY20 thru 5/31



Assumptions and Calculations-of estimated losses (I/II)

Observations

 10% of the total research expenditures is materials and supplies; and 90% is items that includes salaries, graduate student stipends, tuition, travel, publication costs, etc., except direct materials and supplies that needs replenishment

Best Case Example: Total federal research expenditures for the month of \$25M, and a non-federal expenditures of \$8M

Sample Assumptions:

- 50% of research expenditures is for actual work with key personnel and not eligible for reimbursement; 95% of the remaining 50% expenditures is reimbursed by the funding agencies.
- For non-federal sponsors, only 25% of the "unproductive" half is reimbursed.
- For materials and supplies, a 50% loss for the month is included. No reimbursement assumed. M&S is about 10% of total expenditures (data)
- the uncovered loss for the Month is (\$25M x 0.5 x 0.05 +\$8M x 0.5 x 0.75) x (0.9) + (\$25M+\$8M)* 0.1 x 0.5 = \$4.9125M (Institutional ESTIMATED Loss) per month

Assumptions and Calculations-of estimated losses (II/II) Observations

 10% of the total research expenditures is materials and supplies; and 90% is items that includes salaries, graduate student stipends, tuition, travel, publication costs, etc., except direct materials and supplies that needs replenishment

Assumptions: example Worst Case:

- 50% of research expenditures is for actual work with key personnel and not eligible for reimbursement; 75% of the remaining expenditures is reimbursed by the federal funding agencies.
- For non-federal sponsors, 0% of the "unproductive" half is reimbursed.
- For materials and supplies, a 50% loss for the month is included. No reimbursed
- Assuming total federal research expenditures for the month of \$25M, and a non-federal expenditures of \$8M, the uncovered loss for the month is
 (\$25M x 0.5 x 0.25 +\$8M x 0.5 x 1) x (0.9) + (\$25M) x (0.1*0.5) +\$8M*0.1= \$8.4625M (Institutional ESTIMATED Loss) per month

Federal Support for Academic R&D 2018 data

Academic R&D expenditures, by source of support: FY 2018



Billions of current dollars

Note(s)

Numbers may not add to totals in other figures because of rounding.

Source(s)

National Center for Science and Engineering Statistics, National Science Foundation, Higher Education Research and Development Survey (HERD), FY 2018.

Scaling to National Estimates

How does this Scale at a national level? (Federal and Institutional Investments)

Assuming a full reimbursement of 50% expenditures for 3 months, the total

- Federal portion reimbursed = \$25M x .5 x 0.9+\$25M*.1*0.5=\$12.5M per month
- Assuming 3 months of loss (since we are ramping up starting June 1, the 50% number of paid without work will decrease)-Marcy 15 thru June 15. Total losses =\$12.5M x 3 =\$37.5M
- Annual total research at \$25M/month = \$300M
- Proportion = \$37.5M/\$300M = \$12.5%
- Federal R&D support to academic institutions (2018 data) \$41.9B
- 12.5% at a 50% lost work is \$5.24B
- This does not include the Institutional investment in R&D in the form of core facilities and other infrastructure and seed funding that had to remain operational during the 3 months of research ramp down. (Institutional portion of R&D is \$20.4B). A total of \$62.3B
- Total loss at 50% operation during the 3 months out of \$62.3B(12.5% loss) = 7.79B
- Several institutions shut down to 10% level depending on the region. Taking an average 80% loss instead of 50% for 3 months, \$62.3 x 0.8 x3/12 = 12.46B.

Questions to PIs (Survey) (I/III)

- Compensation without work for graduate students and some "nondesignated" personnel.
 - List the names of the student or staff, the project account they were on before March 17, and until June 30th continued to receive payment without work assigned. If some work was done, what proportion of the personnel time was truly for unassigned work status?
- Replacement costs for unusable (expired) materials and supplies (sunk cost), travel for research activities and conferences that were allowed and spent without travel actually taking place.
 - Is this a listed item on your grant? IF so, indicate what materials have to be repurchased, its quantity, and cost?
 - Travel you spent money that was non-refundable, but a trip you must take as part of the grant obligations? What are they and estimated cost?

