

William Paterson University

Animal Welfare Assurance for Domestic Institutions

I, Venkatanarayanan, (Venkat) Sharma, PhD, as named Institutional Official (IO) for animal care and use at William Paterson University, provide assurance that this Institution will comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy).

1. Applicability of Assurance

This Assurance applies whenever this Institution conducts the following activities: all research, research training, experimentation, biological testing, and related activities involving live vertebrate animals supported by the PHS, DHHS, and /or NSF. This Assurance covers only those facilities and components listed below.

The following are branches and components over which this Institution has legal authority, included are those that operate under a different name: William Paterson University (WP) Science East Building, second floor, suite 2008.

The following are other institutions(s), or branches and components of another institution: None

11. Institutional Commitment

This Institution will comply with all applicable provisions of the Animal Welfare Act and other Federal statutes and regulations relating to animals.

This Institution is guided by the “U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training.”

This Institution acknowledges and accepts responsibility for the care and use of animals involved in activities covered by this Assurance. As partial fulfillment of this responsibility, this Institution will ensure that all individuals involved in the care and use of laboratory animals understand their individual and collective responsibilities for compliance with this Assurance, and other applicable laws and regulations pertaining to animal care and use.

This Institution has established and will continue to maintain a program for activities involving animals according to the *Guide for the Care and Use of Laboratory Animals (Guide)*.

This Institution agrees to ensure that all performances engaged in activities involving live vertebrate animals under consortium (subaward) or subcontract agreements have an Animal Welfare Assurance and that the activities have Institutional Animal Care and Use Committee (IACUC) approval.

111. Institutional Program for Animal Care and Use

A. The lines of authority and responsibility for administering the program and ensuring compliance with the PHS are as follows:

- (1) Richard J. Helldobler, PhD., is the President and Chief Executive Officer of William Paterson University (WPU).
- (2) Venkat Sharma, PhD; Dean of the College of Science and Health, is the Institutional Official (IO). He reports directly to Dr. Helldobler, the Chief Executive Officer of WPU.
- (3) The Chairperson of the IACUC, Emmanuel S. Onaivi, PhD; reports information pertaining to the deliberations of the IACUC to the IO. Included in these reports is information pertaining to the semi-annual program reviews performed by the IACUC.
- (4) The consulting veterinarian, Faith Krausman, DVM, in addition to serving as a member of IACUC, has direct communication with Dr. Sharma (IO). Dr. Sharma has agreed to communicate directly with Dr. Krauseman if there any issues that need to be discussed directly between them, and not communicated via Dr. Onaivi, the Chairman of the IACUC.
- (5) Marizel Mina, B.S; the Animal Laboratory Technician, in Charge of daily animal facility management serves as a non-voting member and organizer of IACUC. She therefore, has direct communication with other members of IACUC including Dr. Onaivi, the Chairman and Director of WPU Animal facility.
- (6) The consulting veterinarian, Dr. Krausman has agreed to be on-call if there are any issues pertaining to animal health and welfare emergencies. These animal related issues are conveyed to Dr. Krausman either by Dr. Onaivi or Ms. Mina.
- (7) The Safety Officer of the College of Science and Health, Dr. Mukesh Sahni, has been appointed by the Dean to participate in the Standard operating procedures and ensure safety in the Animal Laboratory facility. He is now also a member of the IACUC committee from 2019.
- (8) Members of the IACUC are appointed by the Dean of the College of Science and Health, Dr. Venkat Sharma (IO).

IACUC membership:

Emmanuel S. Onaivi, PhD; Professor of Biology, Fulbright Scholar WPU, and Guest Researcher at the National Institute on Drug Abuse (NIDA-NIH), with over 33 years of experience in laboratory use of rats and mice. Dr. Onaivi is the coordinator of the Applied Anatomy and Physiology course, inaugurated the Pharmacology program at WPU, a recipient of NIH R15 funded program. He supervises High School, Undergraduate, Master's, Doctoral, Post-doctoral and Guest Professor's conducting research in his laboratory at WPU. Dr. Onaivi served as the Interim Director of the Animal Facility in 2019, before the coronavirus pandemic, worked on compliance issues and annual report. The Dean, Dr. Sharma (IO) appointed Dr. Onaivi as the Director of the Animal facility, this fall of 2020.

Faith Krausman, DVM, is a Clinician at Maywood Veterinary Clinic in Maywood, New Jersey. Dr. Krausman also has a private veterinary practice, Vet-On-Wheels, based in Montclair, New Jersey. Her veterinary experience over the last 29 years includes work with birds, reptiles, ferrets, rabbits, dogs, cats, mice and rats.

Jeung Woon Lee, PhD; Associate Professor of Biology, WPU, with over 25 years of experience in laboratory use of mice and rats at WPU. Furthermore, before joining WPU, Dr. Lee spent four years at the University of Miami Miller School of Medicine, as a Postdoctoral fellow. Afterwards, he spent four years at the Massachusetts General Hospital as a Postdoctoral research fellow.

