BALL STATE UNIVERSITY

OFFICE OF UNIVERSITY COMPLIANCE

May 1, 2007

Material Licensing Section
U. S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Suite 210
Lisle, IL 60532 – 4352

Dear Sir/Madam:

We wish to request an amendment to Ball State University's NRC material license. Our license number is 13-06231-01. The requested amendment and justification are given below.

The amendment becomes necessary due to the impending retirement of Dr. David Ober, the university's present Alternate Radiation Safety Officer (ARSO). Upon recommendations from the university administration and the Radiation Safety Committee, we also wish to add a second ARSO. We seek your approval of Dr. Stuart Walker as the First Alternate Radiation Safety Officer (FARSO) and Dr. Bruce Craig as the Second Alternate Radiation Safety Officer (SARSO). Dr. Walker and Dr. Craig are both authorized users of radioactive material at Ball State University. Dr. Walker has been on the Radiation Safety Committee for many years and is our current chair of the committee. He is a professor and the Director of Center for Medical Education at the Ball State University campus. Dr. Craig is also a professor. He is a member of the Radiation Safety Committee, and has served as a RSO at Wichita State University during 1976 – 1978.

We greatly appreciate your assistance in reviewing the proposed amendments.

Sincerely,

Sali K. Falling

Sali K. Falling
Executive Director
Office of University Compliance

Islam

Mohammed S. Islam
Radiation Safety Officer

Enclosures

RECEIVED MAY 0 4 2007

Curriculum Vitae
T. Stuart Walker

BIRTH DATE: July 16, 1949

MARITAL STATUS: Married to Andrea (Houchin) Walker (since 8/12/72)

CHILDREN: Lisa Nicole Walker (3/24/77)
Nathaniel Stuart Walker (1/5/85)

CURRENT ADDRESSES:

Dr. T. Stuart Walker
Center for Medical Education
Ball State University
Muncie, IN 47306
Telephone: (765)285-1063
(765)751-5102; (765)748-5842 (cell)
E-mail: swalker@bsu.edu

Dr. T. Stuart Walker
6300W CR500N
Muncie, IN 47304
Telephone: (765)286-3152
E-mail: typhusdoc@yahoo.com

EDUCATION:

Cedarville College, Cedarville, OH
B.S. 1971
Major: Biology
Minors: Chemistry, Bible, History, Literature

Indiana University School of Medicine
MS. 1975
Major: Microbiology
Minor: Biochemistry
Thesis: Plasmid DNA in Neisseria gonorrhoeae
Advisor: Dr. Warner Wegener

Indiana University School of Medicine
Ph.D. 1977 (completed 1976)
Major: Microbiology
Minor: Life Sciences
Thesis: Pili of Neisseria and Moraxella
Advisor: Dr. William D. Sawyer

University of Virginia College of Medicine
Postdoctoral Fellow 1977
Department of Microbiology and Immunology
Research Area: Entry of Rickettsia prowazekii into host cells
Advisor: Dr. Herbert Winkler

University of South Alabama School of Medicine
Postdoctoral Fellow 1978-1979
Department of Microbiology and Immunology
Institute for Molecular Biology
Research areas: Entry of typhus rickettsiae into host cells: Rickettsial damage of host phagocytic cells: Pathogenesis of Carrion's disease.
Advisor: Dr. Herbert Winkler

Grace Theological Seminary
Winona Lake, IN
Postgraduate Studies 1985-1986
Areas of interest: Old Testament Theology and Apologetics

PROFESSIONAL EXPERIENCE

1977: Postdoctoral Fellow, University of Virginia College of Medicine, Department of Microbiology and Immunology with Dr. Herbert Winkler.
Role: Research Fellow

1978-79: Postdoctoral Fellow, University of South Alabama School of Medicine, Department of Microbiology and Immunology, Institute for Molecular Biology with Dr. Herbert Winkler.
Role: Research Fellow: also assisted in teaching Medical Microbiology lectures and laboratory

1979-84: Assistant Professor, Department of Biology and Center for Medical Education, Ball State University; and Assistant Professor (adjunct), Department of Microbiology and Immunology, Indiana University School of Medicine.
Role: Medical Microbiology Course Director (including teaching all Bacteriology, Parasitology and Mycology lectures and labs); Research Scientist. (For two years, during this time, I also taught Bio 213 at Ball State University; this is an entry level Microbiology course for Biology majors and nursing students)

1984-91 Associate Professor, Department of Biology and Center for Medical Education, Ball State University; and Associate Professor (adjunct), Department of Microbiology and Immunology, Indiana University School of Medicine. Role: Medical Microbiology Course Director (including teaching all Bacteriology, Parasitology and Mycology lectures and labs; during two years I taught the entire course, including Immunology); Research Scientist.

