ORGANIZATIONAL UNIT PROPOSAL FORM

(Revised November 2018)

DIRECTIONS: Use this form when proposing a new school, college, center, institute or other organizational unit. Internal administrative changes, including but not limited to the addition or elimination of departments, do not require approval by the Academic Affairs Council or the Board of Regents.

DATE OF REQUEST: 12/19/2019

INSTITUTION: University of Nevada, Las Vegas

NAME OF PROPOSED UNIT: Chambers-Grundy Center for Transformative Neuroscience

DATE OF IMPLEMENTATION: July 1, 2020

PART 1

A. Action requested

Approval of the naming and inauguration of the: Chambers-Grundy Center for Transformative Neuroscience.

B. Brief description and purpose of proposed unit

The Chambers-Grundy Center for Transformative Neuroscience will provide an academic platform for research and learning opportunities regarding the study of drug development for Alzheimer's disease and other brain disorders. The Center will include a Clinical Trials Observatory for tracking new treatments, trial designs, and biomarkers in clinical trials for neurodegenerative disorders. The Observatory will develop a database and advance the science of predictive trial analytics. The Center will host a Trial Technology Incubator to promote the development and implementation of new biomarkers, outcome measures, and technologies, as well as the appropriate means to analyze the data generated. The Center will promote interdisciplinary dialogue and research on drug development to identify solutions to challenges to advance therapeutics rapidly. The Center will engage students in drug development-related activities, acquainting them with career opportunities in pharmaceutical and biotechnology research. The Center will create many opportunities for grant proposal submission, donor engagement, and contractual arrangements for revenue and support of the Center's agenda. The Center will advance the neuroscience environment of UNLV and support UNLV's Top Tier Research status.

Date of AAC Approval: 03-04-20

Date of Board Approval:



C. Outline plans for the success of the proposed unit

Plans for success of the Chambers-Grundy Center for Transformative Neuroscience include:

Financial

- \$3,000,000 in donor funds have been secured (see attached Memorandum of Understanding).
- Grant appplication opportunities appropriate for federal support for advancing clinical trials, funding Alzheimer's research projects, supporting the study of drug development, and integrating bioinformatics have been identified, and will be pursued under the umbrella of activities promoted by the Center.
- Donor engagement has been achieved and more donor interest is a goal of the Center.
- Contract-based analyses of the Center database (for example, analysis of trial designs and outcomes of previous agents in the same class as those being considered by the client) are foreseeable, and will compromise another revenue stream.

Scientific

- An annual publication from the Clinical Trials Observatory (begun in 2016, published annually, and projected to continue with more advanced analytics in the future).
- Publications regarding optimal means of central nervous system (CNS) drug development are in progress or planned.
- Projects to promote clinical trial methods have been identified and are in progress (e.g., development of a definition of psychosis in neurodegenerative disorders that will facilitate clinical trials for this disorder).

Collaborative

- The Center offers many opportunities to amplify neuroscience in Nevada. Among the collaborative opportunities are
 - The Interdisciplinary Neuroscience PhD program at UNLV
 - o The Nevada Institute of Personalized Medicine (NIPM) at UNLV
 - The Institute for Neuroscience of University of Nevada Reno (UNR)(there are current collaborations with Dr. Michael Webster and Dr. Josh Baker through the IDeA program that will be expanded with the Center inauguration)

Academic/Teaching

- Students are engaged in various aspects of the on-going research. For example, one UNLV medical student is working on a paper with the Vice Chair for Research and Research Professor, Department of Brain Health on repurposed drugs in the current Alzheimer's disease drug development pipeline. Repurposed drugs are developed to treat one condition, such as inflammation in arthritis, and are evaluated for their possible applicability to another condition, such as inflammation in the brain in Alzheimer's disease.
- The Observatory database affords many opportunities for more student involvement, such as that with above mentioned medical student but addressing the role of biomarkers in current drug development programs, the range of cognitive impairment of patients included in clinical trials, and descriptive analysis of recruitment plans and time line for Alzheimer clinical trials.

PART II

A. Mission statement

Transformative Neuroscience is the application of neuroscience knowledge to improve the lives of individuals with or at risk for brain disorders. The mission of the Chambers-Grundy Center for Transformative Neuroscience is to accelerate the development of new therapies for patients with

central nervous system disorders (focusing on Alzheimer's disease). This mission will be accomplished through study of drug development, optimization of trial design, implementation of new biomarkers and evolving technologies, and training of future drug development leaders.