Sonya M. Bierbower, PhD; Assistant Professor of Biology, WPU with over 20 years of experience in laboratory use of invertebrates to vertebrates' species, including crayfish, rodents and monkeys. Dr. Bierbower completed Postdoctoral fellowship at the University of Texas Health Science Center, in the Department of Physiology, with other collaborative projects. She has mentored numerous Undergraduate students in a number of research areas in ecology, physiology, and neurophysiology. Recently at WPU, Dr. Bierbower's students have completed undergraduate and Master's thesis research using the mouse models of CNS function to determine cellular and molecular correlates of traumatic brain injury (TBI).

Marizel Mina, B.S; Laboratory Technician in charge of the daily animal maintenance and supervision of the animal facility along with student research workers supported by the Dean of the College of Science and Health, and the department of Biology. She took over running WPU Animal laboratory almost 2 years ago. She has more than a decade experience as a Research Scientist in the Academia and the Pharmaceutical Industry. Prior to joining WPU, she was the lead project leader for mouse and rat pharmacokinetics and pharmacodynamics studies at the Rutgers University-Public Health Research Institute in Newark, New Jersey. Her extensive skills range from animal husbandry and documentation, *in-vitro* and *in-vivo* research support to project leader in Pharmacokinetics *in-vivo* studies with novelty compounds for Mycobacterium tuberculosis (Mtb) efficacy studies. She ensures accuracy in overall maintenance of the facility adhering to Standard operating procedures and regulatory requirements, training of undergraduate students, basic and advance research support for ongoing studies and colony breeding of mice and rats.

Mukesh Sahni, PhD; is a Chemist, Instructor and researcher with more than 30 years' experience as Safety Compliance Officer at WPU College of Science and Health. He has established elaborate Standard Operating Procedures for Basic sciences and the Safety Data Sheets. As the WPU-CoSH Safety Compliance Officer, he ensures that WPU complies with Federal and State Safety laws, through proper handling of hazardous chemicals and bio-hazardous wastes. Furthermore, he teaches and train students, faculty and staff to run various laboratory courses and efficient running and maintenance of all analytical instruments. Dr. Sahni, has been appointed by the Dean to participate in the Standard operating procedures and ensure safety in the Animal Laboratory facility. He is now also a member of the IACUC committee from 2019.

Scott Hofsess, M.S, Director of Clinical Studies at Novartis Pharmaceutical Corp; serves as the outside community member.

Jan Pinkston, M.A; Assistant Director of WP Honors College, serves as our non-scientist.

- B. The qualifications, authority, and percent of time contributed by the veterinarian(s) who are participating in the program are as follows:

Faith Krausman, DVM, is a Clinician at the Maywood Veterinary Clinic in Maywood, New Jersey. Dr. Krausman also has a private veterinary practice, Vet-On-Wheels, based in Montclair, New Jersey. Dr. Krausman received her BS in Laboratory Animal Science in 1976 from Downstate Medical Center, Brooklyn, NY. She received her MA in Biology in 1980 from SUNY, Binghamton. Her master's thesis was titled: "Urinary Marking in the Red Backed Vole, *Clethrionomys Gapperi*." She received her DVM in 1983 from the NYS College of Veterinary Medicine. Dr. Krauseman became board certified in companion animal medicine in 1995. She now has approximately 30 years of experience in veterinary medicine and she is licensed to practice in New Jersey. She has served as our consulting veterinarian at WPU since 2003. Dr. Krauseman has direct authority for all animals at WPU and the authority to implement the PHS policy and the provisions of the Guide for the Care and Use of Laboratory Animals. She is the attending veterinarian of WPU, and has authority to make a final decision on the disposition of animals (i.e.; whether to remove an animal from a study/euthanize in the interest of the welfare of the animal).

Authority: Dr. Krausman has direct program authority and responsibility for the Institution's animal care and use program including access to all animals.

Time contributed to the program: Dr. Krauseman, DVM will be devoting 1-2% of her professional time to WPU. Dr. Krausman is a member of the IACUC and is on call as needed for animal medicine. She participates in protocol review and as the attending veterinarian and a voting member of our IACUC. She participates in semiannual inspection of the animal facility and has provided guidance on recommended species-appropriate housing in accordance with "The Guide". She is consulted as needed and is "on call" for consultation by phone and visit the animal facility as needed.

The provisions in place for back-up veterinarian to ensure adequate veterinary care of research animals should Dr. Krausman not be available are as follows: This back-up veterinarian, Dr. Deborah Sarfaty, will not be on a retainer but has agreed to function on a free-lance/per-visit charge arrangement. Dr. Sarfaty graduated from Cornell College of Veterinary Medicine in 1980. She completed a postgraduate internship at Michigan State University and a two-year residency in Internal Medicine at the Animal Medical in Manhattan. Following her residency, she pursued a two-year fellowship in Neurology where she authored several publications in this discipline. Dr. Sarfaty served as emergency veterinarian at Elmsford Emergency Hospital, and as associate veterinarian in a small animal practice in Pelham for six years. She opened the Licolndale Veterinary Center in 1990, which is a progressive small animal hospital for medicine and surgery in Westchester County. She served as Associate Professor in Veterinary Technology Program at La Guardia Community College from 2004 to 2007 where her responsibilities included instructor, staff veterinarian, internship program coordinator, and NAVTA advisor. She also served as Director of Health, Wellness, and Prevention for Biscuits and Bath Daycare facilities of NYC from 2017-2010.