1991-present Professor, Department of Biology and Center for Medical Education, Ball State University; and Professor (adjunct), Department of Microbiology and Immunology, Indiana University School of Medicine. Role: Medical Microbiology Course Director (including teaching all Bacteriology, Parasitology and Mycology lectures and labs); Research Scientist

2003-present: Assistant Director, Muncie Center for Medical Education, Ball State University and Indiana University School of Medicine

REFEREED ARTICLES IN JOURNALS

1. Walker TS, Mellott GE. Rickettsial stimulation of endothelial platelet-activating factor synthesis. Infect Immun. 1993 May;61(5):2024-9.

2. Walker TS, Triplett DA. Serologic characterization of Rocky Mountain spotted fever. Appearance of antibodies reactive with endothelial cells and phospholipids, and factors that alter protein C activation and prostacyclin secretion. Am J Clin Pathol. 1991 May;95(5):725-32.

3. Walker TS, Dersch MW, White WE. Effects of typhus rickettsiae on peritoneal and alveolar macrophages: rickettsiae stimulate leukotriene and prostaglandin secretion. J Infect Dis. 1991 Mar;163(3):568-73.

4. Walker TS, Hoover CS. Rickettsial effects on leukotriene and prostaglandin secretion by mouse polymorphonuclear leukocytes. Infect Immun. 1991 Jan;59(1):351-6.

5. Walker, TS. Animal rights and the image of God. Part I: The case for animal rights. J. Bib. Ethics Med. 1991 Jan:5(1):1-6.

6. Walker, T.S. Animal rights and the image of God. Part II. J. Bib. Ethics Med. 1991 Jul: 5(2):21-27.

7. Walker TS, Brown JS, Hoover CS, Morgan DA. Endothelial prostaglandin secretion: effects of typhus rickettsiae. J Infect Dis. 1990 Nov;162(5):1136-44.

8. Walker TS, Triplett DA, Javed N, Musgrave K. Evaluation of lupus anticoagulants: antiphospholipid antibodies, endothelium associated immunoglobulin, endothelial prostacyclin secretion, and antigenic protein S levels. Thromb Res. 1988 Aug 1;51(3):267-81.

9. Walker TS. Rickettsial interactions with human endothelial cells in vitro: adherence and entry. Infect Immun. 1984 May;44(2):205-10.

10. Walker TS, Winkler HH. Bartonella bacilliformis: colonial types and erythrocyte adherence. Infect Immun. 1981 Jan;31(1):480-6.

11. Walker TS, Winkler HH. Interactions between Rickettsia prowazekii and rabbit polymorphonuclear leukocytes: rickettsiacidal and leukotoxic activities. Infect Immun. 1981 Jan;31(1):289-96.

12. Walker TS, Winkler HH. Rickettsial hemolysis: rapid method for enumeration of metabolically active typhus rickettsiae. J Clin Microbiol. 1979 May;9(5):645-7.

13. Walker TS, Winkler HH. Penetration of cultured mouse fibroblasts (L cells) by Rickettsia prowazeki. Infect Immun. 1978 Oct;22(1):200-8

14. Walker, TS, Sawyer, WD, and Wegener, WS. Pili of commensal Neisseria and Moraxella, In Bradley, DE, Raisen, P., Fives-Taylor, P., and

Ou, J. (ed), Pili. International Conferences on Pili, Washington, D.C., p.49-63.

15. Walker, TS, Wegener, WS, and Sawyer, WD. Antigenic specificity of adherence of Neisseria to buccal epithelial cells. In Bradley, DE, Raisen, P., Fives-Taylor, P., and Ou, J. (ed), Pili. International Conferences on Pili, Washington, D.C., p. 65-71

16. Walker TS, Haak RA, Wegener WS. Plasmid DNA in virulent and avirulent gonococci. Can J Microbiol. 1975 Nov;21(11):1705-10.

