

Faculty Positions in Mental and Physical Health Consequences of Trauma and Adversity
Department of Psychology and
Department of Biological Sciences
Kent State University

In a major joint venture, the Department of Psychology and the Department of Biological Sciences at Kent State University seek six new tenure-track faculty members to work in the field of mental and physical health consequences of trauma and adversity. The purpose of these hires is to build upon existing strengths in each department and to further develop our combined expertise in interdisciplinary and translational approaches to the study of trauma and health, broadly defined. This initiative seeks to both enhance research productivity in this area and to create cutting-edge interdisciplinary opportunities for the training of graduate and undergraduate students.

Kent State University provides an extraordinary opportunity for developing new collaborations and new approaches to the study of trauma and health. A rich collaborative environment is supported by research and educational partnerships with multiple clinical partners throughout Northeast Ohio, outstanding research facilities for animal and human research, and the newly established Center for Clinical and Translational Research.

Faculty in the Departments of Psychology and Biological Sciences at Kent State University are highly productive researchers who have demonstrated success in attracting substantial federal funding in support of their research programs. Combined, these two departments have over 200 students in doctoral degree programs and over 1300 undergraduate majors. Further information is available on the websites <http://dept.kent.edu/psychology> and <http://biology.kent.edu>.

All positions will begin August 2010. Successful applicants will be expected to develop highly productive research programs, secure extramural funding, engage in collaborative research, direct theses and dissertations, and exhibit a commitment to excellence in undergraduate and graduate education. Positions are available at either the Assistant or Associate Professor rank. Applicants at the Associate level will be expected to have an extramurally-funded research program in place, while applicants at the Assistant level will be expected to establish such a program.

TENURE-TRACK POSITIONS – DEPARTMENT OF PSYCHOLOGY:

1. **Behavioral Neuroscience.** We seek an active researcher in the area of animal models of trauma, stress and/or health, with an emphasis on behavior. Research interests could also include animal models of post-traumatic psychopathology, such as posttraumatic stress disorder (PTSD) and depression. Qualifications: Ph.D. in Psychology, Neuroscience, or related fields and postdoctoral experience.
2. **Adult Psychopathology** – We seek applicants with expertise in either basic or clinical human research on trauma or stress-related psychopathology, including areas such as PTSD, depression, substance abuse and/or violence. Qualifications: Ph.D. in Psychology. For clinical psychology applicants, an APA-accredited internship is required.
3. **Child Clinical or Pediatric Psychology.** We seek a child clinical psychologist with expertise in child trauma and/or early adversity. Research approaches could include basic or clinical research, family focused approaches, and clinical interventions. Qualifications: Ph.D. in Clinical Psychology and an APA-accredited internship.

TENURE-TRACK POSITIONS – DEPARTMENT OF BIOLOGICAL SCIENCES:

1. **Neurological/Mental Health Disorders.** We seek individuals with interests in animal models of any type of trauma-related disorders (e.g., conditioned fear, depression, PTSD, anxiety, obsessive compulsive disorder) that would extend existing expertise in animal models of psychopathology and neuropathology. Qualifications: Ph.D. in biology, neuroscience, or a related field and postdoctoral experience.
2. **Developmental Processes.** We seek individuals with interest in developmental effects on behavior. Areas of interest might include (but are not limited to) the impact of early drug exposure, stress, or neural pathologies on mental health and/or neural function later in life. Qualifications: Ph.D. in biology, neuroscience, or a related field and postdoctoral experience.
3. **Molecular bases of health and disease.** We seek individuals with a research focus on the molecular biology of health and disease, particularly in areas with links to trauma and stress. For example, this would include cardiovascular disorders, eating disorders, immunological dysfunction, diabetes, and substance abuse. Qualifications: Ph.D. in biology, neuroscience, or a related field and postdoctoral experience.

Review of applications will begin immediately and continue until the position is filled. The application deadline is December 15, 2009.