The day-to-day activities of the WPU animal facility are under the responsibility of Ms. Marizel Mina, Laboratory Technician, and a non-voting member and organizer of IACUC biannual inspection of the animal facility and convener of IACUC meetings. With the short three years that she took over running the animal facility, she has demonstrated excellent grasp of the operation of the laboratory and all aspects of animal care at WPU. In the event of vacation or sick off or furloughed in this era of coronavirus pandemonium, the day-to-day operation is taken over by the Director of the Animal facility, Dr. Onaivi, and assigns specific maintenance operations to selected students.

- C. The IACUC at WPU are properly appointed according to PHS Policy IV.A.3.a. and are qualified through the experience and expertise of the members to oversee WPU's animal care and use program and facilities. The IACUC currently consists of 8 members, and its membership meets the composition requirements of PHS Policy IV.A.3.b. Attached is a list of the Chairman, and members of IACUC and their names, degrees, profession, titles, specialties and institutional affiliations.

See Table VIII

- D. The IACUC will:

- 1) Perform a semi-annual program review every 6 months of the Institutions' program for humane care and use of animals, using the Guide as a basis of evaluation. The IACUC procedures for conducting semiannual program reviews are as follows: To convene a meeting of the IACUC to review the Occupational Health and Safety Program, Veterinary Care Program, PHS Policy/ Animal Welfare Assurance, adherence of WPU operations according to the *Guide for the Care and Use of Laboratory Animals*, and for WPU training program. In addition, during the semi-annual evaluation program the IACUC will evaluate current procedures and research in progress to ensure that all is in accordance with PHS policy.
- 2) Inspect at least once every six months all of the Institution's animal facilities, including satellite facilities and animal surgical sites, using the Guide as a basis for evaluation. The IACUC procedures for conducting semiannual facility inspections are as follows: To convene a meeting of IACUC to review WPU facility, current procedures, and research in progress to insure that all is in accordance with PHS policy / Animal welfare Assurance. The specific areas to be inspected are the Science East Building, second floor, suite SE 2008. All IACUC members are invited to participate in the facility inspection. The veterinarian will always be present at the inspection since the IACUC will not hold its semiannual meeting and facility inspection without her presence. At the present time WPU does not use USDA covered species. Should the institution house USDA covered species in the future then those areas where the covered animals are housed will be inspected by at least two voting IACUC members.
- 3) Prepare reports of the IACUC evaluations according to PHS policy IV.B.3. and submit the reports to the Dean, the IO. This report includes a description of the nature and extent of the Institution's adherence to the Guide for the Care and Use of Laboratory Animals. Any departures from the Guide will be identified specifically and reasons for each departure will be stated and reported to

the IO for each six month reporting period during which the IACUC approved departure is in place. The IACUC procedures for developing reports and submitting them to the IO are as follows: The IACUC process for developing reports and submitting them to the IO is the product of the efforts of the Chairman and IACUC membership. In the event that any deficiencies are noted as minor or significant upon inspection, the IACUC will upon conclusion of its inspection develop a plan and schedule for correction for addressing these deficiencies and report same to the IO as part of its semiannual report. Any minority views will be included with the report. If there are no minority views, that will be stated. The report will be signed by a majority of the IACUC members.

- 4) Review concerns involving the care and use of animals at WPU: The IACUC procedures for reviewing are as follows:

WPU is open to receiving any and all reports and allegations of animal misuse and mistreatment that involve animal welfare concerns. On a daily basis, any animal welfare concerns are to be reported to Ms. Mina, the laboratory Technician, or Dr. Onaivi, Chairman of the IACUC. As a part of WPU OLAW training program, students and investigators will be informed about this mechanism for reporting animal welfare concerns. In addition, signs will be posted in the facility directing personnel to report any animal welfare concerns to the Laboratory Technician, Ms. Mina or the IACUC Chairman. The IACUC will listen without retribution to both individual and anonymously reported concerns. We will then do an inquiry to evaluate and validate if needed such concerns for animal welfare have been violated. If we discover that an investigator has disregarded proper care of animals, the Chairman of IACUC will report same to the IO. If we consider animals to be at risk we will take action to retain the investigator and or his/her supervisees in the proper care and handling of animals. In the event that our inquiry indicates no violation of animal welfare concerns we will convey that finding to the IO and take no action.

- 5) Make written recommendations to the IO regarding any aspect of WPU's animal program, facilities, or personnel training. The procedures for making recommendation to the IO are as follows: Make written recommendations to Dean, Dr. Venka Sharma [IO] regarding any aspect of WPU's animal program, facilities, or personnel training. The procedures for making recommendations to the IO will involve convening a meeting of the IACUC to discuss/develop such written recommendations.
- 6) Review and approve, require modifications in (to secure approval) or withhold approval of PHS supported activities related to the care and use of animals according to PHS Policy IV.C.1-3. The IACUC procedures for protocol review are as follows: The IACUC procedures for protocol review from the point of receipt of the proposal to final approval will involve the following:

Receipt – recording date of initial receipt of protocol.

