

MINUTES OF THE MEETING
OF THE
MICHIGAN STATE UNIVERSITY
BOARD OF TRUSTEES

April 12, 2019

Acting President Satish Udpa read the following statement before the meeting was called to order.

I want to start out today, as I did at the February meeting, to publicly acknowledge the sexual assault survivors and again issue a formal apology in person to those attending today. More than a year ago, I wrote to colleagues of the Nassar survivors that we share their anguish, and our first obligation is to help them recover and become whole. I know that we have a long and difficult road ahead, and we may be tested as more facts emerge. I said that we cannot change the past, but we can and will devote time and resources to foster healing and create a culture that provides a safe environment for all members of our community.

That is how I feel, and I will work to establish the policies and procedures necessary to put us on that road. To those who are attending today, and those who cannot or could not, I want you to know that on behalf of this university that I love, as an acting president and as a former dean and faculty member, I realize the need to formally apologize and effectively atone. I have been asked by some survivors to acknowledge them by name. And so, I now address the Sister Survivors, many of whom are here with us today. Some wish to remain anonymous, and I will, of course, honor their wishes. Others wish to have their name read, and they may stand to be acknowledged. I will do my best, but I apologize in advance if I mispronounce your name.

Some survivors attending today are:

Alyssa Avery, Autumn Blaney, Kelly Buchanan, Savannah Coomer, Kat Ebert, Nicole Ensing, Ashley Erickson, Grace French, Lindsay Gamet, Trinea Gonczar, Katherine Gordon, Megan Halicek, Louise Harder, Christine Ann Harrison, Emma Ann Miller, Jennifer Hayes, Melissa Hudecz, Emily Meinke, Alexa Moore, Cassidy Robinson, Kayla Spicher, Amanda Thomashow, Krista Wakeman, and Holly Wiles.

Other sister survivors who could not be here today are:

Reed Anderson, Alexandra Brockway, Elena Cram, Jane NLF-1 Doe, Rachel Haines, Anna Loudis, Eve Petrie, Nicole Reeb, Stephanie Robinson, Val Sperdo, Olivia Venuto, and Chrissy Weathersby.

I apologize to anyone whose name I forgot. To each of you, and the survivor community, I am sorry you were subjected to the pain and humiliation of sexual assault by somebody

you should have been able to trust. We failed to comprehend and acknowledge your injuries. We were too slow to grasp the scope and enormity of the offense you endured. And, we failed to treat you with the respect and care you deserve even as we sought to make amends.

You won't hear me talk about putting this pain behind us. Neither the pain of the survivors, nor the pain of our collective souls will be healed quickly or easily. This will be a long journey of healing. We have made many changes at MSU, and will make more. My commitment to each of you today is to listen more closely, ask more caring questions, and act more thoughtfully as all of us work toward a campus culture focused on safety and respect.

Thank you for coming and sharing your stories and experiences. Once again, I ask that the entire MSU community surround you with support. Thank you for sharing your insights and recommendations so we can work to prevent sexual assault, support survivors, and work to ensure their experience is not repeated. Thank you for your courage, which has made a difference and will continue to affect us all as we seek to go forward together.

I will end with my thanks to the Board of Trustees for once again giving me the opportunity to make these remarks.

Acting President Udpa called the meeting of the Board of Trustees to order at 8:15 a.m. in the Board Room.

Trustees present: Dianne Byrum, Joel Ferguson, Melanie Foster, Dan Kelly, Brian Mosallam, Brianna Scott, Nancy Schlichting, and Kelly Tebay.

University officers present: Acting President Udpa, Provost and Executive Vice President Youatt, Executive Vice President Wilbur, Secretary Barr, Acting Vice President and General Counsel Quinn, Vice Presidents Bales, Bollman, Byelich, Gore, Guerrant, Haas, Heil, Maybank, Swain, Associate Vice President Hunt, and Senior Advisor and Director Granberry Russell. Faculty liaisons present: Richard Bellon, Richard Fulton, Jennifer Johnson, Mike Kaplowitz, and Deborah Moriarty. Student liaisons present: Meagan Abel, Ten-Niah Kinney, James Liu, and Katherine Rifiotis.

All actions taken were by unanimous vote of the Trustees present, unless otherwise noted.

1. On a motion by Trustee Scott, supported by Trustee Mosallam, the **BOARD VOTED to approve** the agenda.
2. On a motion by Trustee Kelly, supported by Trustee Mosallam, the **BOARD VOTED to approve** the minutes of the February 15, 2019 Board of Trustees meeting.
3. Public Participation on Issues Germane to the Agenda
 - a. Nick Rowe

- b. Lisa Hawley
- c. Kevin Bird
- d. Patrick O'Grady
- e. Shawna Rowe

4. President's Report

Acting President Udpa provided the following report to the Board.

A. NCAA Tournament Review

It has been an eventful few weeks in sports for MSU, and we are all proud of the way our men's basketball team, and the entire program, represented MSU over what was truly an exciting season. This team was gracious in victory and in defeat, and their deep shared sense of family touched all of us.

I want to thank this remarkable group of young men for such a thrilling season, and to the coaches, trainers and other staff who make the program such a success, year-in and year-out.

The NCAA Tournament was a great opportunity to demonstrate Spartan excellence to the nation, and thanks also are owed to our athletics and alumni organizations for producing such an amazing series of events for the Spartan faithful at tournament locations.

B. Debate at Nationals

The men's basketball team was not the only MSU team competing at the national level in Minneapolis recently. The MSU Debate team qualified last month for the National Debate Tournament there for the 23rd year in a row. Three MSU teams traveled to the University of Minnesota, which equaled the presence of only five other schools, including Harvard and Northwestern.

MSU debaters won a few and lost a few, but this was a young group, not one senior among them, and five of the six at nationals were sophomores. The tournament closed another successful season for the debate program, one that included a \$1.5 million alumni gift that is going mostly toward scholarships.

C. RVSM and Related Events

Next week, the MSU Museum opens an important exhibit reflecting on this university's difficult experience with sexual assault and the Nassar case in particular.