B. Goals and objectives

i. Teaching

Involve students in all aspect of activities of the Chambers-Grundy Center for Transformative Neuroscience, including trial database interrogation (for example, studying the range of cognitive impairment of patients included in clinical trials, the use of repurposed drugs in the Alzheimer pipeline, and descriptive analysis of recruitment plans and timeline for Alzheimer clinical trials), clinical trial design, and promotion of new trial technology. The Center will host students from the Interdisciplinary Neuroscience Ph.D. (IDP) program, and will support their research.

The Center will collaborate with other neuroscience enterprises in Nevada including the Institute for Neuroscience at UNR to expand the number of students benefiting by its programs.

ii. Research

- Analyze the clinical trial database of the Center's Clinical Trial observatory to identify emerging trends and best practices.
- Participate in, and lead clinical trials through the National Institute on Aging (NIA)-sponsored mechansisms.
- Develop new diagnostic criteria relevant to clinical trials (e.g., definitions of psychosis and agitation relevant to clinical trials are currently being developed in conjunction with the International Psychogeriatric Association [IPA]).
- Publish research findings in high-impact, peer-reviewed journals, including our annual Alzheimer's pipeline review (published annually since 2016).
- Seek National Institutes of Health (NIH) and National Science Foundation (NSF) support for research related to the objectives of the Center.

iii. Service

- Promote the goals of the Department of Brain Health.
- Promote the goals of the School of Integrated Health Sciences.
- Promote the goals of UNLV, especially as they pertain to the Top Tier Research status.

C. Major participants or collaborators

i. Internal to Campus

- Associate Professor and Chair, Department of Brain Health.
- Vice Chair for Research and Research Professor, and proposed director of the proposed Chambers-Grundy Center for Transformative Neuroscience.
- Assistant Professor, Department of Brain Health.
- Professor and Chair, Department of Health Physics and Diagnostic Sciences, School of Integrated Health Sciences.
- Professor and Chair, Cyrus Chung Ying Tang Foundation Research Professor, Department of Physical Therapy, School of Integrated Health Sciences.
- Professor and Acting Chair, Department of Kinesiology and Nutrition Sciences, School of Integrated Health Sciences.
- Medical student, UNLV School of Medicine.

ii. External to Campus

Advisory Board consisting of:

- Chief Science Officer, Alzheimer's Drug Discovery Foundation, New York, New York.
- Director, Alzheimer's Disease Cooperative Study, University of California, San Diego.

D. Evidence of contact within and between affected academic units

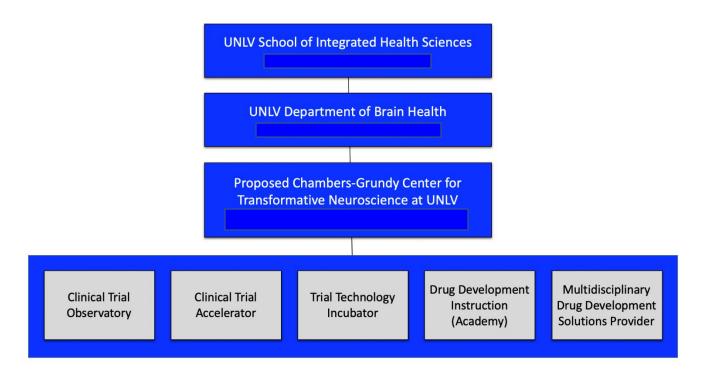
See attached letters from the aforementioned individuals internal to the UNLV Campus.

E. Proposed physical location

Science and Engineering Building (SEB), UNLV Campus. Offices are already assigned to, and occupied by the individuals internal to the UNLV Campus.

F. Proposed organizational structure (include organizational structure within the Campus)

The proposed Chambers-Grundy Center for Transformative Neuroscience will be administratively organized within the Department of Brain Health in the UNLV School of Integrated Health Sciences. The functions of the Chambers-Grundy Center for Transformative Neuroscience are shown; these may change as drug development evolves, new data become available, and participating faculty and students change. New functions can be added, and non-productive functions deleted. The Center will be dynamically responsive to the changing intellectual environment surrounding drug development.