BOOKS PUBLISHED

1. Walker, TS. Microbiology Review, Philadelphia, WB Saunders Company, 1999.

2. Walker, TS. Microbiology. Philadelphia, WB Saunders Company, 1998.

GRANTS RECEIVED

1995-2000 National Institutes of Health
National Institute of Allergy and Infectious Diseases
Tropical Medicine and Parasitology Section
Title: Pathogenesis of bacillary angiomatosis
Amount: $96,237 (total costs)

1990-1992 National Institutes of Health
National Institute of Allergy and Infectious Diseases
Tropical Medicine and Parasitology Section
Title: Rickettsial effects on endothelial functions
Amount: $91,145

1986-1989 American Heart Association, Indiana Affiliate
Title: Effects of lupus anticoagulants on endothelial function
Amount: $27,800

1985-1987 National Institutes of Health

National Institute of Allergy and Infectious Diseases
Tropical Medicine and Parasitology Section
Title: Arachidonate derivatives and the typhus toxic reaction
Amount: $49,978

1981-1984 National Institutes of Health
National Institute of Allergy and Infectious Diseases
Tropical Medicine and Parasitology Section
Title: Rickettsial interactions with endothelial cells (and platelets)
Amount: $165,566

1980-1981 Ball State University Faculty Research Grant
Title: Biology of meningococcal pili
Amount: $800

1980 Ball State University CORE Grant
Title: In vitro culture of vascular endothelium
Amount: $1500

1979-1980 Ball State University New Faculty Grant
Title: In vitro culture of vascular endothelium
Amount: $400

1979-1980 National Science Foundation "National Needs" Postdoctoral Fellow (Competitive grant)

1976 Indiana University Predoctoral Fellow (Competitive)

HONORS RECEIVED

Who's Who in Emerging Leaders in America (1987)

Who's Who in the Midwest (1984, 1985, 1986, 1987, 1989)

Outstanding Young Men in America (1983, 1984, 1985)

NSF "National Needs" Postdoctoral Fellow (1977)

Indiana University Predoctoral Fellow (1976)

Who's Who in American Colleges and Universities (1970-1971)

COURSES TAUGHT

1979-present: Muncie Center for Medical Education, Ball State University and Indiana University School of Medicine. Course Director of Medical Microbiology. This course is taught to 16 first-year medical students and may also include some graduate students. I direct the course, and teach all the lectures pertaining to Bacteriology, Mycology, Parasitology, and Virology. The course is media-intensive, and I use Powerpoint and computer-assisted learning modules extensively. I also wrote the book for the class, and have written a review book that many in the class use.. During a single two-year period I also taught Immunology.

I intermittently serve as a guest lecturer in a course at Anderson University (taught by Dr. Lee Griffeth) entitled "Christian Issues in Science". I generally have taught a section on a Christian philosophy of science.

1979-1982: Ball State University, Department of Biology. I taught 2 classes per quarter of BIO 213; this is the entry level Microbiology course for Biology majors and nursing students.

1975-1976: Indiana University School of Medicine. Assisted in Medical Microbiology lab; was responsible for one section of 8 medical students. I also taught some lectures and a series of microbiology labs to nursing students.

RELEVANT EXPERIENCE USING RADIOACTIVE MATERIALS

1. Courses taken that involved training in radiation theory or usage:
    a. Molecular Biophysics (1 semester graduate course on subatomic theory including applications) (1976)
    b. Physical Chemistry (1 semester course with a large component of wave theory) (1975)
    c. Radiation Safety course: a one month course taught two days a week specifically addressing issues of radiation usage in the laboratory and issues of proper handling and disposal. An exam was given at the end for certification. (1979)
    d. Annual radiation safety class – a 1-2 hr class administered annually at BSU with an exam at the end for annual certification. (I have taken this annually since 1979).

2. Radiation usage experience:
    a. All of my graduate studies involved daily usage of radioactive materials (1972-76)
    b. I was continuously externally funded for 21 years, daily performing experiments using radioactive materials
3. Other relevant experiences
    a. Member of Ball State University's Radiation Safety Committee for at least 15 years
    b. Chair of BSU's Radiation Safety Committee for the past 6 years.

RADIATION SAFETY OFFICER
QUALIFICATION VITA

BRUCE W. CRAIG, PHD
GRADUATE COORDINATOR EXERCISE SCIENCE &
PROFESSOR
HUMAN PERFORMANCE LABORATORY
BALL STATE UNIVERSITY

MAILING ADDRESS: Human Performance Laboratory
Ball State University
Muncie, IN 47306
email: bcraig@bsu.edu

PHONE NUMBER: (765) 285-1141
FAX NUMBER: (765) 285-8596

AREA OF SPECIALIZATION: Diabetes: cellular mechanisms of control and the influence of exercise.