Co-curated by sister survivors and museum staff, the exhibit is called "Finding Our Voice: Sister Survivors Speak." One feature is a grove of trees bearing the teal ribbons survivors and families tied around campus trees last year. Those had to be removed because of their use by invasive gypsy moths, but were carefully preserved by MSU staff and are now part of the exhibit. A tree will also be planted in honor of sexual abuse survivors Tuesday near the museum, among other activities surrounding the opening. The exhibit will be in place through March 2020.

Last week was the annual "It's On Us Week of Action" on campus, which featured several special events to heighten awareness of sexual assault. I want to thank the students and staff who produced those programs.

A reminder to the campus community that our first survey focused on the culture, perceptions and policies associated with relationship violence and sexual assault launched last month and is still open if people haven't participated yet. We are looking forward to seeing the aggregated results, which will help establish a baseline for progress in our procedures and culture in the years to come.

Also a reminder that the annual "Race for the Place" 5K run and other events are coming up on Sunday, April 14. It is the biggest fundraiser for MSU Safe Place, which celebrates its 25th anniversary this week. Safe Place was the nation's first on-campus shelter and support program for students, staff and faculty or their partners experiencing relationship violence or other abuse. We are very proud of this pioneering and important program.

The Spartans Will Serve Global Day of Service, April 13, will bring Spartans together to serve their communities around the world while demonstrating the reach and power of the Spartan network. Last year more than 1,500 Spartan volunteers, both students and alumni, reported donating more than 7,000 hours of service to their communities. More information is available at <http://www.serve.msu.edu>

D. Top U.S. News Rankings

MSU earned number one rankings for five of its programs in the 2020 edition of the US News ranking of American graduate schools. For the 25th consecutive year, the College of Education earned the top spot for both elementary and secondary education.

Rehabilitation Counseling maintained its number one spot, joined at the top by Curriculum and Instruction for the first time in its history. Supply chain management retained its top spot after three years there, too.

U.S. News doesn't rank all programs annually. Those include our number one programs in African History, Industrial & Organizational Psychology and Nuclear Physics. Eight other programs ranked in the top 20 nationally, speaking very well of our graduate programs.

E. Fighting Opioid Abuse

All of us are alarmed by the growing opioid addiction crisis, and I want to take note of how MSU and our fellow Michigan University Research Corridor members are working to get more medical addiction specialists working in Michigan more quickly.

MSU is sharing a two-year, \$1.5 million dollar grant with Wayne State, the University of Michigan and Spectrum Health in Grand Rapids to train more physicians by streamlining the certification program. There are fewer than 200 addiction specialists in Michigan currently, and only one in the entire Upper Peninsula.

The joint Michigan CARES program will assist physicians in fulfilling certification requirements through online courses, clinical experiences and leadership opportunities. As a group, we are going to get more specialists on the ground in Michigan to meet the opioid crisis.

The University Outreach and Engagement office is using another grant to develop an Opioid Prevention and Education Network. OPEN-MSU will work with community health agencies and other nonprofits in Michigan to build their capacities to address opioid abuse and addiction.

F. WKAR Awards

Congratulations are once again in order for WKAR, which was named the Michigan Public Television Station of the Year and the Public Radio Group One Station of the Year by the Michigan Association of Broadcasters.

G. Commencement Ceremonies

I'm looking forward to MSU commencement weekend May 3-5 and to saluting more than 9,000 of our Spartan baccalaureate and advanced degree earners. We are pleased to host two distinguished alumni, Governor Gretchen Whitmer and former Spartan quarterback Kirk Cousins of the Minnesota Vikings, as speakers at the programs on May 3.

5. Gift, Grant and Contract Report

Associate Vice President Hunt presented the Gifts, Grants, and Contracts Report for the period January 17, 2019 through March 12, 2019. The report is a

compilation of 370 Gifts, Grants and Contracts plus 51 Consignment/Non-Cash Gifts, with a total value of \$75,738,814.

Trustee Foster **moved to approve** the recommendation, with support from Trustee Mosallam.

THE BOARD VOTED to approve the recommendation.

Associate Vice President Hunt introduced Emily Steffke, MSU Undergraduate student, who gave the Board a presentation entitled "Sweatin' the Small Stuff: Molecular Mechanisms of Stress". (Appendix A)

6. Personnel Actions

Provost Youatt presented the following personnel actions.

Bills, Kenneth, AY-Associate Professor, Department of Accounting and Information Systems, with Tenure, effective August 16, 2019.

Crosson, Sean, AN-Rudolph Hugh Endowed Chair in Microbial Pathogenesis, Department of Microbiology and Molecular Genetics CNS, with Tenure, effective August 16, 2019.

Jones, Natasha, AY-Associate Professor, Department of Writing, Rhetoric and American Cultures, with Tenure, effective August 16, 2019.

Turner, Monique, AN-Professor, Department of Communication, with Tenure, effective June 1, 2019.

Verter, Nafiz, AN-Professor, Department of Supply Chain Management, with Tenure, effective July 1, 2019

Vos, Timothy, AN-Professor, School of Journalism, with Tenure, effective June 1, 2019.

Wu, Horng-Shiauann-AY, Associate Professor, College of Nursing, with Tenure, effective August 16, 2019.

Trustee Byrum **moved to approve** the recommendations, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendations.

7. Committee on Budget and Finance

Trustee Foster presented the Trustee Budget and Finance Committee Report and the following recommendations and resolutions.

A. 2019-20 Housing and Dining Rate Recommendations

It was recommended that the Board of Trustees authorize the Administration to implement academic year 2019-20 room and board rates consistent with the projected rate increase presented in January 2013 as part of the RHS ten-year strategic direction.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby adopts the basic residence hall double room and board rate of \$10,472 for freshman, transfer, and returning students who select the silver unlimited meal plan for the 2019-20 academic year.

BE IT FURTHER RESOLVED, that the Board of Trustees of Michigan State University hereby adopts a 1 % rate increase for 1855 Place and University Village apartments for the 2019-20 academic year.

Trustee Foster **moved to approve** the recommendation, with support from Trustee Kelly.

THE BOARD VOTED to approve the recommendation.