Pre-review / initial screening – IACUC Chairman will review proposal and place it on agenda for consideration by full IACUC.

Notification of members – members will be notified of meeting time and place for protocol consideration within two weeks of receipt of protocol.

Distribution – copies of protocol will be distributed to IACUC members.

Meetings – full membership attendance in accordance with quorum requirements to evaluate and vote on submitted protocols.

Method of protocol review – full committee of IACUC will evaluate if protocol fits within standards/guidelines of PHS and OLAW requirements for ethical treatment of animal research subjects.

Conflict of interest – If a member of IACUC has submitted a protocol for review they shall be available for information and questions but shall absent themselves from final deliberations and voting on the actual proposal. If the absence of a recused member from discussions prevents a quorum, then such proposal will be tabled until a later time when a quorum is present.

Voting – majority vote of quorum present will constitute approval. In the event a project requires modifications to secure approval, the investigator will resubmit the protocol to the Chairman of IACUC. Within two weeks of receipt of the revised proposal, IACUC will reconvene (outside members unable to physically attend will be teleconferenced) to discuss the submission. The guidelines described in the NIH guide for Grants and Contracts NOT-OD-06-052 for approved methods of conducting IACUC business on a teleconference call will be followed for discussion of the submission. The Chairman of IACUC will then communicate approval of the proposal to the Investigator or ask for further modification to secure approval as determined by a majority of the committee members.

- 7) Review and approval, require modifications in (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities according to PHS Policy IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are as follows: It will be the researcher's responsibility to inform the Chairman of any planned changes in the protocol. The Chairman will determine if the changes significantly impact the ethical treatment of research animals such that the IACUC will need to meet for reviewing the proposed significant changes in ongoing research projects. Significant changes in protocol will constitute the need for a formal meeting by the IACUC to review and discuss the modifications under review. If significant modifications in protocol are requested the IACUC procedures for protocol review from the point of receipt of the proposal to final will follow the same procedures as described in Section III. D.6 above (i.e. receipt, pre-review/initial screening, notification of members, distribution, meetings, method of protocol review, conflict of interest, and voting).

Significant changes in the protocol that impact the ethical treatment of research animals will include the following but not limited to:

- * Change in objectives of a study;
- * Proposals to from non-survival to survival surgery
- * Change in degree of invasiveness of a procedure or discomfort to an animal;
- * Change in species or in approximate number of animals used;
- * Change in personnel involved in animal procedures;
- * Change in anesthetic agent(s) or in the use or withholding of analgesics
- * Changes in methods of euthanasia; or
- * Change in duration, frequency or number of procedures performed on an animal.

In the event a project requires significant changes in the protocol, the investigator will submit the changes in the protocol to the Chairman of the IACUC. The Chairman will then communicate these changes to the other members of the IACUC. Within two weeks of receipt of this information, IACUC will reconvene (outside members unable to physically attend will be teleconferenced) to discuss the submission. The Chairman of the IACUC will then communicate approval of the changes to the Investigator or ask for further clarification or modification for approval as determined by majority of the committee members.

- 8) Notify investigators and the WPU in writing of its decision to approve or withhold approval of those activities related to the care and use of animals, or modifications required to secure IACUC approval according to PHS Policy IV.C.4. The IACUC procedures to notify investigators and the Institution of its decision regarding protocol review are as follows:

The IACUC procedures to notify investigators and the institution of its decisions regarding protocol review will involve formal communication by the Chairman of IACUC in writing. In the event that the protocol approval is withheld, the principal investigator will receive the reasons for withholding approval. The Principal Investigator will then have the opportunity to respond to the Chairman of IACUC in writing with respect to the decision. The IO is apprised of any decision regarding approval or denial of activities related to the care and use of animals at WPU in writing. Typically, information regarding these will be communicated via minutes of the semi-annual meeting of the committee. In the event that the committee deliberations take place in between these semiannual meetings, that information will also be communicated to the IO in writing.

- 9) Conduct continuing review of each previously approved, ongoing activity covered by PHS Policy at appropriate intervals as determined by IACUC, including a complete review at least once every 3 years according to PHS Policy IV.C.1. -5. WPU does not have any USDA covered species so we currently do not have any review procedures. If at any the WPU utilizes USDA covered species, this document will be updated to address that issue. The IACUC procedures for conducting continuing reviews are as follows: The IACUC will meet semiannually to review animal use and care. The facilities will be inspected semiannually, every six months. The IACUC will jointly address concerns and make recommendations. Applications and proposals will be sent to the IACUC Chairman and circulated to other members of the committee. The investigator of a protocol eligible for a 3-year review will provide a summary of the current status of the project and protocol for ethical animal care and indicate any changes that have occurred since the last review. The IACUC Chairman will then follow the procedure as outline above in Part III. D. 6 for conducting the 3-year review. Providing there are no problems with the review and the investigator wishes to continue the work, then the investigator will be required to resubmit the entire proposal. There will then be a complete de novo IACUC review of the proposal and all ongoing activities relating to the proposal. In addition to the 3-year review, there will be post approval monitoring of all ongoing activities and previously approved animal activities. This post approval monitoring will primarily be the responsibility of our principal Animal Laboratory Technician, Ms. Marizel Mina.
- 10) Be authorized to suspend an activity involving animals according to PHS Policy IV.C.6. The IACUC procedures for suspending an ongoing activity are as follows: The IACUC procedures for suspending an ongoing activity are to call a formal meeting by the IACUC to review and discuss the potential suspension of an ongoing activity. A majority vote of a quorum at the