Questions to Pls (Survey) (II/III)

- Repair and recommissioning costs for research infrastructure including equipment and instrumentation, cell lines, and animal models that have to be recreated and shared among many projects and cannot be charged to a single project. Additional costs include general laboratory supplies such as gases, chemicals, protective gear depleted during the ramp down period and animal costs. For social science researchers, costs associated with rehiring and retraining of social workers to support research going forward.
 - What equipment, machinery, instrumentation was shut down and what is the justification for additional funds to start up? What is the required actions and the costs associated with it?
- Personnel costs during the ramp up period to get the labs fully operational before actual research activities can be undertaken.
 - Estimate for how long it would take and the person hours involved with costs to ramp up to your normal 100% operation?

Questions to Pls (Survey) (III/III)

- Support costs for graduate students on contracts and grants that have expired or reneged by the sponsor to allow for students to make progress towards their degree.
 - Provide details on the grant, the status of the student, project work to be completed by the student for the degree, time, and cost?
- Institutional F&A loss associated with all the above.
 - Provide automatic calculation.

Future Directions

- Automated assessment of losses from PI responses
- Individual documentation for agencies Assist PIs to write to their program managers in a concise uniform manner with institutionally consistent data
- Training and information for PIs on what to put into RPPR that covers the COVID-19 ramped down research period that is consistent with institutional data, with awareness of Institutional policies
 - Centralized data for institutional losses such as core facilities etc.,



CONSIDERATIONS FOR FINANCIAL ANALYSIS OF COVID-19 ON UNIVERSITY RESEARCH ENTERPRISE

Jim Luther - Duke University AVP Finance, Compliance Officer & Sponsor Liaison June 10, 2020





Overview of Topics

1) National Context & Considerations Impacting an Institutional Approach

2) Duke University Approach







University Timeline – COVID Impact



Other Research Issues: Core Lab – Burn Rate, Industry & Foundation Relations, Definition of Essential, International faculty/student, etc.

Concerns: Safety, Continuity of Mission, Graduate/PostDoc Support, Financial viability...

Duke

Revenue Issues





National Context

<complex-block>

Journals 🚽

At the University of Michigan, researchers returning to laboratories have their temperatures taken under new health and safety procedures. UM PHOTOGRAPHY

As pandemic pounds U.S. universities, federal support helps their labs stay afloat

"Amidst the sea of red ink, however, one stream of revenue has remained healthy: the money universities receive from others especially the federal government—to carry out research. That fact looms large in any effort to forecast the impact of COVID-19 on U.S. academic research."

Michael Crow, president of Arizona State University, recently described his 65,000student institution as <u>a "battleship" that was</u> plowing ahead despite "40-foot waves" and even stormier seas on the horizon.

By Jeffrey Mervis | Jun. 5, 2020 , 11:50 AM

Contents



Science

AAU, APLU, AAMC, & ACE Letter

Dear Speaker Pelosi, Majority Leader McConnell, Minority Leader McCarthy, and Minority Leader Schumer:

April 7, 2020

- 1) <u>Sustaining the research workforce</u> until operations return to full speed. This includes support for graduate students, postdocs, early career researchers, principal investigators, and technical support research staff.
- 2) Additional COVID-19-related research costs, including but not limited to personnel, personal protective equipment (PPE), supplies, equipment, and additional analytic capabilities.
- 3) Ramp-down and eventual ramp-up of costs to close and restart research activities.
- 4) Inactivity of core research facilities and research and technical staff that support federally funded research by providing instrumentation, equipment, computation, analysis, and other research services.
- 5) <u>Compliance</u> with federal regulations and <u>audits</u>
- 6) International graduate students and researchers visa status.