B. Replacement Policy 02-06-01—Capital Project Planning and Approval

It was recommended that the Board of Trustees revise its policies for the acquisition, construction, renovation, and maintenance of the University's buildings, roads, and infrastructure by increasing the approval threshold from One Million Dollars to Five Million Dollars and permitting the Administration to revise the procedures for obtaining Board of Trustee approval to provide efficiency and cost savings.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby renames Policy 02-06-01 (Construction and Other Real Property Improvements Project Planning and Approvals) "Capital Project Planning and Approval" and restates the Policy in its entirety as shown in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board of Trustees of Michigan State University hereby authorizes the Administration to make any necessary changes to the Campus Land Use Master Plan, University Ordinances, and University Policies to conform them to the Capital Project Planning and Approval Policy.

Trustee Foster **moved to approve** the recommendation, with support from Trustee Byrum.

THE BOARD VOTED to approve the recommendation.

C. Project Approval—Authorization to Proceed—Biological Safety Level-3 Research Laboratory

It was recommended that the Board of Trustees authorize the Administration to proceed with a Biological Safety Level-3 Research Laboratory expansion to accommodate the needs of recent faculty hires.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby authorizes the Administration to proceed with the project entitled "Biological Safety Level-3 Research Laboratory," with a project budget of \$3,500,000.

Trustee Foster **moved to approve** the recommendation, with support from Trustee Kelly.

THE BOARD VOTED to approve the recommendation.

D. Project Approval—Authorization to Proceed—Music Building Addition (*budget adjustment*)

It was recommended that the Board of Trustees authorize the Administration to increase the budget for the "Music Building Addition" to cover the increased costs of construction due to material costs and delays in commencing the project.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby authorizes the Administration to increase the budget for the project entitled "Music Building Addition," from \$36,250,000 to \$41,500,000 to cover increased construction costs.

Trustee Foster **moved to approve** the recommendation, with support from Trustee Byrum.

THE BOARD VOTED to approve the recommendation.

E. Project Approval—Authorization to Proceed—Cowles House—Accessibility and Interior Renovations

It was recommended that the Board of Trustees authorize the Administration to proceed with renovations to Cowles House to improve accessibility and functionality of the building.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby authorizes the Administration to proceed with the project entitled "Cowles House—Accessibility and Interior Renovations," with a project budget of \$6,000,000; and

BE IT FURTHER RESOLVED, that the Board of Trustees of Michigan State University hereby grants a variance to the University zoning ordinance to permit construction within protected green space.

Trustee Foster **moved to approve** the recommendation, with support from Trustee Kelly.

THE BOARD VOTED to approve the recommendation.

8. Academic Affairs Committee

Trustee Byrum presented the Trustee Academic Affairs Committee Report.

The committee on Academic Affairs received an overview of the collective bargaining process from the Director of Employee Relations. Provost Youatt also provided updates on Detroit initiatives and international programs.

9. Audit, Risk and Compliance Committee

Trustee Kelly presented the Trustee Audit, Risk and Compliance Committee Report and the following recommendations and resolutions.

A. Approval of contract terms

It was recommended that the Board of Trustees approve a contract between Michigan State University and *Cradle Genomics, Inc.* a company in which MSU faculty member Dr. Sascha Drewlo holds a financial interest.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a sponsored research agreement with *Cradle Genomics, Inc.*, consistent with earlier public notice given at a Board meeting and with a "Sponsored Research Agreement Term Sheet" presented to the Board for inclusion in its minutes. (Appendix B)

It was recommended that the Board of Trustees approve a contract between Michigan State University and *EeroQ Corporation*, a company in which MSU faculty member Dr. Johannes Pollanen holds a financial interest.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a sponsored research agreement with *EeroQ Corporation* consistent with earlier public notice given at a Board meeting and with a "Sponsored Research Agreement Term Sheet" presented to the Board for inclusion in its minutes. (Appendix C)

It was recommended that the Board of Trustees approve a contract between Michigan State University and *FibrosIX, LLC*, a company in which MSU faculty member Dr. Richard Neubig holds a financial interest.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a service agreement with *FibrosIX, LLC* consistent with earlier public notice given at a Board meeting and with a "Service Agreement Term Sheet" presented to the Board for inclusion in its minutes. (Appendix D)

It was recommended that the Board of Trustees approve a contract between Michigan State University and Dr. Gordon Henry, an MSU faculty member.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a publishing contract with Dr. Gordon Henry consistent with earlier public notice given at a Board meeting and with a "Publishing Contract Term Sheet" presented to the Board for inclusion in its minutes. (Appendix E)

It was recommended that the Board of Trustees approve a contract between Michigan State University and Dr. Elizabeth LaPensee, an MSU faculty member.

BE IT RESOLVED, that the Board of Trustees of Michigan State University, hereby approves a publishing contract with Dr. Elizabeth LaPensee consistent with earlier public notice given at a Board meeting and with a "Publishing Contract Term Sheet" presented to the Board for inclusion in its minutes. (Appendix F)

It was recommended that the Board of Trustees approve a contract between Michigan State University and Dr. William F. Porter, an MSU faculty member.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a publishing contract with Dr. William F. Porter consistent with earlier public notice given at a Board meeting and with a "Publishing Contract Term Sheet" presented to the Board for inclusion in its minutes. (Appendix G)

It was recommended that the Board of Trustees approve a contract between Michigan State University and Dr. Laura Schmitt-Olabisi, an MSU faculty member.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a publishing contract with Dr. Laura Schmitt-Olabisi consistent with earlier public notice given at a Board meeting and with a "Publishing Contract Term Sheet" presented to the Board for inclusion in its minutes. (Appendix H)

It was recommended that the Board of Trustees approve a contract between Michigan State University and Dr. Jinhua Zhao, an MSU faculty member.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby approves a publishing contract with Dr. Jinhua Zhao consistent with earlier public notice given at a Board meeting and with a "Publishing Contract Term Sheet" presented to the Board for inclusion in its minutes. (Appendix I)

Trustee Kelly **moved to approve** the recommendation, with support from Trustee Byrum.

THE BOARD VOTED to approve the recommendation.