- G. Activities to be sponsored (e.g., courses, seminars, research, and outreach) indicate if courses or seminars will be offered through the proposed unit. Please specify if they will be offered for academic credit and applicable to a degree program. Give estimated enrollment.
- The Chambers-Grundy Center for Transformative Neuroscience is primarily an academic research unit that will offer high quality, individualized student experiences relevant to drug development and careers in the biopharmaceutical industry and related disciplines.
- Small-scale seminars with indivdualized projects are planned.
- Courses to be offered as on-line learning experiences are under consideration.
- Research activities in which students will be involved incude:

- Publications from the Clinical Trials Observatory.
- Publications regarding optimal means of central nervous system (CNS) drug development.
- Projects to promote optimal clinical trial methods (e.g., study of the use of biomarkers to accelerate drug development across neurodegenerative disorders).
- The Center will host students from the Interdisciplinary Neuroscience Ph.D. (IDP) program, and will support their research through data availability and mentoring.
- Collaborative outreach to other Nevada neuroscience enterprises including the Institute for Neuroscience at UNR.
- H. Resource Analysis source of funds necessary for the proposed change (enrollment-generated state funds, reallocation of existing funds, grants, other state funds)
- The Chambers-Grundy Center for Transformative Neuroscience is supported by a \$3,000,000 endowment (see attached Memorandum of Understanding). The anticipated \$109,500 annual interest income from the endowment will be allocated to the salary of a post-doctoral student, and to research expenses.
- The Joy Chambers-Grundy Professorship (\$1,000,000 endowment) is allocated to the Director of the Chambers-Grundy Center for Transformative Neuroscience activities. The anticipated \$35,000 annual interest income from the endowment will be devoted to a combination of salary and research expenses.
- Scientific grants (NIH, NSF, Alzheimer's Association, etc.) will generate additional resources.
- It is anticipated that additional donors will be attracted to this Center.
- I. Projected Budget identify portions of costs which will require state resources, grants, gifts and/or contracts

The Chambers-Grundy Center for Transformative Neuroscience will be self-sustaining. Endowment funds are available for the operations of the Center and required supplies and services. Additional sources of revenue to be developed are listed above. A post-doctoral student will be responsible for constructing and curating the database of the Observatory. Dr. Cummings will oversee all Center operations. See attached budget.

Please attach any supporting documentation (i.e. support letters from community, industry).



Memorandum of Understanding between Joy Chambers-Grundy and the University of Nevada, Las Vegas Foundation Concerning Funds for the Department of Brain Health in the School of Integrated Health Sciences

This Memorandum of Understanding ("MOU") is between the University of Nevada, Las Vegas Foundation, a Nevada nonprofit corporation ("Foundation"), and Joy Chambers-Grundy ("Donor") for the establishment of endowment funds for the University of Nevada, Las Vegas ("UNLV"). This MOU shall be effective as of the last date any authorized signatory affixes his her signature below.

Establishment of Fund/Procedures

This MOU contains the entire agreement between the Donor and the Foundation concerning the management of the Reg and Joy Grandy Endowed Chair (the "Chair"), Joy Chambers Grandy Endowed Professor of Brain Health Fund (the "Professorship"), and Chambers Grandy Center for Transformative Neuroscience Endowment (the "Center")

The Foundation hereby establishes three (3) endowment funds to be known as: (1) Reg and Joy Grandy Endowed Chair Fund (2) Joy Chambers-Grandy Endowed Professor of Brain Health Fund, and (3) Chambers-Grandy Center for Transformative Neuroscience Endowment Fund (collectively, the "Funds") to support the Department of Brain Health in the School of Integrated Health Sciences. This MOU contains the entire agreement between the Donor and the Foundation concerning the management of the Funds.

Any and all contributions designated to the Fund shall be deposited only to the Fund and shall be administered in the manner set forth in this MOU. Disbursements from the Fund shall be made in accordance with policies established by the Board of Regents of the Nevada System of Higher Education ("NSHE"), with the policies of the Board of Trustees of the Foundation, and with the provisions specified in this MOU. The Board of Trustees of the Foundation, or its designee, has and shall have full power and authority to accept, take, hold, manage, invest, and reinvest the Funds, including any and all income produced by the Funds, and any increase or accumulation to it.

The Foundation complies with and will comply with the Uniform Priident Management of Institutional Funds Act ("UPMIFA") adopted by the State of Nevada in May of 2007 as amended including the corresponding provisions of any succeeding law. UPMIFA developed by the Uniform Law Commission provides guidance for the investment management and expenditure of funds held in endowments.