formally convened meeting will constitute an action to suspend a research activity. The IO will be informed prior to the meeting of the question of suspension of research activity and be provided, within one week after the meeting, with a report detailing the IACUC's decision. The option of a review of the case will be afforded the researcher in writing within one week of the decision and such review will involve a meeting between the researcher and the IACUC. Final appeal and review will be available via a meeting between the IO, Dr. Sharma, the researcher and the Chairman of IACUC. Following review of an appeal, the Chairman of IACUC in conjunction with the IACUC may decide to overturn this suspension. The Chairman of the IACUC will communicate this decision to the IO. Following review of an appeal, if a decision to suspend approval is made the IO will provide OLAW with notification of such suspension approval. This notification will include a review of reasons for the suspension.

- E. The risk-based occupational health and safety program for personnel working in laboratory animal facilities and personnel have frequent contact with animals as follows:
- 1) To ensure that health and safety issues pertaining to animal research are addressed, the University Compliance Officer, the University Safety Officer and the Institutional Biosafety Committee will collaborate to offer training (including training regarding the appropriate handling of hazardous agents) and conduct risk assessments. The Safety Officer is the responsible person for overseeing and/or administering the University's occupational health and safety program. The Safety Officer (currently Dr. Mukesh Sahni) will ensure that medical evaluations are performed by appropriate medical personnel. Dr. Mukesh has now been appointed into WPU IACUC. All individuals who will work in the animal facility are required to make an appointment at WPU Health and Wellness Center to complete an Occupational Health Questionnaire for Animal Laboratory Workers (health history) which will be reviewed and medically cleared by a health provider at WPU Health and Wellness Center (Jill Guzman, DNP, CPNP, Director; Carola Gremlich, BSN, RN, CBE, Charge Nurse). Any personal information discussed with health providers will be confidential. Once the Health and Wellness Center health provider clears the person for working in the animal facility, they will contact the Director of the facility (currently Dr. Emmanuel Onaivi, Chairman of WPU IACUC), and state whether or not said person is cleared to work in the facility.
 - 2) The occupational Health and Safety program at WPU is based on a Risk Assessment and Hazard identification. Specific information relating to the University's Right to Know Hazard Communication Program can be obtained from PHYSICAL PLANT OPERATIONS at WPU (NEW JERSEY "Employee Right -to-Know" Rules Manual & Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard 29 CFR 1910. 1200). In brief, this policy document is written to ensure that employees and students are alerted and properly trained in the safe use of hazardous substances with which they may come in contact. We will accomplish by compiling lists of hazardous substances, harmful physical agents and infectious agents, maintaining and using Material Safety Data Sheets (MSDS), ensuring proper container labeling, and by providing employee training. This policy document applies to all WPU employees and students who may work with hazardous substances in their work area. The training method provides an opportunity for the employee to ask questions.

3) Common Risks Associated with Animal Husbandry and Care – Personnel involved in the care and use of research animals work in an environment that presents a number of unique hazards from several sources:

- Hazards related to the equipment, material and practices used in performing routine animal husbandry;
 - Hazards related directly or indirectly to animal contact; and
 - Hazards related to the techniques or materials that may be used during the course of animal experimentation.
- a. Regardless of the source of hazard, several basic measures should be taken to reduce the risk of personal exposure. These include understanding the hazards likely to be encountered during animal care and use, using appropriate personal protective equipment, and demonstrating the technical proficiency necessary to accomplish experimental manipulations or animal care procedures in safe and humane fashion.
 - b. Training of personnel involved with the care, treatment and use of animals will be mandatory and will be performed annually. Training will include policies, laws, and regulation pertaining to health and safety for personnel involved with the care, treatment and use of animals – including safe work practices, good personal hygiene, proper protective clothing, appropriate use of research devices, and appropriate handling of hazardous agents – as well as appropriate actions to be taken in the event of injury.
 - c. Documentation of training will be noted in the annual report to OLAW.
 - d. Individual risk assessments will be performed. They will incorporate individual health histories, current health and safety concerns, the species of animals used, the extent of animal contact, and the experimental agents or procedure that will be used in the animal studies. Based on this assessment, additional vaccinations or modifications in the use of personal protective equipment (PPE) might be recommended. In addition, consultation and close communication with medical professionals at WPU Health and Wellness Center, our primary care provider for workplace injuries, will be performed to ensure that all concerns associated with animal handling are addressed.