B. Notice of Intent to Negotiate Contracts

Pursuant to State law, the Chair of the Trustee Committee on Audit, Risk and Compliance is requested to give public notice of the University's intent to negotiate contracts with *Jetfire Power Systems, Inc.*, a Michigan corporation. Dr. Harold Schock, Professor in the Department of Mechanical Engineering, and members of his family, have, or have options to buy, an interest in the company. As negotiations progress, detailed information about proposed contracts with *Jetfire Power Systems, Inc.* will be provided to the Board for its review in accordance with State law.

Pursuant to State law, the Chair of the Trustee Committee on Audit, Risk and Compliance is requested to give public notice of the University's intent to negotiate contracts with the *National Pesticide Safety and Education Center*. Mr. Tom Smith, Associate Director of MSU's Institute of Agricultural Technology, has an interest in the Center. As negotiations progress, detailed information about proposed contracts with the *National Pesticide Safety and Education Center* will be provided to the Board for its review in accordance with State law.

Pursuant to State law, the Chair of the Trustee Committee on Audit, Risk and Compliance is requested to give public notice of the University's intent to negotiate contracts with *Fraunhofer USA*. Dr. Thomas Scheulke,

Professor and Director of MSU's Center for Coatings and Diamond Technologies, has an interest in *Fraunhofer USA*. As negotiations progress, detailed information about proposed contracts with the *Fraunhofer USA* will be provided to the Board for its review in accordance with State law.

10. Student Life and Culture Committee

Trustee Scott presented the Trustee Student Life and Culture Committee Report and the following recommendations and resolutions.

A. Age-Friendly State of Michigan Designation

It was recommended that the Board of Trustees support the designation of the State of Michigan as an Age-Friendly State.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby supports the designation of the State of Michigan as an Age-Friendly State.

Trustee Scott **moved to approve** the recommendation, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendation.

B. Mobility Device Ordinance Amendments

It was recommended that the Board of Trustees amend University Ordinance 33.00 (Bicyclists—Traffic) and make conforming changes to Ordinances 5.01, 10.00, 12.00, 35.26, 36.05, and 38.00 to address the use of mobility devices.

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby amends University Ordinance 33.00 (Bicyclists—Traffic) and authorizes conforming changes to Ordinances 5.01, 10.00, 12.00, 35.26, 36.05, and 38.00 as shown in Exhibit A attached hereto to address the use of mobility devices on campus.

Trustee Scott **moved to approve** the recommendation, with support from Trustee Kelly.

THE BOARD VOTED to approve the recommendation.

11. Public Participation on Other Issues

- a. Betsy Riley
- b. Olivia Drexler
- c. Nilanjan Chakraborty
- d. Anna Pergler-Gordon

- e. Kelly Buchanan
- f. Kristin Nagle
- g. Erin Blayer
- h. Brian Conway
- i. Nicole Casady
- j. Gregory Spencer
- k. Lynne Erickson
- l. Elizabeth Lancaster
- m. Andrew Irons
- n. Areeba Nadeem
- o. Brian Krause
- p. Lauren Collier

12. Chairperson's Report and Trustee Comments

Trustee Byrum thanked survivors for their bravery in sharing their stories. She congratulated graduates for their achievements and noted the record number of graduates with a 4.0 grade point average.

Trustee Foster thanked all public commenters for speaking. She congratulated Coach Izzo and Coach Merchant for their runs in the NCAA tournaments. She thanked all the student liaisons for their work.

Trustee Tebay yielded the floor to a member of the public, which resulted in a disturbance.

13. Request to Adjourn

On a motion by Trustee Byrum, supported by Trustee Foster, **THE BOARD VOTED to adjourn** at 10:30 a.m.

Respectfully submitted,



Nakia Barr
Secretary of the Board of Trustees

**RESEARCH
PRESENTATION
TO THE MSU BOARD OF TRUSTEES**

APRIL 12, 2019

**STUDENT
PRESENTATION**


**EMILY STEFFKE
UNDERGRADUATE PRESENTER**

Facilitated by the Office of the Vice President for
Research and Graduate Studies

Emily Steffke, Undergraduate Student Presenter Introduction

April 12, 2019

Emily Steffke is a senior from Beal City, Michigan double majoring in Neuroscience in the College of Natural Science and English in the College of Arts and Letters, with a minor in Music on piano. She maintains a 4.0 GPA and is a member of the Honors College. Emily is an undergraduate researcher in the labs of Drs. A. J. Robison and Michelle Mazei-Robison in the Department of Physiology, where she studies the neurobiological underpinnings of stress, depression, and addiction. She is currently in the process of submitting a first-author publication in a peer-reviewed journal about her research, and she has been nominated for the nationally prestigious Goldwater Scholarship. Her work at Michigan State has served as a springboard to additional research opportunities around the world; Emily has completed summer research fellowships at the University of Oregon, the National Institute of Mental Health, and the German Cancer Research Center in Heidelberg, Germany. On campus, Emily is a student-athlete on MSU's Cross Country and Track teams. She is also the Co-Founder and President of Reach Outside, a student organization and pending non-profit dedicated to creating opportunities for underserved and at-risk youth experience all that outdoor recreation has to offer. Throughout her time at MSU, Emily has also been involved in the leadership of the sophomore honor society Tower Guard, volunteered with Pediatrics at Sparrow Hospital, mentored elementary students through Honors Times Two, and enjoys climbing with the MSU Rock Climbing Club in her free time. This summer, she will be leading teenagers on month-long backpacking treks in the four corner states through an experiential outdoor education program. She will return to MSU for a final year before pursuing an MD-PhD dual degree, with aspirations of becoming a physician-researcher specializing in treatments of pediatric brain cancer with novel immunotherapies.

A large, faint watermark of the Michigan State University logo is visible in the background, featuring a stylized sunburst and the letters 'MSU'.

Sweatin' the Small Stuff: Molecular Mechanisms of Stress

Emily Steffke

Robison and Mazei-Robison Labs
2018-2019 Dean's Research Scholar
Michigan State University



How are you feeling today?

