

# Violet Vakunseh Bumah, Ph.D.

## *Curriculum Vitae*

### **ADDRESS**

College of Health and Human Services  
Bioscience Center, Room 2205  
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: [bumah\\_violet@yahoo.com](mailto:bumah_violet@yahoo.com)

### **EDUCATION**

2000 Ph.D. Biochemistry, University of Calabar, Nigeria  
1992 B.S. Biochemistry, University of Uyo, Nigeria

### **POSTDOCTORAL TRAINING**

2005-2006 Northwestern University, Chicago, USA (Infection and Immunity)  
2003-2005 University of Buea, Cameroon (Infectious disease Pathogenesis)

### **ACADEMIC AND RESEARCH APPOINTMENTS**

2016-Present San Diego State University, USA

- Research Professor, College of Health and Human Services
- Lecturer, Department of Chemistry and Biochemistry
- Research Associate Professor, College of Sciences

2009-2016 University of Wisconsin-Milwaukee, USA

- Research Associate

2012-2016 Medical College of Wisconsin-Milwaukee, USA

- Adjunct Assistant Professor of Clinical and Translational Science Institute

2007-2009 University of Buea, Cameroon

- Lecturer, Department of Biochemistry

2005-2007 Northwestern University, Chicago, USA

- Fulbright Senior Research Fellow/Postdoctoral training

2002-2005 University of Buea, Cameroon

- Assistant Lecturer, Department of Biochemistry

2001-2001 Ministry of Agriculture, Yaounde, Cameroon

- Project Manager
- 200-2001    United Nations World Food Program, Yaounde, Cameroon
- Temporary Program Assistant Manager
- 1996-2000    University of Calabar, Nigeria
- Graduate Assistant

## **HONOURS**

Fulbright Senior Research Scholar  
 Northwestern University, Chicago, USA (Additional support from Northwestern university for visiting scholar and Burroughs Wellcome resulted in extended Fulbright Program), August 2005 to November 2006

Upgraded to PhD Biochemistry Program after my BSc.

## **UNIVERSITY APPOINTMENT**

University of Wisconsin Biosafety Committee member - Representative of the Department of Biomedical Sciences

## **RESEARCH SUPPORT AND SCHOLARSHIP**

7/1/2016 – 06/30/2020

CareWear Corporation Grant through the San Diego State University Research Foundation

Title: Effect of blue light on *Propionibacterium acnes*: Time-kill studies

Role: Co-Principal Investigator

Funds: 386,621

7/1/2015 – 3/31/2016

Sonovia Holdings, LLC Grant through the San Diego State University Research Foundation Grant

Title: Effect of blue light on *Propionibacterium acnes*: Time-kill studies

Role: Principal Investigator

Funds: \$170,470

4/4/2013 – 12/31/2015

University of Wisconsin-Milwaukee College of Health Sciences (CHS) Stimulus Program to Accelerate Research Clusters (SPARC) Grant

Title: Mechanisms of blue light phototoxicity in methicillin-resistant *Staphylococcus aureus*

Role: Co-Principal Investigator

Funds awarded: \$25,000

3/1/2013 – 9/31/2014

University of Wisconsin-Milwaukee College of Health Sciences, Stimulus for Extramural Enhancement & Development (SEED) Grant

Title: Molecular analysis of blue light irradiated methicillin-resistant *Staphylococcus aureus* (MRSA)

Role: Principal Investigator

Funds awarded: \$10,000

07/01/2012 – 12/31/2014

University of Wisconsin-Milwaukee Research Foundation Catalyst Grant

Title: Development of a light delivery system that optimizes bacterial eradication

Role: Co-investigator

Funds awarded: \$55,000

12/01/2009 – 04/30/2016

University of Wisconsin-Milwaukee Funds for Dr. Enwemeka's laboratory

Role: Co-investigator

4/1/2012 – 3/31/2014

Clinical and Translational Science Institute (CTSI), Pilot and Collaborative Grant

Title: Mechanisms of antimicrobial effect of blue light and hyperbaric oxygen on methicillin-resistant *Staphylococcus aureus* (MRSA)

Role: Principal Investigator

Funds awarded: \$20,000

2008 – 12/31/2012

PPG of NIH5PO1HL078826: Part of the Parent Grant of National Institutes of Health

Title: Mechanisms of erythrocytic infections and anemia in malaria

Role: Co-investigator

2008 – 12/31/2012

University of Buea, Cameroon grant for supporting small research projects. Molecular analysis of parasite and human host determinants in sera from individuals susceptible or immune to malaria