AAU, APLU, AAMC, & ACE Letter

Dear Speaker Pelosi, Majority Leader McConnell, Minority Leader McCarthy, and Minority Leader Schumer:

April 7, 2020

- Additionally, we recommend providing temporary regulatory and audit flexibility. Specifically, we recommend:
 - 1) Supplemental appropriations of \$26 billion for the major research agencies
 - a) to cover requests for research grant and contract supplements
 - b) for emergency relief to sustain research support personnel and base operating costs for <u>core</u> <u>research facilities</u> and user-funded research services
 - c) to fund additional graduate student and postdoc fellowships, traineeships, and research assistantships for up to two years
 - 2) Urge or require that federal research agencies immediately implement uniform guidance and policies that <u>provide flexibility</u> for research institutions during this national health emergency to cover salaries, benefits, and tuition support for graduate students and research personnel engaged in federally sponsored research grants and contracts.
 - 3) OMB and the research agencies should be directed to provide <u>temporary regulatory</u> and audit flexibility during the pandemic period and for a year afterwards. Subsequent government audits conducted for this period also should allow for additional flexibility, particularly as it relates to the accounting of time and effort reporting given the extreme and unique situation.



National Context

- NIH Director Francis S. Collins said that number includes both lost productivity from shuttered laboratories as well as keeping scientists and their staff employed.
- Sens. Edward J. Markey (D-Mass.) and Thom Tillis (R-N.C.) asked Senate leadership for \$26 billion in the next round of stimulus funding to address the challenges that U.S. scientific research workforce faces during this crisis.



Francis Collins, director of the National Institutes of Health, testifies during a Senate panel hearing on May 7, 2020. Photographer: Andrew Harnik/AP Photo/Bloomberg

Virus Will Cost NIH \$10 Billion in Lost Research, Director Warns (1)

May 7, 2020, 1:35 PM; Updated: May 7, 2020, 3:22 PM

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Duke University - Primary Focus

- Clinical Readiness
 - COVID Clinical Care Now → Elective in Future
- Employee and community safety and support
- Academic mission
- COVID Specific-Research
- Research Lab Re-opening





Duke – "Expense Management"

- Merit increases suspended (except for staff <\$50k)
- University match for retirement plans suspended
- Salary reductions for senior-level employees
- Hiring freeze
- Suspension of nearly all planned new construction and renovations



Tracking of Idle Effort





Tracking of Idle Effort

Dukeuniversity

Person	4/15 Irom SAP	Working	ldle	Working	Idle	Working	late
Jennifer Taylor	20%	Enter % Effort	Enter % Effor				
Derek Jones	20%	Enter % Effort	Enter % Effor				
Blake Perrault	20%	Enter % Effort	Enter % Effor				

A. Person: List of personnel on the WBSE

Duke MRESEARCHAnne

- B. Current Effort: Total current effort allocated to project WBSE
- C. Month of Effort: Month the effort is being captured for. Enter % for each type of effort: Working and Idle. If the individual does not have effort for a given month, enter 0. A zero must be entered to reflect no effort.
- **D. Notes:** Record additional information, such as unusual situations, or an explanation of adjustments
- E. Save: You must click SAVE after entering info

TRACKING EFFORT DURING COVID-19



Programmatic



TRACKING EFFORT DURING COVID-19

with PO (RPPR) Effort Grant-by-Management Grant Reporting Idle Time Reporting **Future** Audit **Request for** Supplement / (OIG & NCE / Adjustment to UG) Scope

Programmatic Discussions



Reducing The Risk → Incurring Costs

- An online symptom screening system
- A robust symptom-based testing program for our workforce
- Installation of handwashing stations throughout our buildings
- Provision of face masks for those who don't have their own
- Controlled access to buildings in order to reduce the density of people and facilitate social distancing
- Clear signs in common areas indicating safety guidelines
- Frequent walkthrough of labs by departmental leaders assigned to buildings

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Quan	tifiable
Co	osts



University School of Medicine



Duke UNIVERSITY

Duke University School of Medicine

	Swipe Count	Change from 3-16-2020	Change from Prev Week	Change from Prev Day		
Research Personnel	1,305	-612 🔻	307▲	819▲	1,917	
Non-Research Personnel	279	-439 🔻	25▲	245		Da
Grand Total	1,584	-1,051 🔻	332	1,064		