4) Common Injuries Associated with Animal Husbandry and Care – Injuries and accidents possible in personnel working in animal laboratories include

- Crush or lacerations from moving caging equipment and/or operating sanitation equipment
- Respiratory exposure to irritating vapor, aerosols, or particulates from working with disinfectants and bedding materials
- Skin irritation or contact dermatitis from exposure to chemicals used in cleaning, latex or talc allergy, or in experimental procedures used
- Needle stick exposures
- Musculoskeletal injuries (sprains, strains, or fractures) due to improper technique in lifting or moving equipment.
- Slip or fall injuries

NOTE: Personal awareness of hazardous conditions or factors in the environment is critical to avoiding these types of injuries, and individuals should develop the habit of assessing the environments in which they work.

- 5) Animal-Related Hazards – Bites, scratches, and other injuries represent a significant portion of animal-associated hazards encountered by individuals with laboratory animal contact and are readily preventable through proper animal handling techniques and proper use of PPE. Animal bites should be regarded seriously even when they have caused little tissue damage. All injuries (bites, scratches, even cuts on equipment), however small, should be reported to your instructor/supervisor. Personnel who have been bitten should seek prompt medical review of the wound and their tetanus immunization status by the WPU Health and Wellness Center (Overlook South). It is a general policy of the animal laboratory that anyone working in the lab should have received a tetanus vaccination within the last 10 years. WPU Health Services are open Monday-Friday 8:30 am – 4:30 pm. In the case of an emergency call 973-720-2300 (Campus Police) or proceed immediately to St. Joseph’s Wayne Hospital, 224 Hamburg Turnpike, Wayne NJ 07470. WPU has an immunization tracking center. All students must be compliant with state mandated higher education immunizations for New Jersey. Animal bites will also prompt a review of the animal handling circumstances to ensure that proper animal handling techniques are used.
- 6) Animal – Related Allergy – An estimated 10 to 30 percent of individuals who work with laboratory animals may eventually develop allergy to laboratory animals manifested by reddened, itchy eyes, nasal symptoms and skin rashes. Asthma, which is characterized by cough, wheezing, chest tightness and shortness of breath, develops as a further complication in approximately 10 percent of individuals with animal – associated allergy.

NOTE: Rodents can be a source of laboratory-animal-associated allergy. Work practices, which minimize contact with animal proteins, reduce the risk for development of allergy. For example, various levels of PPE are available for personnel working with laboratory animals to reduce exposure to allergens. Allergy history is an important element of our medical evaluation conducted by the Health and Wellness Center Personnel who suspect that they are developing animal-associated allergy should consult with the Safety Officer to determine an allergy management strategy.

- 7) Zoonoses – Zoonoses are diseases that are transmissible from animals to human. Laboratory animal species potentially harbor numerous zoonotic agents, including viruses, bacteria, fungi, protozoa, and internal and external parasites. Individuals who become ill and/or feel they have contacted a disease from a laboratory animal should consult with WPU Health and Wellness Center staff and notify the safety officer.

NOTE: Modern conditions and care for most laboratory rodents have led to the eradication of zoonoses in most of these species. However, these animals can become contaminated through environmental sources, contact with wild rodents, or other infected animals. In most circumstances, only wild caught or other infected animals. In most circumstances, only wild-caught, laboratory

maintained rodents would be regarded as high risk for transmission of zoonotic diseases. Other than the bite-associated bacterial infections from rodents (i.e., rat-bite fever), there are few bacterial zoonoses in this species. Rodents can also be a source of human ringworm infection (fungal). The dwarf tapeworm infestation of rodents also is capable of infecting humans. Health surveillance measures and the proper use of PPE when working with our laboratory animals are required. All unusual illnesses or conditions possibly related to animal contact will be reported to the Safety Officer.

- 8) The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is as follows: Training in the care and use of research animals at WPU is two-pronged. First, all personnel including IACUC members are required to read on-line all the CITI (Collaborative Institutional Training Initiative) modules relating to animal usage. These modules include training in animal research ethics, humane practice of animal care and use, methods to minimize the number of animals needed for a given research project, methods of animal analgesia and euthanasia and specific work with rats and mice. All personnel will be required to achieve a score of 80% on the tests associated with these modules. Secondly, all personnel working in the laboratory are also required to take an examination based on material deemed necessary for daily operation and safety in the laboratory. Students' ONLY occasional working in the laboratory will be informed of appropriate information with regards to the usage and handling of laboratory animals. In addition to this training, IACUC members are provided with a list of web site links for NIH, OLAW, AWIC, OLAW/ARENA, Institutional Animal Care and USE Committee Guidebook, and the Animal Welfare Assurance. IACUC members will be asked to review the CITI training module related to animal usage once every two years as part of their continuing education.
- 9) Investigators are directed to consult with a physician knowledgeable about animal-related diseases if they have any medical condition that may make them more susceptible to certain animal-related diseases. Such medical conditions that may make them more susceptible to certain animal-related diseases. Such medical conditions include but are not limited to splenectomy, alcoholism, immune system problems (e.g. AIDS, chemotherapy, systemic steroids such as cortisone, cancer), tuberculosis, pregnancy, or a history of heart disease or heart surgery (even though they may not have any heart symptoms now). If their personal physician is unfamiliar with animal diseases, they should contact the WPU Health and Wellness Center for additional information.
- 10) WPU has numerous institutional policies in place for personal hygiene, handling hazardous agents and personnel protection. We instruct investigators in several policies that are more or less specific to the animal facility. The following items are a partial list of policies relating to these issues practiced in the animal facility.
 - a) Practice good personal hygiene when working with animals. Never eat, drink, smoke, or apply make-up in animal areas. Wash your hands thoroughly after handling animals or animal related equipment.