The Foundation Board of Trustees Investment Committee sets the payout amount from the Fund to the campus on an annual basis. Factors considered in determining the payout amount include 11 duration and preservation of the endowment fund; 2) the purposes of the institution and the endowment fund; 3) general economic conditions; 4) effect of inflation or deflation; 5) the expected total return from income – including funds payable to the Foundation as any fee, as stipulated in the Foundation policy – and the appreciation of investments; 6) other resources of the institution; and 7) the investment policy of the

Page 1 of 4 Donor(s) Initials

Memorandum of Understanding between Joy-Chambers Grundy and the University of Nevada, Las Vegas Foundation

institution. Income may be carried forward from year to year and need not be spent. Such unspent income will be available for disbursement at a later time.

Any balance in the Funds may be carried forward from year to year and need not be spent at the discretion of the Board of Trustees of the Foundation or its designee. Any and all contributions received for deposit to the Funds shall be available for the uses and purposes stated herein. A one-time reinvestment fund contribution of five percent (5%) is assessed on all gifts to the Funds to cover the costs associated with their administration

In order to ensure that any new fund is well established and to help ensure the long-term ability of the Foundation's endowment funds to make annual payments, gifts given to the Foundation to establish any endowment fund before June 30 of any year will be invested for a minimum of 12 consecutive months before the endowment is eligible to make a distribution to the related operating fund.

Pledge Payments

The Donor pledges a total of six million dollars (\$6,000,000 00). Two payments of three million dollars (\$3,000,000.00) each will be made on or before March 31,2020. The first payment is to be made by on or before December 31, 2019 and the last pledge payment will be made by March 31, 2020. The pledge will be deposited in equal amounts in the Funds until they reach the below balances:

- One million dollars (\$1,000,000,00) into the Joy Chambers-Grundy Endowed Professor for Brain Health Fund;
- Two million dollars (\$2,000,000,000) into the Reg and Joy Grundy Endowed Chair Fund; and
- Three million dollars (\$3,000,000,00) into the Chambers-Grundy Center for Transformative Neuroscience Endowment Fund.

The Donor may elect to make additional gifts to the Funds beyond March 31, 2020.

Uses, Purposes, and Distribution

The purpose of the Funds is to provide financial support for Chair, Professorship and Center in the Department of Brain Health at UNLV. The Chair will support the Vice Chair of Research for the Department of Brain Health. The Professorship will support the Director of the Center. The appointment of the individuals who will be named the Chair and the Professorship will be at the discretion of the Dean of the School of Integrated Health Sciences with the consent of the Provost. The Center will be a multidisciplinary interactive enterprise focused on the single outcome of bringing better treatment to patients with brain disease as fast as possible. The Center will have two major dimensions: 1) develop strategies to optimize the discovery, development and dissemination of new treatment for brain disorders and 2) engage law, business and policy to align drug development with strategies for optimizing getting new therapies to patients with urgent unmet needs. Uses of the Joy Chambers-Grundy Endowed Professor for Brain Health Fund and Reg and Joy Grundy Endowed Chair Fund may include but not be limited to financial support for the Chair and Professorship to research and teach on issues specific to the Department of Brain Health.

Page 2 of 4 Donor(s) Initials

Memorandum of Understanding between Joy-Chambers Grundy and the University of Nevada, Las Vegas Foundation

The Chambers-Grundy Center for Transformative Neuroscience Endowment Fund will be used to respond to emerging opportunities involving people, projects and programs. Uses of the fund may include but not be limited to signage to recognize the Donor and location of the Center, equipment purchases, safaries, graduate stipends, conferences, travel, recruitment, consultant fees, and contractual relationships for services to support the work of the Center.

Because the Funds will consist of private donations, Funds' expenditures may include use for entertaining, hosting, travel expenses, employee perquisites, or other reasonable expenditures that comply with all applicable Board of Regents, NSHE and UNLV policies, as well as all applicable state regulations. The Funds shall be used only for qualified charitable purposes consistent with the laws of the State of Nevada, the Internal Revenue Code of the United States, and the policies of UNLV. Any and all contributions to the Funds will be used for the purposes stated in this MOU. Distributions from the Funds will be awarded according to Foundation policies and procedures existing at the time of distribution. The Dean of the School of Integrated Health Sciences will have spending authority over the Funds.

Naming Recognition

In acknowledgement of the generous support, the School of Integrated Health Sciences will create two named positions and a center in honor of Reg and Joy Grundy ("Naming") The Naming will be *The Reg* and Joy Grundy Endowed Chair, *The Joy Chambers-Grundy Endowed Professor of Brain Health*, and *The Chambers-Grundy Center for Transformative Neuroscience*. The naming of the Center will be contingent upon approval from the NSHE Board of Regents. It is expected that the Funds will provide annual support for the Chair, Professorship and Center.