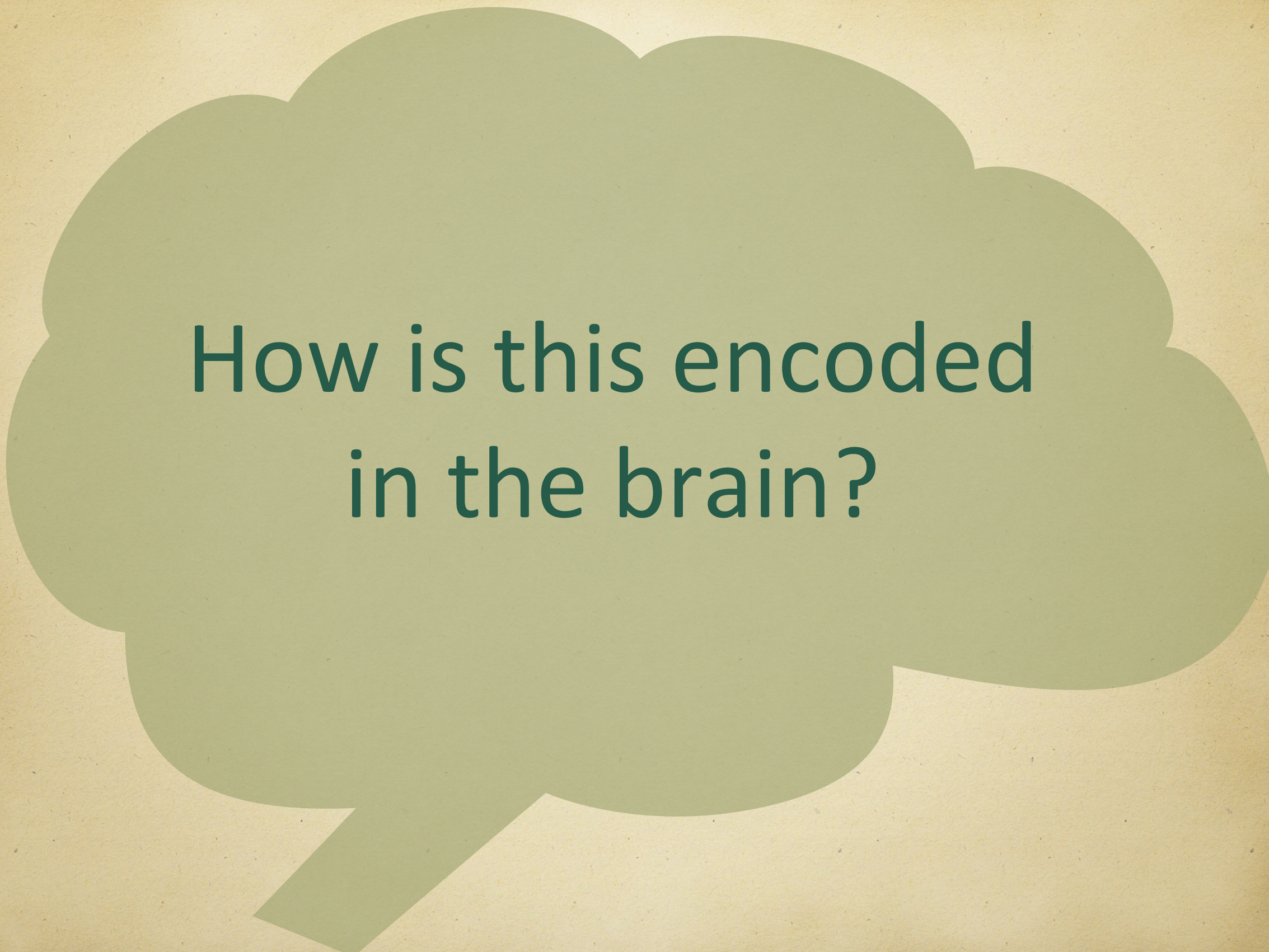
Stress

acute

- Cognitive facilitation
- Performance enhancement

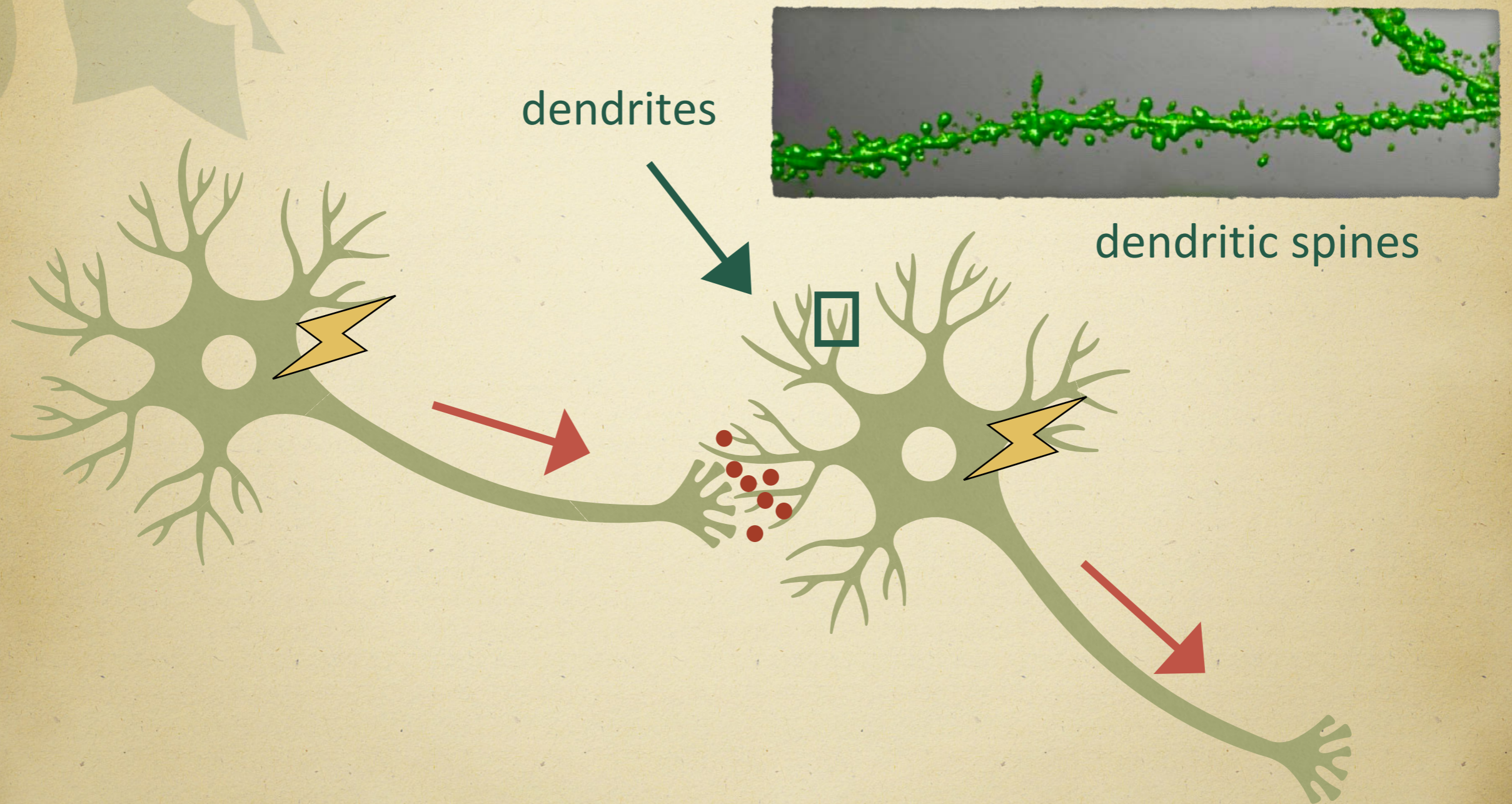
chronic

- Cognitive impairment
- Depression
- Memory loss
- Attentional impairment
- Executive dysfunction
- Poor decision making



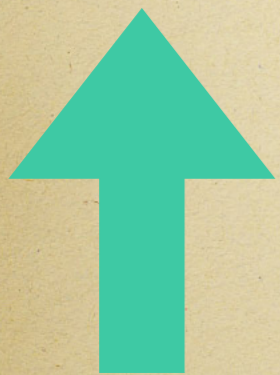
How is this encoded
in the brain?

Synaptic modulations



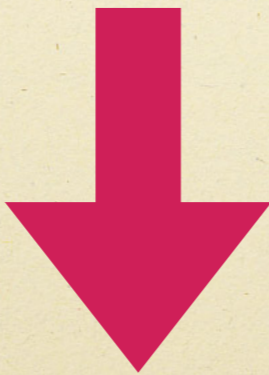
SGK1: A Potential Key Player

acute stress



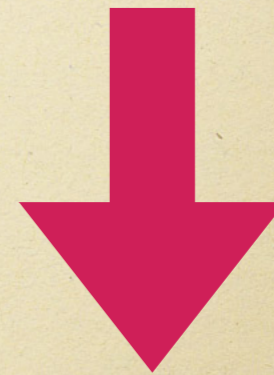
SGK1

PTSD



SGK1

impaired
memory



SGK1

Mouse modeling



control (GFP)