For positions in the Department of Psychology, send application materials, including statements of research and teaching interests, curriculum vitae, copies of publications and other supporting materials, summaries of teaching evaluations, and three letters of recommendation by e-mail to psysearch@kent.edu; or by mail to:

Chair, Coordinated Hire Search Committee
Department of Psychology
Kent State University
P.O. Box 5190
Kent, OH 44242-0001

For positions in the Department of Biological Sciences, send application materials, including statements of research and teaching interests, curriculum vitae, and three letters of recommendation by e-mail to biosearch@kent.edu; or by mail to:

Chair, Coordinated Hire Search Committee
Department of Biological Sciences
Kent State University
P.O. Box 5190
Kent, OH 44242-0001

Kent State University is an Affirmative Action/Equal Opportunity Employer and encourages applications from candidates who would enhance the diversity of the University's faculty.

Background to Hiring Effort

In 2009, the Departments of Biological Sciences and Psychology were approved to hire 6 new tenure track faculty to work in the field of mental and physical health consequences of trauma and adversity. This effort is based on well-developed plans for growth in two of Kent's most productive academic departments as well as an expansion of institutional investment in the biomedical-focused disciplines.

The purpose of these hires is to build upon existing strengths in each department and to further develop our combined expertise in interdisciplinary and translational approaches to the study of trauma and health, broadly defined. Translational research includes applying discoveries generated during research in the laboratory, and in preclinical studies, to the development of trials and studies in humans, as well as enhancing the adoption of best practices in the community. The new hires will be appointed in the respective departments but will participate with existing faculty in helping meet 4 key missions: (1) build on existing academic strengths within each unit, (2) greatly increase the extramural funding generated by these two highly productive departments, (3) extend collaborative ventures with community partners and (4) enhance KSU's growing international reputation in the areas of Trauma and Health- related disorders.

The foci of these hires mesh well with strategic hiring plans in both departments and represent a natural extension of ongoing collaborations between our departments. In addition to increasing collaborative interdisciplinary grant proposals, the proposed hires will bridge relationships between our two departments and will provide us with opportunities for interdisciplinary training of undergraduate and graduate students.

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Department partners

Department of Psychology: During the past five years (AY 04-05—08-09) 20 PSYC faculty members received extramural funding for research, and the total amount of grant awards during this period was over \$11 million, with the majority of these funds representing National Institutes of Health (NIH) grants. In this 5-year time frame, PSYC faculty published 311 peer-reviewed articles in scientific journals, 37 chapters in edited volumes and 9 authored books. PSYC has approximately 122 graduate students and approximately 600 undergraduate majors. The proposed coordinated hires align nicely with the department's strategic plan to develop and extend expertise in trauma and health.

Department of Biological Sciences: During the past 5 years, faculty in BSCI have generated about \$9.5 million in extramural funding, with a major share of this total coming from NIH. Faculty have published 240 articles in refereed journals and edited volumes. BSCI faculty currently advise 85 students in graduate degree programs

(including the School of Biomedical Sciences) and over 850 students in undergraduate degree programs. The department has replaced some of the cohort of faculty who retired in the past decade, and a majority of new faculty have created significant overlap with the research expertise and interests of faculty in the Department of Psychology. This strong foundation of common research interests in the areas of trauma and health also align well with long-term funding streams from extramural funding agencies, in particular NIH.

Both departments have extensive existing collaborations with area academic and clinical institutions, the latter including SUMMA Health System, Akron Children's Hospital and the Cleveland Clinic Foundation.

Position Descriptions

The areas of expertise for the 6 positions were carefully chosen to link researchers and provide help build collaborative opportunities across units and with other collaborative partners.