Change of Conditions

This MOU references the policies of the Board of Regents of the NSHE, UNLV, and the Foundation. The policies of these organizations, insofar as they affect the matters discussed in this MOU, may change over time. The policies in force at the time of any future activity or transaction shall be the policies that govern future activities or transactions.

If all or part of this gift cannot be usefully or practically applied to the purposes outlined in this MOU because of change in law or unforesceable circumstances, it may be used for a related purpose that is as close as possible to the original intent of the Donor as expressed in this Agreement. Whenever possible, the Donor will be consulted prior to re-designation.

Changes to this MOU require a written amendment, signed by the same Donor(s) who sign this agreement, so long as they are living and competent to act, and agreed to by the signing Donor(s) and the UNLV Foundation. Individuals who make additional gifts to the endowment, but who are not signers to this agreement, shall have no authority to consent to changes.

The Board of Regents of the Nevada System of Higher Education, acting on behalf of the University of Nevada. Las Vegas, reserves the right to re-name or remove the name of any donor from its

Page 3 of 4 Donor(s) Initials

Memorendum of J inderstanding between Jusse hambers Grandy and the University of Nevada, Las Vegas Foundation

scholarships, programs, positions, and facilities in the event of unusual or competing a transtances at any time if such circumstances have a material adverse impact on UNEV or the UNEV Foundation. The I niversity in its sole and absolute discretion, may exercise this option if a name designated herein, in ps judgment, should bring discredit, disrepete or potential legal irability upon the University. The parties acknowledge and agree that in the event and as the result of such re-maning or removal, the University shall have no financial or other obligation to any party, bkewise, the donor will be under no further obligation, financial or otherw Sector any parts

Donor

Joy Chambers torunde

Dated this first day of the her 2016

UNEV Foundation

Dated this 31 day of October Sur

ACKNOWLEDGED AND ACCEPTED BY THE BOARD OF REGENTS OF THE NEVADA SYSTEM OF HIGHER EDUCATION. ON BEHALF OF THE UNIVERSITY OF NEVADAL LAS VE0.48

Recommended:

Bon Brown. Dean UNEX School of Integrated Health Serences Chris Heavey. Interim Executive VerDesident and Provost

Dated the H day of

Approved as to Legal Form:

ALX I IN

MIC Dated this 15th day of Oct 2019

Page 1 of 4 Donor(s) Initials



UNIVERSITY OF NEVADA, LAS VEGAS

MEMORANDUM

DATE: October 16, 2019

| TO: | Marta Meana | m | m |
|-----|-------------|---|---|
| | President | | • |

FROM: Elda Luna Sidhu General Counsel

RE: MOU between Joy Chambers-Grundy and the UNLV Foundation concerning funds for the Department of Brain Health in the School of Integrated Health Sciences

The enclosed MOU will establish three endowment funds: (1) Reg and Joy Grundy Endowed Chair Fund; (2) Joy Chambers-Grundy Endowed Professor of Brain Health Fund, and (3) Chambers-Grundy Center for Transformative Neuroscience Endowment Fund. The funds will support the Department of Brain Health in the School of Integrated Health Sciences. The Donor pledges Six Million Dollars (\$6,000,000.00), with one million to be placed into the Joy Chambers-Grundy Endowed Professor of Brain Health Fund, two million into the Reg and Joy Grundy Endowed Chair Fund, and three million into the Chambers-Grundy Center for Transformative Neuroscience Endowment Fund.

The agreement complies with the requirements of UNLV and NSHE. Your signature is required as the amount of the donation exceeds one million dollars.

Please sign where indicated, and should you have any questions, please feel free to contact me.

EMS:emn encl.

UNIV | SCHOOL OF INTEGRATED HEALTH SCIENCES

December 20, 2019

Christopher Heavey Executive Vice President and Provost Office of the Provost University of Nevada, Las Vegas 4505 South Maryland Parkway Las Vegas, Nevada 89154

Dear Chris:

Over the past several months we have been working with Gail Griffin on a proposal to establish the Chambers-Grundy Center for Transformative Neuroscience. This Center will be housed within the Department of Brain Health of the School of Integrated Health Sciences. The Center will focus on the processes of drug development for Alzheimer's disease and other neurodegenerative brain disorders. The Center will be led by Jeffrey Cummings, M.D., Sc.D., a leader in this research area. The Center has received an endowment of \$3,000,000; there is an additional endowment of \$1,000,000 for an endowed professorship of the Director of the Center. The Center will provide exciting new research and educational opportunities for University students and faculty. Enclosed you will please find the materials in support of the Center application. I enthusiastically support the development of this new Center within the School of Integrated Health Sciences. In accordance with the gift agreement, we are requesting formal approval of the Center for the Board of Regents of the Nevada System of Higher Education. Should you have any questions regarding the application, please do not hesitate to contact me.