- b) Do not wear work clothing home. At a minimum, wear a disposable gown when working with animals. Gloves and dust masks are highly recommended and readily available.
- c) People who do not work with animals have a right not to be unknowingly exposed. Work with animals in animal facilities when possible or transport them in a manner that protects other people.
- d) Use safety equipment and protective clothing only as instructed
- e) Do not invite friends, relatives or children into animal areas without permission from your instructor/supervisor.
- f) Remove jewelry before working with animals. Jewelry can be caught in machinery or pulled by animals. Loose hair and clothing are also a danger. Remove earrings, finger rings, necklaces and bracelets when working with animals or machinery.
- g) Do not introduce animals into research facilities without prior approval from Laboratory Animal Services. This includes pets from home and animals from other research facilities.

- 11) The total gross number of square in each animal facility (including each satellite facility), the species of animals housed there and the average daily inventory of animals, by species, in each facility is provided in the attached Facility and Species Inventory table

IV. Institutional Program Evaluation and Accreditation

All of this Institution's programs and facilities (including satellite facilities) for activities involving animals have been evaluated by the IACUC with the past 6 months and will be reevaluated by the IACUC at least every 6 months according to PHS Policy IV.B.1.-2. Reports have been and will continue to be prepared according to PHS IV.B.3. All IACUC semiannual reports will include a description of the nature and extent of this Institution's adherence to the PHS Policy and *Guide*. Any departures from *Guide* will be identified specifically and reasons for each departure will be stated. Reports will distinguish significant deficiencies from minor deficiencies. Where program facility deficiencies are noted, reports will contain a reasonable and specific plan and schedule for correcting each deficiency. Semiannual reports of the IACUC's evaluations will be submitted to the IO. Semiannual reports of IACUC evaluations will be maintained by this Institution and made available to OLAW upon request.

- (1) This Institution is category 2 – not accredited by the association for assessment and Accreditation of Laboratory Animal Care International (AAALAC). As noted above, reports of the IACUC's semiannual evaluations (program reviews and facility inspections) will be made available upon request. The report of the most recent evaluations (program review and facility inspection by virtual inspection due to coronavirus shut down) is attached. However the Animal Laboratory Technician is an Essential worker, who maintains the facility, was able to work IACUC through the facility virtually.

V. Recordkeeping Requirements

- A. This Institution will maintain for at least 3 years:
 - 1. A copy of this Assurance and any modifications made to it, as approved by the PHS.
 - 2. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations.
 - 3. Records of applications, proposal, and proposed significant changes in the care and use of animals and whether IACUC approval was granted or withheld.
 - 4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the IO, Dr. Sharma.
 - 5. Records of accrediting body determinations.
- B. This Institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the IACUC for the duration of the activity and for an additional 3 years after completion of the activity.
- C. All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

VI. Reporting Requirements

- A. This Institutional reporting period is the calendar year (January 1 – December 31). The IACUC, through the IO, will submit an annual report to OLAW by January 31 of each year. The annual report will include:
 - 1. Any change in the accreditation status of the Institution (e.g., if the Institution obtains accreditation by AAALAC or AAALAC accreditation is revoked).
 - 2. Any change in the description of the Institution's program for animal care and use as described in this Assurance. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations.
 - 3. Any changes in the IACUC membership
 - 4. Notification of the dates that the IACUC conducted its semiannual evaluations of the Institution's program and facilities (including satellite facilities) and submitted the evaluations to the IO, Dr. Sharma
 - 5. Any minorities views filed by members of the IACUC.
- B. The IACUC, through the IO, will promptly provided OLAW with full explanation of the circumstances and actions taken with respect: This Institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the IACUC for the duration of the activity and for an additional 3 years after completion of the activity.
 - 1. Any serious or continuing noncompliance with the PHS Policy.
 - 2. Any serious deviations from the provisions of the Guide
 - 3. Any suspensions of an activity by the IACUC
- C. Reports filed under VI.A. and VI.B. above should include any minority views filed by members of the IACUC.