Within the Department of Psychology, we seek applicants in the following three areas:

1. Behavioral Neuroscience - Consistent with the NIH Roadmap and recent NIH initiatives to bridge the gap between biological scientists and behavioral/social scientists, an expert in Behavioral Neuroscience will help establish KSU as a leader among peer institutions in the "bench to bedside" emphasis in NIH. The ideal candidate would be an active researcher in the area of animal models of trauma, stress and/or health. Areas of interest include animal models of post-traumatic psychopathology (e.g., posttraumatic stress disorder (PTSD) and depression), with an emphasis on behavior as reflected in mechanisms of altered memory and conditioned fear. Given the critical nature of this individual to our translational focus, this hire would be made at the advanced assistant or associate professor level. This individual would have a proven track record of grant support in order to immediately provide the foundation for our translational approach. In addition to the funding potential afforded by such a hire, this individual would fill critical teaching needs in PSYC at the undergraduate and graduate levels and would be involved in coordinated undergraduate teaching endeavors between BSCI and PSYC.

2. Psychopathology – The ideal candidate for this position would be an expert in either basic or clinical human research of trauma and post-traumatic psychopathology. Experts in PTSD, depression, substance abuse and/or violence would provide critical links between departments, would provide collaborative opportunities for existing highly productive faculty, and would link with stress researchers at Summa Health System. This position is proposed at the assistant professor level, although applicants would be expected to be highly productive with high likelihood of extramural funding. In addition, this hire would provide critical teaching needs for a number of undergraduate and graduate courses.

3. Child/Adolescent – In order to provide a lifespan approach to the study of trauma and health, the third position is a child clinical psychologist with expertise in child trauma and early adversity. Such an individual would extend existing expertise in PSYC and would extend collaborations at Summa Health System and at Akron Children’s Hospital. Areas of interest include basic or clinical research in child trauma, family focused approaches to the study of child traumatic experiences, and clinical interventions for child trauma patients. Similar to the other positions, this individual would meet critical teaching needs at the undergraduate and graduate levels. This position is also proposed at the assistant professor level.

Within the Department of Biological Sciences, we seek applicants in the following three areas:

4. Neurological/Mental Health Disorders – this individual would extend existing expertise in animal models of psychopathology and provide a critical animal component to our translational continuum. It is anticipated that this hire would collaborate closely with existing researchers in both departments as well as with position 1 and 2 described above. Although this description overlaps somewhat with that of position 1 above, it is essential that we create a critical mass of researchers in this area in order to develop a strong reputation. An assistant professor in BSCI with an active research program in animal models of any type of trauma-related disorders (e.g., conditioned fear, depression, PTSD, anxiety, obsessive compulsive disorder) would be an integral addition to our coordinated plans in both research and development of new instructional opportunities, including in collaboration with the College of Public Health.

5. Developmental processes – this position meshes nicely with position 3 above and provides a translational approach to the study of early adversity, canalization of biological processes, and developmental influences on risk and resilience behaviors. The ideal candidate would be an active researcher with high likelihood of grant funding in any area of risk and resilience from a developmental perspective. Areas of interest might include the impact of early drug exposure, stress, or neural pathologies on mental health/neural function later in life. This individual would also be hired at the rank of assistant professor.

6. Molecular bases of health and disease - this individual would have expertise in any physical health area with links to trauma and stress, and would coordinate well with existing faculty in PSYC. Health is a major area of excellence in PSYC; however, extending our ability to approach the study of major health issues translationally will allow for a more novel approach to the study of health and disease. Existing faculty have expertise in cardiovascular disorders, neurological disorders, eating disorders, immunological dysfunction, diabetes, substance use and a number of other disorders that have established links to trauma and stress.

Facilities

Research facilities available to faculty in both departments area extensive and include those available in our clinical partners. Some of the facilities located at Kent State University include the following.