Sincerely,

les fun

Ronald Brown, Dean

Box 453019 • 4505 S. Maryland Parkway • Las Vegas, NV 89154-3019 • Main: 702-895-3693 • Fax: 702-895-1356



October 24, 2019

Re: Proposed Chambers-Grundy Center for Transformative Neuroscience

Dear Center Reviewers:

I am a second year medical student in the UNLV School of Medicine. I have worked with Dr. Jeffrey Cummings this past year on a project involving the study of repurposed drugs being studied as potential therapies for Alzheimer's disease.

Repurposed drugs are agents that have been approved for one indication but may be applicable for the treatment of another such as Alzheimer's disease. Using these drugs offers an accelerated pathway for drug development since preclinical studies and early dosing and safety studies may not be necessary. Repurposing drug development pathways can be as much as 40% shorter than the development of a truly novel compound. Given the urgency of developing new medications for Alzheimer's disease, understanding and promoting these accelerated pathways is critically important.

Dr. Cummings is an enthusiastic teacher, and I have learned a great deal about drug development, repurposing, and scientific writing in the context of conducting my project with him. I understand that he will develop the new Chambers-Grundy Center for Transformative Neuroscience, which will engage even more students in drug development projects. My experience with Dr. Cummings was highly positive, and I fully embrace the introduction of the new proposed Center as a great resource for students.

Sincerely,

Justin Bauzon, B.A. University of Nevada, Las Vegas School of Medicine

2040 West Charleston Boulevard • Fourth Floor • Las Vegas, NV 89102-2244

UNIX SCHOOL OF INTEGRATED HEALTH SCIENCES Department of Brain Health

October 18, 2019

Re: Proposed Chambers-Grundy Center for Transformative Neuroscience

Dear Center Reviewers:

It is with pleasure that I add my strong support to the development of the proposed Chambers-Grundy Center for Transformative Neuroscience to be led by Jeffrey Cummings, MD, ScD, of the Department of Brain Health, School of Integrated Health Sciences, University of Nevada Las Vegas.

Dr. Cummings has given substantial thought to the need to develop better drugs for the treatment of Alzheimer's disease and other brain disorders and that a new Center at UNLV can play a critical role in the process. Dr. Cummings has substantial experience in CNS drug development and has developed a platform for studying drug development, its successes and failures, the role of biomarkers, the evolution of new strategies such as monoclonal antibodies, and the influence of new clinical trial designs in drug development. All of these will comprise a research agenda for the proposed Chambers-Grundy Center for Transformative Neuroscience. Students will be involved in all aspects and this will provide an extraordinary new opportunity for students to gain real world skills applicable to post-graduation employment opportunities.

Dr. Cummings and Dean Brown of the School of Integrated Health Sciences have developed a relationship with a donor who has pledged the \$3million needed to establish the Center. Additional funding will establish positions in the Department of Brain Health.

I enthusiastically support this proposed new Center which will comprise an important dimension of our growing Department of Brain Health.

Sincerely,

efferson Kinney

Jefferson Kinney, PhD Chair, Department of Brain Health School of Integrated Health Sciences University of Nevada Las Vegas

UNIV KINESIOLOGY & NUTRITION SCIENCES

12/3/19

Dear Center Review Committee;

I am writing to add my support to the establishment of the Chambers-Grundy Center for Transformative Neuroscience in the School of Integrated Health Sciences of UNLV.

Transformative Neuroscience is a new concept that addresses who to optimize scientific advances to maximally impact patient lives. Alzheimer's disease --- the focus of the Chambers-Grundy Center --- has a devasting effect on patients and families. It affects the patient's ability to think, remember, and function and takes a tragic toll on the victims and their families. New therapies are needed to prevent or defer the onset, slow the process, or improve the symptoms of Alzheimer's. The Chambers-Grundy Center for Transformative Neuroscience will apply itself to understanding the best practices, optimal integration of technology and biomarkers, and most successful classes of interventions. These learnings will be made widely available to improve clinical trial design and drug development practices.