VII. Institutional Endorsement and PHS Approval

A. Authorized Institutional Official	
Name: Dr. Venkatanarayanan Sharma	
Title: Professor and Dean	
Name of Institution: William Paterson University	
Address: <i>(street, city, state, country, postal code)</i> College of Science and Health William Paterson University, Wayne NJ 07470	
Phone: 973-720-2194	Fax: 973-720-2338
E-mail: Sharmav@wpunj.edu	
Acting officially in an authorized capacity on behalf of this Institution and with an understanding of the Institution's responsibilities under this Assurance, I assure the humane care and use of animals as specified above.	
Signature: 	Date: 9/04/2020

B. PHS Approving Official <i>(to be completed by OLAW)</i>	
Signature:	Date:
Assurance Number:	
Effective Date:	Expiration Date:

VIII. Membership of the IACUC

Date: 9/04/2020			
Name of Institution: William Paterson University, Wayne NJ 07470			
Assurance Number: D16-00879 (A4681-01)			
IACUC Chairperson			
Name*: Emmanuel S. Onaivi			
Title*: Professor		Degree/Credentials*: PhD	
Address*: College of Science and Health, William Paterson University, Department of Biology 300 Pompton Road, Wayne, NJ 07470			
E-mail*: Onaivie@wpunj.edu			
Phone*: 973-720-3453		Fax*: 973-720-2338	
IACUC Roster			
Name of Member/ Code**	Degree/ Credentials	Position Title***	PHS Policy Membership Requirements****
Jeung Woon, Lee	PhD	Ass. Prof. of Biology	Scientist
Sonya Bierbower	PhD	Asst. Prof. of Biology	Scientist
Faith Krausman	D.V.M	Veterinary Clinician	Veterinarian
Jan Pinkston	M.A.	Ass. Director of WPU Honors College	Non-Scientist
Scott Hofsess	M.S.	Clin. Direct. Novartis Pharmaceuticls Co.	Non-affiliated
Marizel Mina	B.S.	Lab. Technician	Non-voting member/Org.
Mukesh Sahni	PhD	Safety officer	Scientist

* This information is mandatory.

** Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this submission to OLAW. Sufficient information to determine that all appointees are appropriately qualified must be provided and the identity of each member must be readily ascertainable by the institution and available to authorized OLAW or other PHS representatives upon request.

*** List specific position titles for all members, including nonaffiliated (e.g., banker, teacher, volunteer fireman; not "community member" or "retired").

**** [PHS Policy](#) Membership Requirements:

Veterinarian veterinarian with training or experience in laboratory animal science and medicine or in the use of the species at the institution, who has direct or delegated program authority and responsibility for activities involving animals at the institution.

Scientist practicing scientist experienced in research involving animals.

Nonscientist member whose primary concerns are in a nonscientific area (e.g., ethicist, lawyer, member of the clergy).

Nonaffiliated individual who is not affiliated with the institution in any way other than as a member of the IACUC, and is not a member of the immediate family of a person who is affiliated with the institution. This member is expected to represent general community interests in the proper care and use of animals and should not be a laboratory animal user. A consulting veterinarian may not be considered nonaffiliated.

[*Note: all members must be appointed by the CEO (or individual with specific written delegation to appoint members) and must be voting members. Non-voting members and alternate members must be so identified.*]

IX. Other Key Contacts (optional)

If there are other individuals within the Institution who may be contacted regarding this Assurance, please provide information below.

Contact #1	
Name: Martin Williams	
Title: Director Office of Sponsored Programs	
Phone: 973-720-3263	E-mail: WilliamsM@wpunj.edu
Contact #2	
Name:	
Title:	
Phone:	E-mail:

X. Facility and Species Inventory

Date: 9/04/20			
Name of Institution: William Paterson University			
Assurance Number: D16-00879 (A4681-01)			
Laboratory, Unit, or Building*	**Gross Square Feet [<i>include service areas</i>]	Species Housed [<i>use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog</i>]	Approximate Average Daily Inventory
Colony rooms#		Mice and Rats	
Colony 1	36' X 30'	Mouse-C57BL/6J	214
Colony 1	-ditto-	Mouse-S129	56
Colony 1	-ditto-	Mouse-THY	79
Colony 1	-ditto-	Mouse-BTBR	105
Colony 2	10' X 15'	Mouse-CB2F	48
Colony 2	-ditto-	Mouse-DAT- CNR2	54
Colony 2	-ditto-	Mouse-CX3CR1-CNR2	100
Colony 2	-ditto-	Mouse-DAT-Cre	13
Colony 2	-ditto-	Mouse-CX3CR1-Cre	20
Colony 3	10' X 10'	Rat-SD	6
Colony 4	12' X 10"	Mouse-C57BL/6J	89
Colony 4	12' X 10"	Mouse-E1F3	7
Colony 4	12' X 10"	Mouse-MUB	13
Colony 4	12' X 10"	Mouse-SERT	106
Colony 4	12' X 10"	Mouse-DAT-CI	45
Colony 4	12' X 10"	Mouse-DAT	51
Common room	10' X 15"	Meetings	
Surgery room	12' X 10'	Surgery/perfusion/injection	
Balance room	10' X 10'	Drug preparation	
Testing room	10' X 15'	Behavioral testing	
Testing room	-ditto-	Ultra sound/Behavior analysis	
Testing room	20' X 15'	Multiple testing	
Cage washer/disposal	30' X 20'	Storage/dumping/filling	

*Institutions may identify animal areas (buildings/rooms) by a number or symbol in this submission to OLAW. However, the name and location must be provided to OLAW upon request.

** Estimates of Gross square feet.