Biological Sciences Dept: Research facilities are located primarily in Cunningham Hall, the adjacent Science Research Laboratory and the Cunningham Hall Research Annex. The Department of Psychology is located in Kent Hall; facilities housed in the department and other information can be found at <http://dept.kent.edu/psychology/>

Within the Department of Biological Sciences, all laboratories house modern equipment related to faculty research (centrifuges, thermocyclers, gamma/scintillation counters, etc). The department maintains multiple staffed core facilities and an animal facility holding both transgenic and knockout animal experimental models. The Research Annex is a 56,000 sq. ft., 8 million dollar facility dedicated entirely to supporting Bioscience and Biotechnology researchers in the Biological Sciences Department as well as collaborative units. The Annex contains 20, 1000 sq ft. research laboratories, the occupants of which generated an estimated 9.5 million dollars in research funding over the past 3 years. The Annex also contains core facilities (below), two research seminar rooms and is connected to all other science units in Kent's science mall by a dedicated gigabit+ high bandwidth network.

Cunningham Hall contains an additional 13,900 sq ft. research laboratories, an attached 6000 sq. ft research greenhouse, the second largest research Herbarium in Ohio, 4 core facilities (below) and one of Kent's two animal vivariums (below). Cunningham Hall is slated for a complete modernization beginning in 2010 which will modernize spaced dedicated to faculty research.

Our modern core facilities include the following large equipment items with individual researchers holding a substantial array of complementary equipment:

Our **Bioimaging core facility** contains an Olympus FV300 Confocal Microscope, Olympus FV500 Confocal Microscope, Olympus IX71 Fluorescence Microscope, Olympus IX70 Fluorescence Microscope, Nikon Diaphot microscope, Nikon Optiphot microscope, ISS Fluorescence Correlation Spectrophotometer with Inverted Microscope, Jobin Yvon HR800 Raman Spectrometer with Inverted Microscope, Varian Unity/Inova 500MHz NMR spectrometer with 3D scanning probe and multiple fluorescence microscopes housed in individual research laboratories.

The **Genomics Core facility** contains an Affymetrix GeneChip (ProteinChip) microarray system, Applied Biosystems 7000 SDS Real-time PCR , Arcturus Autopix Laser Capture Microscope, Two Beckman CEQ 8800 Genetic Analysis System (16 capillary) GeneQuant Pro Spectrophotometer, Typhoon Phosphoimaging System, Fuji Phosphoimaging Ststem, a Becton Dickinson Facscaliber Cell Sorter and Flow

Cytometer. Our Cell/Tissue handling facility includes 8 cell incubators, cryogenic storage tanks, 8 ultracold freezing units, 2 Leica CM1850 cryostats and multiple Cell/Tissue Culture Hood (x3) (most researchers have their own cell culture hoods as well).

A **Proteomics Core Facility** is shared with the Department of Chemistry and additionally includes a Genogrinder, multiple thermocyclers for large-scale DNA/RNA/protein isolation and analysis, FPLC Chromatographic System, Agilent 2100 Bioanalyzer, Turner Biosystems 20/20n Luminometer and a Fuji LAS3000 Chemiluminescence Imaging System. The Department's Bioinformatics, BioVisualization and Computational Core Facility contains a 16 node PSSC Beowulf clusters for genomic and proteomic data analysis, a 6 terabyte disk array and dedicated research server for bioimage storage, and a 3D stereo iImmersive classroom, shared with the Chemistry department, with a Fakespace PowerWall stereoscopic projection system for viewing and analyzing complex chemical and biomedical images.

The **Behavioral Core Facility** maintains extensive equipment for behavioral testing of animal models. Within the department are eleven walk-in Environmental Chambers for housing behavioral experiments that require chronic controlled conditions, with each chamber capable of housing 60 large to 100 small rodents. Several small rooms adjacent to the Vivarium are available for conducting acute behavioral studies. Five computerized animal activity monitoring systems, each capable of monitoring multiple chambers, are used for studies in various areas of neuroendocrinology and behavioral neuroscience. Other behavioral assessment equipment includes computer monitored maze systems (elevated plus maze, Morris water maze, etc.), open field arenas, running wheels, treadmills, equipment for in vivo microdialysis including 2 dedicated HPLC systems, Minimitter systems for body temperature recording, acoustic startle and prepulse inhibition systems, video cameras for recording behavior. Surgical facilities housed in the Vivarium include stereotaxic apparatuses for site-specific intracranial or intraspinal implants or lesions.