non-functional

over-expression



surgery

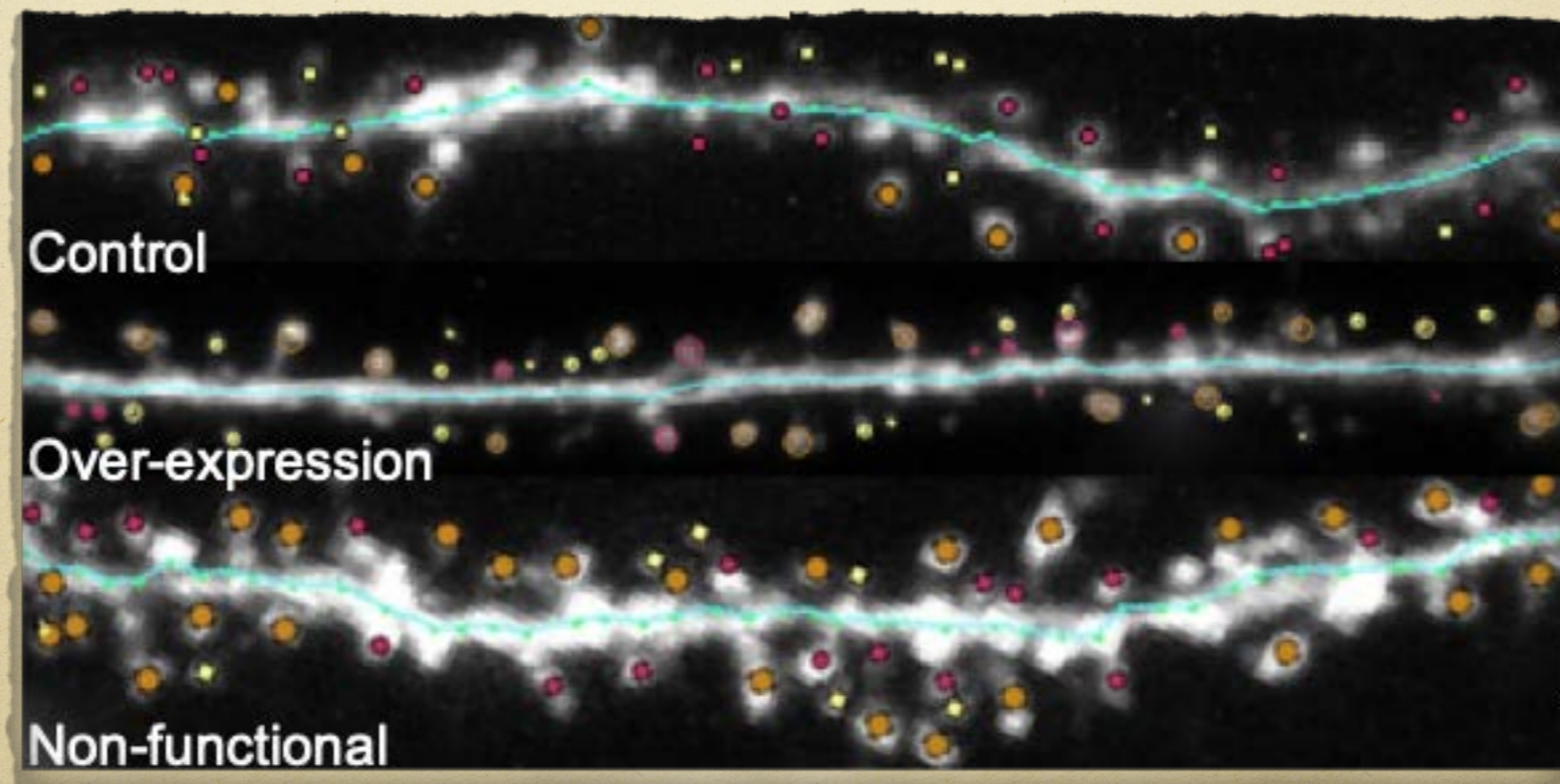
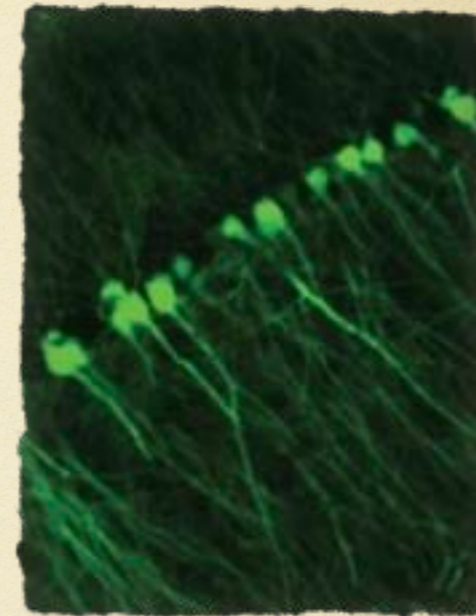
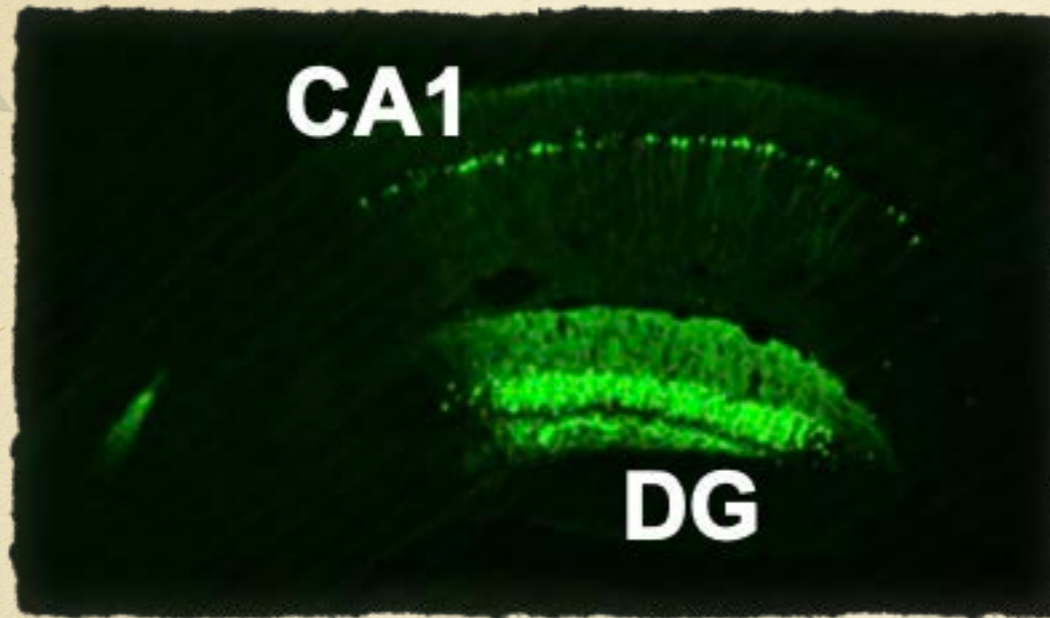
sacrifice

slice

image

analyze

Classifying spines



Results

CA1

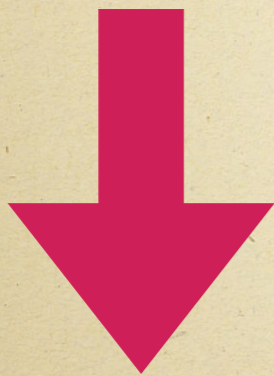
Dentate Gyrus



non-functional



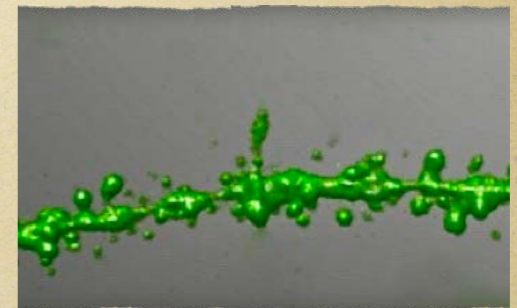
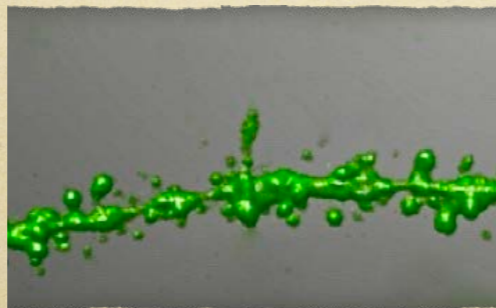
over-expression



SGK1



SGK1



Acknowledgements:

Dr. A. J. Robison and Dr. Michelle Mazei-Robison,
Dept. of Physiology

Neuroscience Program

College of Natural Science Dean's Research Scholars Program

CNS Undergraduate Research Support Scholarship

Honors College Professorial Assistant Program

❖ *Thank you for your support of Undergraduate Research!*

SPONSORED RESEARCH AGREEMENT TERM SHEET

Party: Cradle Genomics, Inc.

Agreement: Provide cervical specimens to Cradle Genomics as a service under their SBIR Phase I project entitled, "A Noninvasive Platform to Assess Maternal Risk for Perinatal Complications in the First Trimester."