Dr. Cummings, the candidate director for the proposed Chambers-Grundy Center, has a record of accomplishment in drug development. He publishes an annual review of the Alzheimer's drug development pipeline and has studied successful development programs in other fields such as cancer to import best practices into Alzheimer drug development. These strategies will form part of the core curriculum for teaching students and developing the Nevada scientific biopharmaceutical workforce.

The Chambers-Grundy Center for Transformative Neuroscience will provide an important foundation for those seeking grant funding from the National Institutes of Health and other funding entities. Grant funding is key to success in a university environment and will help UNLV maintain tier 1 research status. Drug development and the associated biomarkers and technology offer many opportunities to launch research programs and seek funding in conjunction with the activities of the Chambers-Grundy Center.

The Chambers-Grundy Center for Transformative Neuroscience will be key aspect of the newly formed Department of Brain Health in the School of Integrated Health Sciences at UNLV. The proposed center will provide opportunities for students enrolled in the Interdepartmental Program (IDP) for Neuroscience and many other student learning opportunities. The Center will be a key aspect of UNLV neuroscience.

I am very supportive of the development of this proposed Center and am enthusiastic about the learning, research, and funding opportunities it will create.

Sincerely,

John Mercer, Ph.D., Professor and Acting Chair Department of Kinesiology and Nutrition Sciences School of Integrated Health Sciences

UNIV PHYSICAL THERAPY

UNIVERSITY OF NEVADA, LAS VEGAS

December 2, 2019

Dear Center Review Committee;

As the Chair of the Department of Physical Therapy, I would like to express my support and enthusiasm for the creation of the Chambers-Grundy Center for Transformative Neuroscience in the School of Integrated Health Sciences at UNLV.

UNLV will benefit from research and educational programs of the proposed Center. The new Center will provide educational opportunities for students at many levels both with the School of Integrated Health Sciences and from other schools and colleges when students have interests in aspects of drug development. The development of new therapeutics depends on a multidisciplinary collaboration that includes basic biology, animal models, neuropsychology, medicine, imaging, law, policy, and business. The Chambers-Grundy Center for Transformative Neuroscience will provide students across all these disciplines with learning opportunities.

The Chambers-Grundy Center for Transformative Neuroscience will provide a platform from which to launch many types of grant applications. The NIH, Alzheimer's Association, and other funders can be approached to support research activities of the proposed Center. The Center will provide instructions to students on how to develop grant applications and pursue research funding to students from many schools and colleges.

Dr. Cummings, the candidate director for the proposed center, is an expert in drug development. He has led clinical trials and has pioneered the concept of a clinical trial observatory to study the drug development process. The observatory will be a key part of the Chambers-Grundy Center for Transformative Neuroscience and will bring great positive attention to UNLV as the source of information regarding drug development and best practices of advancing therapeutics, especially for Alzheimer's disease.

The Chambers-Grundy Center for Transformative Neuroscience will comprise an important aspect of the learning environment of UNLV and will advance the neuroscience enterprise at the university. The Chambers-Grundy Center for Transformative Neuroscience will contribute importantly to maintaining UNLV's R1 status.

In summary, I am very supportive of the development of the Chambers-Grundy Center for Transformative Neuroscience in the School of Integrated Health Sciences at UNLV. I believe that this center is fully in alignment with the mission and vision of UNLV and the School of Integrated Health Sciences and I anticipate potential collaborations with the clinical neuroscience faculty in my department. I am confident that this center will improve the reputation of UNLV and will lead to better recruitment of students and faculty. However, most importantly, this center has incredible potential to have a positive impact on those suffering from diverse neurological and neurodegenerative diseases. If you have any questions or a need for clarification please feel free to contact me.

Sincerely,

Merrill Landers, PT, DPT, PhD, OCS Chair and Professor Cyrus Chung Ying Tang Foundation Research professor <u>merrill.landers@unlv.edu</u> 702-895-1377

> Department of Physical Therapy Box 453029 • 4505 S. Maryland Parkway • Las Vegas, NV 89154-3029 Main: 702-895-3003 • Fax: 702-895-4883 (ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE 06/11/20) Ref. ARSA-5, Page 15 of 17

UNIV | SCHOOL OF INTEGRATED HEALTH SCIENCES

October 21, 2019

Re: Proposed Chambers-Grundy Center for Transformative Neuroscience

Dear Center Reviewers:

I am proud to be a founding member of the proposed Chambers-Grundy Center for Transformative Neuroscience. I am a new faculty member in the Department of Brain Health within the School of Integrated Health Sciences at University of Nevada Las Vegas. I am a neuropsychologist trained in the cognitive assessment of patients with neurodegenerative diseases. I specialize in evaluation of diverse patient groups and ethnic minorities in research and in understanding neurodegenerative disorders, such as Alzheimer's disease, in diverse populations. There is a great synergy between my interests and the development of the proposed Chambers-Grundy Center for Transformative Neuroscience. I offer my full support for the Center and look forward to the opportunities that it will create for our department, for UNLV, and for the larger community of researchers dedicated to improving outcomes in neurodegenerative disease.