Role: Principal investigator

09/30/2006 – 11/31/2006

Northwestern grant for visiting Scholar "Pathogenesis of infectious diseases" for the completion of Fulbright research Project at Northwestern University

Role: Principal Investigator

07/01/2006 – 09/30/2006

Awarded Burroughs Wellcome grant "Identification and Characterisation of a recombinant antigen vaccine against malaria"

Role: Principal Investigator

09/01/2005 – 06/30/2006

Fulbright African Senior Research Scholar grant by CIES "Identification and Characterization of a recombinant antigen vaccine against malaria"

Role: Principal Investigator

2003 – 2004

African Technology Policy Studies (ATPS) Network grant

Title: Biotechnology systems of innovation: A study of institutions and policies in Cameroon”

Role: Principal Investigator

Funds awarded: \$10,000

01/04/2000 – 30/09/2000

United Nations World Food Program (WFP Project 4387.01) in Cameroon

Title: Comparative studies on the nutritional status of beneficiaries/non- beneficiaries of the School Feeding Project

Role: Program Assistant

Funds awarded: (Undisclosed, part of WFP School feeding project in Cameroon)

## **U.S. FOOD AND DRUG ADMINISTRATION (FDA) APPLICATION**

2018: Bacterial kill in *P. acnes* using printed 450 nm light emitting diodes (LEDs)

### **Investigators**

Chukuka Enwemeka PT, PhD Principal Investigator, Professor, San Diego State University; **Violet Bumah PhD**, Research Professor San Diego State University; J.C. Castel PhD CTO Carewear Corp. Funded under Research grants through the San Diego State Research Foundation by Carewear Corp. Reno NV.

## **PUBLICATIONS**

**Bumah V.V.**, Masson-Meyers D.S., Tong W., Castel C., Enwemeka C.S. (2020).

Optimizing the bactericidal effect of pulsed blue light on *Propionibacterium acnes*-A correlative fluorescence spectroscopy study. Journal of Photochemistry and Photobiology B: Biology 202, 111701. Jan; 202:111701.

DOI: [10.1016/j.jphotobiol.2019.111701](https://doi.org/10.1016/j.jphotobiol.2019.111701) PMID: 31759194

**Bumah V.V.**, Masson-Meyers D.S., Enwemeka C.S. (2020). Pulsed 450 nm blue light suppresses MRSA and *Propionibacterium acnes* in planktonic cultures and bacterial biofilms. Journal of Photochemistry and Photobiology B: Biology 202, 111702.

DOI: [10.1016/j.jphotobiol.2019.111702](https://doi.org/10.1016/j.jphotobiol.2019.111702) PMID: 31760372

Masson-Meyers D.S.\*, **Bumah V.V.**\*, Castel C., Castel D., Enwemeka C.S. (2020). Pulsed 450 nm blue light significantly inactivates *Propionibacterium acnes* more than continuous wave blue light. Journal of Photochemistry and Photobiology B: Biology 202, 111719; DOI: [10.1016/j.jphotobiol.2019.111719](https://doi.org/10.1016/j.jphotobiol.2019.111719) PMID: 31770705. \*These authors have contributed equally to this work.

Idowu A.O., Oyibo W.A., Bhattacharyya S., Khubbar M., Mendie U.E., **Bumah V.V.**, Black C., Igietseme J., Azenabor A.A. (2019). Rare mutations in *Pfmdr1* gene of *Plasmodium falciparum* detected in clinical isolates from patients treated with anti-malarial drug in Nigeria. Malaria journal 18 (1), 319

**Violet V. Bumah**, Daniela Masson-Meyers, Dawn Castel, Chris Castel. Chukuka S.

Enwemeka (2019). Development of pulsed blue light technologies for bacterial biofilm disruption. Proceedings SPIE 10863, Photonic Diagnosis and Treatment of Infections and Inflammatory Diseases II; 108630U. SPIE BiOS, <https://doi.org/10.1117/12.2510699>

Enwemeka C. S., **Bumah V.V.**, Masson-Meyers D. S., Castel D., Castel C., (2019). Optimizing the antimicrobial efficacy of pulsed 450-nm light on *Propionibacterium acnes* through correlation with fluorescence spectroscopy, Proc. SPIE 10851, Photonics in Dermatology and Plastic Surgery. 108510D. SPIE BiOS <https://doi.org/10.1117/12.2510796>

Aboualizadeh E. \*, **Bumah V.V.\***, Masson-Meyers D.S., Eells J.T., Hirschmugl C.J., Enwemeka C.S. (2017). Understanding the antimicrobial activity of selected disinfectants against methicillin-resistant *Staphylococcus aureus* (MRSA). *PLoS ONE*, 12 (10), e0186375. \*These authors have contributed equally to this work.