The Biological Sciences Department houses a variety of equipment for to support a wide range of cell/molecular research needs. These include a Biosafety Level 3 Training Laboratory is a fully functioning level 3 containment laboratory used to train a growing workforce on the procedures and practices of a level 3 facility, using level 1 and level 2 surrogate organisms and other materials that mimic level 3 organisms as well as support microbiological research, especially that related to human disease. The lab houses an Olympus IX fluorescence microscope, Cepheid SmartCycler (16 chamber real time PCR thermocycler), Thermo refrigerated centrifuge, bacteriological and CO₂ incubators, 3 class-2 biological safety cabinets, a "pass-through" Century sterilizer, 96-well plate washer, 96-well format spectrophotometer, PCR thermocycler, gel electrophoresis equipment, Optimax UV/VIS spectrophotometer, AMX integrating controller providing local and remote control of 6 cameras, 3 microphones and a DVD recorder (in the lab) for monitoring activity in the lab. The Department also maintains a support lab containing a walk-in 37°C incubator for cultures, Steris-Amsco Century autoclave, large (chromatography) refrigerator, refrigerator/freezer, microwave, dishwasher, waterbaths, spectrophotometer, microscopes,

and a separate media preparations room. Individual faculty members also share a variety of equipment such as a Class 2 laminar-flow hood for microorganism containment, a refrigerator (4°C), -20 and -80 °C freezers, three bacteriological incubators, electrophoresis and immunoblot systems, Genesys 10 spectrophotometer, cell harvester, Spectronic 501 spectrophotometer, dual chamber stationary water bath, shaking water bath, IEC MP4 refrigerated centrifuge, microfuge, Olympus Fluorescence & Polarizing microscope with CCD camera, Beckman J2-HS centrifuge, Bausch and Lomb 1001 UV spectrophotometer, two New Brunswick hybridization incubators, Nikon Labophot-2 microscope with epifluorescent unit, Bio Rad CHEF II electrophoresis system, Labconco centrivap, Forma biohazard cabinet, Nikon dissecting microscope, Bio Rad 3000 and 200 power supplies, Bio Rad Electroporator, Millipore Tangential filtration apparatus, Market Forge autoclave, Virsonic sonicator, Fotodyne transilluminator and gel documentation system, MJ Research thermocycler, BioRad D-Code system for DGGE, and three Phipps and Bird paddle stirrers for microcosms, a selection of centrifuges, pumps, heating baths, stirrers, shakers, electrophoresis gel rigs, colony counters, and micropipetters, anaerobe chamber, rotating cell culture systems and 8 slow turning lateral vessels for use with these systems.

Kent State maintains two large AALAC-approved Animal Vivariums. The **BSCI Bioscience Animal Facility** located in Cunningham Hall contains 14 animal holding rooms (approximately 3000 ft²) suitable for housing knock-out/transgenic rodent animal models and other species and all requisite infrastructure for animal breeding and maintenance. The surgical suite is approved for small animal survival surgery. The Biological Sciences department also houses the Kent State University/Oak Clinic Consortium for Multiple Sclerosis Research in 1000 ft² of dedicated research space that complements the 10000 ft² of laboratory space at the Oak Clinic.

Related core facilities for Bioscience research are located in the Psychology Department which maintains a 9,500 ft² **Psychology Animal Facility** (also AALAC approved) that houses a variety of animal models (both knock-out and transgenic) and contains large dedicated laboratory space for behavioral testing of these models that roughly doubles the infrastructure dedicated to measuring behavioral endpoints of a variety of biomedical disorders.