Dr. Jeffrey Cummings is an experienced drug developer, having conducted many clinical trials. He is knowledgeable about neuropsychological and cognitive trial outcomes as well as trial tools that measure function, activities of daily living, and neuropsychiatric and behavioral symptoms. We have discussed the development of new trial technologies, such as patient-reported outcomes (PROs) that are currently favored by the Food and Drug Administration (FDA) for drug development. It is critically important that new drug development include the patient and caregiver perspective on the goals of the development program. The innovative approach to drug development to be advanced by the proposed Center includes the creation of new PROs for Alzheimer's disease and related brain disorders. Dr. Cummings and I will collaborate on the development of these as part of the strategic agenda of the proposed Chambers-Grundy Center for Transformative Neuroscience. The research will also provide education and training for students in clinical neuropsychology in the development of trial outcomes and clinical trial designs---all critical in the process of drug development.

As a junior faculty member, I prioritize innovative and collaborative research approaches. I joined the Department of Brain Health, in part, to learn from and work with Dr. Cummings, a researcher at the forefront of Alzheimer's drug discovery. The Chambers-Grundy Center for Transformative Neuroscience offers an unprecedented resource for multidisciplinary team science that will shape the future of neurodegenerative disease research. Dr. Cummings and I are motivated to train the next generation of clinical researchers, and we share a vision of best practices for patient treatment and improved clinical outcomes. The mission of the Center will undoubtedly recruit future collaborators and encourage additional funders.

I enthusiastically support the proposed Chambers-Grundy Center for Transformative Neuroscience. Please do not hesitate to contact me with any questions.

Sincerely,

Jamak

Samantha John, PhD Department of Brain Health, School of Integrated Health Sciences UNLV Population Health & Health Equity Initiative

> 4505 S. Maryland Parkway · MSM-407 · Las Vegas, NV 89154-1087 Tel: 702-895-4580 · email: samantha.john@unlv.edu

UNIV | HEALTH PHYSICS & DIAGNOSTIC SCIENCES

Dear Center Review Committee;

It is with pleasure that I endorse the establishment of the Chambers-Grundy Center for Transformative Neuroscience in the School of Integrated Health Sciences of UNLV.

This new center will bring research and educational programs of great value to the School of Integrated Health Sciences of UNLV. As part of the Department of Brain Health the new Center will provide opportunities for doctoral students of the newly established Interdepartmental Program (IPD) for Neuroscience.

Dr. Cummings, who will lead the Chambers-Grundy Center for Transformative Neuroscience, has a history of accomplishment in drug development and clinical trials and brings this important dimension of neuroscience to UNLV. The program will advance research through its work on the study of drug development and how to optimize getting new drugs to patients with brain disorders. The Center will promote the implementation of new technologies and approaches into the drug development process. The Center will provide many opportunities for students of the School of Integrated Health Sciences and other schools and colleges to learn about drug development and the many opportunities to engage in biopharmaceutical and related occupations.

UNLV will benefit from the creation of the Chambers-Grundy Center for Transformative Neuroscience. In addition to enhancing the opportunities for research and education, the new Center will place UNLV at the Center for many Alzheimer drug development activities through collaboration with the Alzheimer's Association, Alzheimer's Drug Discovery Foundation, and other advocacy and philanthropy enterprises.

Support by grants from the National Institutes of Health, the National Science Foundation, and other funding bodies is the life blood of research at UNLV and other tier 1 research universities. The Chambers-Grundy Center for Transformative Neuroscience will provide a platform from which to launch many grant applications. The Chambers-Grundy Center for Transformative Neuroscience will provide instructions to students on how to develop grant applications and pursue research funding. This research will advance understanding of drug development and will accelerate getting urgently needed drugs to patients.

In summary, I am very supportive of the creation of the Chambers-Grundy Center for Transformative Neuroscience in the School of Integrated Health Sciences of UNLV as a means of amplifying the education and research mission of the School.

Sincerely,

Steen Madsen, Ph.D Professor and Chair, Department of Health Physics and Diagnostic Sciences, School of Integrated Health Sciences

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