Safeukui I., Fru-Cho J., Mbengue A., Suresh N., Njimoh D.L., **Bumah V.V.**, Nkuo-Akenji T., Titanji V.P.K., Haldar K. (2017). Characterization of polymorphisms in *Plasmodium falciparum* artemisinin resistance marker *kelch13* in asymptomatic infections in a rural area of Cameroon. bioRxiv preprint first posted online Jun. 12, 2017; <http://dx.doi.org/10.1101/148999>

**Bumah V.V.**, Aboualizadeh E., Masson-Meyers D.S., Eells J.T., Enwemeka C.S., Hirschmugl C.J. (2017). Spectrally resolved infrared microscopy and chemometric tools to reveal the interaction between blue light (470 nm) and methicillin-resistant *Staphylococcus aureus*. *Journal of Photochemistry & Photobiology, B: Biology*. 167:150–157

Biener G.B., Masson-Meyers D.S., **Bumah V.V.**, Hussey G., Stoneman M.R., Enwemeka C.S., and Raicu V. (2017). Blue/violet laser inactivates methicillin-resistant *Staphylococcus aureus* by altering its transmembrane potential. *Journal of Photochemistry & Photobiology, B*. 170:118-124. Epub 2017

Masson-Meyers D.S., **Bumah V.V.**, and Enwemeka C.S. Blue light does not impair wound healing *in vitro*. (2016). *Journal of Photochemistry & Photobiology, B: Biology*. 160:53-60

Masson-Meyers D.S., **Bumah V.V.**, and Enwemeka C.S. (2016). A comparison of four methods for determining viability in human dermal fibroblasts irradiated with blue light. *Journal of Pharmacological and Toxicological Methods* 79:15–22

**Bumah V.V.**, Masson-Meyers D.S., and Enwemeka C.S. (2015). Blue 470nm light suppresses the growth of *Salmonella enterica* and methicillin-resistant *Staphylococcus aureus* (MRSA) *in vitro*. *Lasers in Surgery and Medicine* 47(7):595-601

**Bumah V.V.**, Whelan H.T., Masson-Meyers D.S., Quirk B., Buchmann E., Enwemeka C.S. (2015). The bactericidal effect of 470 nm light and hyperbaric oxygen on

methicillin-resistant *Staphylococcus aureus* (MRSA). *Lasers in Medical Science* 30(3):1153-1159

Masson-Meyers D.S., **Bumah V.V.**, Biener G., Raicu V. and Enwemeka C.S. (2015). The relative antimicrobial effect of 405nm LED and Blue 405nm laser on methicillin-resistant *Staphylococcus aureus in vitro*. *Lasers in Medical Science* DOI: 10.1007/s10103-015-1799-1

Daum LT, **Bumah VV**, Masson-Meyers DS, Khubbar M, Rodriguez JD, Fischer GW, Enwemeka CS, Gradus S, Bhattacharyya S. (2015). Whole-genome sequence for methicillin-resistant *Staphylococcus aureus* strain ATCC BAA-1680. *Genome Announc* 3(2):e00011-15. doi:10.1128/genomeA.00011-15

**Bumah V.V.**, Masson-Meyers D.S., Cashin S., Enwemeka C.S. (2015). Optimization of the antimicrobial effect of blue light on methicillin-resistant *Staphylococcus aureus* (MRSA) *in vitro*. *Lasers in Surgery and Medicine* 47(3):266-72

Fru-Cho J., **Bumah V.V.**, Safeukui I., Akenji N.T., Titanji V.P.K. and Haldar K. (2014). Molecular typing reveals substantial *Plasmodium vivax* infection in asymptomatic adults in a rural area of Cameroon. *Malaria Journal* 13:170 doi: 10.1186/1475-2875-13-170

Azenabor A. Cintron-Cuevas J., Schmitt H., **Bumah V.V.** (2014). Early Switch from Inflammatory to Anti-Inflammatory Cytokine in Chlamydia Trachomatis-Infected Macrophages Initiates Chlamydia Chronic Course. *Journal of clinical immunology* 34, S190-S190