EDUCATION:

Bachelor of Science (Zoology)
Northern Arizona University, 1967

Master of Science (Physiology)
Northern Arizona University, 1969

Thesis Title: "Effects of Pinealectomy and Melatonin on the Histology of the Rat, Testes, Seminal Vesicles, and Prostate Gland"

Doctor of Philosophy (Physiology)
Iowa State University, 1972

Dissertation Title: "Effects of Exercise, Thyroxine, and Age on Corticosterone Production in the Male Rat"

RADIATION COURSE WORK, 1970-71 (Iowa State University)

Radiotracer Methods (Chem. 426) - 2 hr lecture class. Emphasized how to use tracers safely and covered all of the basic measurement techniques.
Laboratory Radiotracer Techniques (Chem. 529) - 2 hr lab class. An expansion of the earlier class that provided laboratory experience with liquid scintillation and various isotopes.
Radiation Biochemistry (Chem 521) - 3 hr lecture-lab class. Dealt with the usage of radioactive to investigate biochemical reactions, and provided both

lecture and hands on-experience in single and double label experiments.

PROFESSIONAL EXPERIENCE AND ADVANCED TRAINING

Postdoctoral Research Fellow 1978-1981, Dr. John Holloszy's laboratory, Fellowship support provided by the National Institute of Health (5-F32-AM06123-02) and (5-TAM07226-02). The research utilized C-14 glucose and H-3 glucose. I was required to take a radiation exam administered by the Washington University School of Medicine Division of Radiation Safety to qualify as an approved user. Each user was responsible for doing their own area radiation surveys each week and give weekly accounts of usage and storage levels of radiation.

Sabbatical Leave at the Karolinska Institute Stockholm, Sweden. July 15 to January 5, 1993. I conducted research on the influence of insulin-like growth factor I (IGF 1). I utilized C-14 mannitol and H-3 glucose in that research.

TEACHING EXPERIENCE

Positions Held prior to Ball State University
1971-1972--Instructor, Iowa State University (last year of graduate training)
1972-1978--Assistant Professor, Wichita State University.

Ball State Positions
1981-1988--Associate Professor, Ball State University
1988-Present--Professor, Ball State University
1993-Present--Associate Faculty Member of the Gerontology Institute
1999-Present--Associate Faculty Member Health and Physiology Department

ADMINISTRATIVE EXPERIENCE

Positions Held prior to Ball State University
1976-1978--**Radiation Safety Officer at Wichita State University**

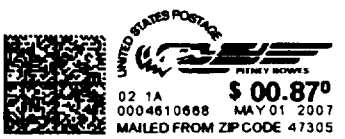
- The RSO position at Wichita was covered by a State Of Kansas Radioactive Materials License. It was a "Type B Specific License of Broadscope". The license number is 31-C155-01. It has been renewed many times and expires next on February 28, 2011.
- RSO duties included the following
    - Oversight of ordering, receipt, surveys and delivery of materials
    - Personnel monitoring program: all personnel using radioactive substances were required to wear film badges and the RSO was responsible for exchanging the badges each month and monitoring exposure from the monthly Radiation Dosimetry Reports they received each month.
    - Investigation of any incidents and responding to any emergencies
    - Waste disposal program

- Maintaining all required records
- Writing amendments to the license

Ball State Positions
1981-1996--Graduate Director Human Performance Laboratory
2002-Present--Graduate Coordinator Exercise Science Division
1981-Present--Controlled substance monitor Human Performance Laboratory
1981-Present--Committee Member University Radiation Safety Committee.
1981-Present--Approved radioactive user and contact person for the Human Performance Laboratory

EXPERIENCE WITH RADIOACTIVE MATERIALS

1. Iowa State University: C-14
2. Wichita Sate University: C-14
3. Washington University School of Medicine: H-3, C-14, and Iodine 131
3. Ball State University
   - 1981--to present: C-14, H-3 glucose in double isotope research aimed at examining glucose uptake by the muscle (animal model). Usage of Iodine -125 hormone kits (cortisol, estrogen, testosterone, growth hormone, and insulin) for measuring hormone levels of the blood (human model).
   - Supervision of students who have used C-14, H-3, Iodine 125 (hormone kits) or P-32 (two PhD students who work with faculty in biology).



FROM:

Dr Mohammed S Islam
I-30100

BALL STATE
UNIVERSITY
Muncie, IN 47306

Material Licensing Section
U. S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Form 893-A

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