Term: Effective date to August 31, 2019

Potential Commercial Application: Prevention of risks associated with perinatal complications during pregnancy

Payment Terms: \$18,218.37 to MSU for services

Services Provided: By MSU to Cradle Genomics, Inc.: Provide cervical specimens from pregnant women
By Cradle Genomics, Inc. to MSU: None contemplated under the agreement

Organization Type: Delaware corporation

Personnel Interest: Dr. Sascha Drewlo, an Associate Professor in the College of Human Medicine, and members of his family own or have options to buy an ownership interest of more than 1% of the company.

SPONSORED RESEARCH AGREEMENT TERM SHEET

Party: EeroQ Corporation

Agreement: Proof of concept development of an on-chip charge sensor for single electron qubit trapping

Term: April 2019 to April 2020

Potential Commercial Application: Quantum computing and sensing for applications in information processing and charge sensing

Payment Terms: \$100,000 to MSU to fund the research

Services Provided: By MSU to EeroQ Corporation: Proof of concept research as described herein
By EeroQ Corporation to MSU: None contemplated under the agreement

Organization Type: Delaware corporation

Personnel Interest: Dr. Johannes Pollanen, a Jerry Cowen Chair of Experimental Physics and Assistant Professor in the Department of Physics and Astronomy, and members of his family own or have options to buy an ownership interest of more than 1% of the company.

SERVICE AGREEMENT TERM SHEET

Party: FibrosIX, LLC

Agreement: Testing services by MSU for preclinical work regarding prevention of chemotherapy-induced lung fibrosis

Term: April 2019 to September 2019

Potential Commercial Application: Human Therapeutics

Payment Terms: \$14,603 to MSU in fees for service

Services Provided: By MSU to FibrosIX, LLC: Testing Services as described herein
By FibrosIX, LLC to MSU: None contemplated under the agreement

Use of University Facilities/Personnel: Work is to be performed at MSU's Life Sciences Building and animal vivarium by, or supervised by, Dr. Teresa Krieger-Burke and/or Dr. Marc Bailie

Organization Type: Michigan limited liability company

Personnel Interest: Dr. Richard Neubig, Professor and Chair of the Department of Pharmacology and Toxicology, and members of his family own or have options to buy an ownership interest of more than 1% of the company.

PUBLISHING CONTRACT TERM SHEET

Party: Dr. Gordon Henry

Project Description: Publication of a co-edited book entitled *Sovereign Traces: Not Just Another*.

Term: Immediate manuscript delivery and publication.

Agreement: Dr. Henry will receive twenty free copies of each edition, and additional copies at a 40% discount from the retail price.

Services Provided: By MSU to Dr. Henry: Publication of book
By Dr. Henry to MSU: Editing the book manuscript

**Use of University Facilities/
Personnel:** Not Applicable

Organization Type: Dr. Henry is acting as an individual.

Personnel Interest: This contract will be directly between Dr. Henry, a Professor in the Department of English.

PUBLISHING CONTRACT TERM SHEET

Party: Dr. Elizabeth LaPensee

Project Description: Publication of a co-edited book entitled *Sovereign Traces: Not Just Another*.

Term: Immediate manuscript delivery and publication.

Agreement: Dr. LaPensee will receive twenty free copies of each edition, and additional copies at a 40% discount from the retail price.

Services Provided: By MSU to Dr. LaPensee: Publication of book
By Dr. LaPensee to MSU: Editing the book manuscript

**Use of University Facilities/
Personnel:** Not Applicable

Organization Type: Dr. LaPensee is acting as an individual.

Personnel Interest: This contract will be directly between Dr. LaPensee, an Assistant Professor in the Department of Media and Information, and MSU.

PUBLISHING CONTRACT TERM SHEET

Party: Dr. William F. Porter

Project Description: Publication of a co-edited book entitled *Innovations in Collaborative Modeling*.

Term: Immediate manuscript delivery and publication.

Agreement: Dr. Porter will receive 1% of net revenue from net copies sold of all editions, two free copies of each edition, and additional copies at a 40% discount from the retail price.

Services Provided: By MSU to Dr. Porter: Publication of book
By Dr. Porter to MSU: Editing the book manuscript

**Use of University Facilities/
Personnel:** Not Applicable

Organization Type: Dr. Porter is acting as an individual.

Personnel Interest: This contract will be directly between Dr. Porter, the Boone Crockett Professor in the Department of Fisheries & Wildlife, and MSU.

PUBLISHING CONTRACT TERM SHEET

Party:	Dr. Laura Schmitt-Olabisi
Project Description:	Publication of a co-edited book entitled <i>Innovations in Collaborative Modeling</i> .
Term:	Immediate manuscript delivery and publication.
Agreement:	Dr. Schmitt-Olabisi will receive 1% of net revenue from net copies sold of all editions, two free copies of each edition, and additional copies at a 40% discount from the retail price.
Services Provided:	By MSU to Dr. Schmitt-Olabisi: Publication of book By Dr. Schmitt-Olabisi to MSU: Editing the book manuscript
Use of University Facilities/ Personnel:	Not Applicable
Organization Type:	Dr. Schmitt-Olabisi is acting as an individual.
Personnel Interest:	This contract will be directly between Schmitt-Olabisi, an Associate Professor in the Department of Community Sustainability, and MSU.

PUBLISHING CONTRACT TERM SHEET

Party:	Dr. Jinhua Zhao
Project Description:	Publication of a co-edited book entitled <i>Innovations in Collaborative Modeling</i> .
Term:	Immediate manuscript delivery and publication.
Agreement:	Dr. Jinhua Zhao will receive 1% of net revenue from net copies sold of all editions, two free copies of each edition, and additional copies at a 40% discount from the retail price.
Services Provided:	By MSU to Dr. Jinhua Zhao: Publication of book By Dr. Jinhua Zhao to MSU: Editing the book manuscript
Use of University Facilities/ Personnel:	Not Applicable
Organization Type:	Dr. Jinhua Zhao is acting as an individual.
Personnel Interest:	This contract will be directly between Dr. Jinhua Zhao, a Professor in the Department of Economics, and MSU.