**Bumah V.V.**, Masson-Meyers D.S., Cashin S., Enwemeka C.S. (2013). Wavelength and bacterial density influence the bactericidal effect of blue light on methicillin resistant *Staphylococcus aureus* (MRSA). *Photomedicine and Laser Surgery* 31(11): 547-553

Masson-Meyers D.S., Enwemeka C.S., **Bumah V.V.**, Andrade T.A.M., Frade M.A.C. (2013). Topical treatment of *Copaifera langsdorffii* oleoresin improves wound healing in rats. *International Journal of Phytomedicine* 5(3):378-386

Masson-Meyers D.S., Enwemeka C.S., **Bumah V.V.**, Andrade T.A.M., Cashin S. and Frade M.A.C. (2013). Antimicrobial effects of *Copaifera langsdorffii* oleoresin in infected rat wounds. *International Journal of Applied Microbiology Science* 2(3):9-20

Azenabor A.A., Cintrón-Cuevas J., Schmitt H., **Bumah V.** (2011). *Chlamydia trachomatis* induces anti-inflammatory effect in human macrophages by attenuation of immune mediators in Jurkat T-cells. *Immunobiology* 216: 1248-1255

Ebong P.E., Eyong E.U., **Bumah V.V.** and Udo E.E. (2009). Effect of glucose 6-phosphate dehydrogenase activity and hemoglobin genotype on malaria parasite density in Nigerian children. *Nigerian Journal of Biochemistry and Molecular Biology* 24 (1): 38 – 41

**Bumah V.V.** and Agbedahunsi J.M (2009). Toxicological studies of the stem bark extract of *Khaya grandifoliola* in rats. Nigerian Journal of Natural Products and Medicine 13: 46-52

Mdulusa T., Bumah V.V. et al. (2007). A gateway to biomedical research in Africa: Chapter on the Republic of Cameroon. Nova Science Pub Inc. 2007 ; 101-108

**Bumah V.V.**, Essien E.U., Agbedahunsi J.M. and Eka O.U. (2005). Effects of *Khaya grandifoliola* on some biochemical parameters in rats. Journal of Ethnopharmacology 102(3): 446-449

**Bumah V.V.**, Essien E.U., Agbedahunsi J.M. and Eka O.U. (2005). Effects of *Khaya grandifoliola* on red blood cells and bone mineral contents in rats. Phytotherapy Research 19(11): 928-31

**Bumah V. V.** and Ngwa A. (2003). Biotechnology systems of innovation. A study of institutions and policies in Cameroon. African Technology Policy Studies Network Annual Conference and workshop Proceedings, 9-12

**Bumah V.V.** and Essien E.U. (1999). Effect of phenobarbitone administration on hepatocellular lipid profile in rats. Bioscience Research Communication 2: 81-88

#### **Paper under Review:**

**Bumah V.V.**, Masson-Meyers D.S., Awosika, O., Zacharias S., Enwemeka C.S., Viability of human cells irradiated with 470 nm blue light *in vitro*. Lasers in Surgery & Medicine - LSM-20-0002

### **PROFESSIONAL MEMBERSHIP AND ACTIVITIES**

Member of North American Association for Photobiomodulation Therapy (NAALT)

Member of The International Society for Optics and Photonics (SPIE)

Member of the American Society of Tropical Medicine and Hygiene (ASLMS)

Member of the Federation of African Societies of Biochemistry and Molecular Biology (FASBMB)

### **TEACHING**

#### **2018-2019: Lecturer**

- Chemistry 100 – Introduction to General Chemistry
- Chemistry 102 – Introduction to General, Organic and Biological Chemistry

#### **2017: Lecturer**

- Chemistry 200 – General Chemistry
- Chemistry 567 – Biochemistry Labs

**2009-2016: Research Associate, College of Health Sciences  
University of Wisconsin-Milwaukee, USA**

- Guest Instructor: Clinical Immunology; Biomedical Sciences (BMS) 427
- Guest Instructor: Sexually Transmitted Diseases and Acquired Immune Deficiency Syndrome (STD and AIDS); BMS 201
- Guest Instructor: Medical Parasitology and Mycology
- Guest Instructor: Advance lectures in CLS (BMS 246-531, Diagnostic Clinical Virology)

**2002-2009: Lecturer: Department of Biochemistry and Microbiology, University of Buea, Cameroon**

- Course instructor for the following courses:
- BCH 306 -Tissue and Organelle Biochemistry
- BCH 302 - Metabolic Biochemistry 1
- BCH 405 - Metabolic Biochemistry 2
- BCH 608 - Advanced Lipid Chemistry (Graduate Level)
- BCH 604 - Advanced Nucleic Acid Chemistry (Graduate Level)

**CONFERENCE PRESENTATIONS**

**Bumah Violet**, Daniela Masson-Meyers, Dawn Castel, Chris Castel, Chukuka S. Enwemeka. Development of pulsed blue light technologies for bacterial biofilm disruption. SPIE – The International Society for Optics and Photonics. February 02-07, 2019 San Francisco, California.