Building	Swipe Count	Change from 3-16-2020	Change from Prev Week	Change from Prev Day	718
SOM - OVERALL	1,584	-1,051	332	1,064	
CARL	194	-269	106	149	
BRYAN	164	-105	67	107	
MSRB1	202	-116	56	169	
SANDS	133	-126	55	102	
GSRB2	170	-64	44	121	
JONES	202	-110	36	154	
MSRB2	188	-89	24	143	Rad
LSRC	186	186	22	114	Duu
VIVARIUM	101	-69	18	69▲	
CARMICHAEL	63	-70	17	37	
GSRB1	80	-18	14	55▲	-
SORF	42	-2	13	32	
RP1	21	-4	8	19	
MSRB3	130	-47	7	91	² به ا
F-CIEMAS	36	36	7	25	uno
USSTEEL	62	62	7	42	So o
NANALINEDUKE	164	-60	5	97▲	i pe 1
RP2	12	2	4	12	S
RP3	47	5	2	40	dge
NORTH	5	5	1	5▲	8 1
AERI			0	0	
CCIF			0	0	
HUDSON			0	0	
WADSWORTH			0	0	
323FOSTERST			0	0	
RP4	55	-17	-1	53▲	
CHESTERFIELD	18	-21	-2	13	



DUKE UNIVERSITY

Determining the Financial Implications

- When determining the short-term Financial Implications, it's critical to consider an institution's "Restart Objectives". Two options could include:
 - Return to pre-COVID research efficiencies or
 - Maximize efficiency while "Operating in a COVID World" including reducing remote operations?
- Financial Implications include
 - Cost-savings
 - Lost productivity
 - Tangible cost/revenue losses





Somewhat Calculable

• Cost of Idle effort

Duke UNIVERSITY

- Replacement of donated PPE
- Loss of revenue for cores/shared resources
- COVID Testing costs
- Cost related to adding sanitizing stations to bldg. entries/labs, etc. and managing access
- Unreimbursed cancelled travel expenses
- Reestablishing cell lines // Reestablishing animal models
- Retesting/calibrating equipment
- Costs related to lab reconfiguration to operate safely with COVID
- Purchasing replacement reagents for those that have expired
- Additional admin support for management of COVID oversight
- Need for increased imaging to support remote work access

Difficult to Quantify

- Reenrolling human subjects for trials that were paused
- Recruiting/training new support staff/students/post-docs if people are no longer available to work in the lab
- Delayed supply chain

Duke UNIVERSITY

- Cost related to moving labs to 24 hour shifts
- Unknown costs related to stalled/stopped research building renovation & construction
- Cost of inability to work at same previous level of efficiency (due to remote status, etc.)
- Lack of PPE to enable research labs to open
- Delayed research due to faculty/staff unable to travel and stuck in other states/countries
- Increased lab costs (or research inefficiencies) related to required density issues
- Inability to enroll subjects because clinical activities are reduced
- Reduced efficiency for enrolling subjects because people are concerned about coming into clinic
- Immuno-compromised people staying at home
- Slowed return to work due to day-care/school closures
- Redirection of entire strategic focus to "Operating in a COVID World" and associated opportunity cost
- Termination of industry and service agreements
- Loss of labor related to Visiting students/staff to labs

Summary

 Financial Implications = Lost revenue, additive costs to manage COVID19, Reduction of efficiency, Various Ramp-up (e.g. cell lines, reagents), Idle Time, etc.

- Calculable vs. Non-Quantifiable

- Uncertainty of supplements and regulatory flexibility
 - June 17th
 - And Beyond...

• "40 foot waves & even stormier seas on the horizon"







Next Session: 2 p.m. Guest Speaker, Dr. Kelvin Droegemeier, Director of the Office of Science and Technology Policy

Thank You

Visit us at <u>www.cogr.edu</u>

COUNCIL ON GOVERNMENTAL RELATIONS

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