**Bumah Violet**, Daniela Masson-Meyers, Chris Castel, Chukuka S. Enwemeka, Dawn Castel. Optimizing the efficacy of pulsed 450 nm light on *Propionibacterium acnes* through correlation with fluorescence spectroscopy. SPIE – The International Society for Optics and Photonics. February 02-07, 2019 San Francisco, California.

**Bumah Violet**, Daniela Masson-Meyers, Dawn Castel, Chris Castel, Chukuka S. Enwemeka. Developments in Bacterial Kill Using Printed 450 nm LEDs. Clinical Microbiology and Infectious Diseases Conference. December 05-06, 2018 Vancouver, Canada (**Keynote Speaker**)

Aboualizadeh E., **Bumah V.**, Masson-Meyers D, Eells J., Chukuka Enwemeka C.S., Hirschmugl C. The potential of FTIR spectroscopy and computational analysis in characterizing the mechanism of action of blue light against methicillin-resistant *Staphylococcus aureus in vitro*. The Great Scientific Exchange (SCIX). October 8-13, 2017. Reno, Nevada

Aboualizadeh E., **Bumah V.**, Masson-Meyers D, Eells J., Chukuka Enwemeka C.S., Hirschmugl C. Spectrally resolved Infrared microscopy and chemometric tools to reveal the interaction between blue light (470 nm) and methicillin-resistant *Staphylococcus aureus* (MRSA). 9th Conference of Advanced Vibrational Spectroscopy. Victoria, British Columbia, June 11-16, 2017



Masson-Meyers D., **Bumah V.**, Biener G., Raicu V., Enwemeka C. Antimicrobial activity of different treatment protocols of blue light therapy on methicillin-resistant *Staphylococcus aureus in vitro*. 2nd International Congress on Bacteriology and Infectious Diseases. November 17-19, 2014. Chicago, IL

Masson-Meyers D., **Bumah V.**, Biener G., Raicu V., Enwemeka C. The relative antimicrobial effect of blue 405 nm light-emitting diode (LED) and blue 405 nm laser on methicillin-resistant *Staphylococcus aureus* (MRSA) *in vitro*. Clinical & Translational Science Institute of Southeast Wisconsin (CTSI) and Milwaukee Regional Research Forum. October 27, 2014. Wauwatosa, WI

Azenabor A.A., Cintrón-Cuevas J., Schmitt H., **Bumah V.** Early switch from inflammatory to anti-inflammatory cytokine in *Chlamydia trachomatis*-infected macrophages initiates Chlamydia chronic course. Conference Paper in Journal of Clinical Immunology October 2014. 16th Biennial Meeting of the European-Society-for-Immunodeficiencies Volume: 34, September 2014

**Bumah V.V.**, Masson-Meyers D.S., Da Silva T.S., Post Z.R., Whelan H. and Enwemeka C.S. The viability of blue light irradiated human cells. Annual North American Association for Laser Therapy (NAALT) and World Association for Laser Therapy (WALT) joint session. September 9-12<sup>th</sup>, 2014 at Arlington, Virginia, USA

**Bumah V.V.**, Masson-Meyers D.S., Biener G., Raicu V. and Enwemeka C.S. Irradiation interval influences blue light suppression of methicillin-resistant *Staphylococcus aureus in vitro*. Annual North American Association for Laser Therapy (NAALT) and World Association for Laser Therapy (WALT) joint session. September 9-12<sup>th</sup>, 2014 at Arlington, Virginia, USA

**Bumah V.V.**, Masson-Meyers D.S., Enwemeka C.S. Suppression of methicillin-resistant *Staphylococcus aureus* and *Salmonella enterica* growth by blue light. International Union of Microbiological Societies. July 27-August 1, 2014. Montreal Canada

**Bumah V.V.**, Enwemeka C.S., Masson-Meyers D.S., Quirk B.J., Buchmann E., Whelan H.T. The combined bactericidal effect of 470nm light and hyperbaric oxygen (HBO) on methicillin-resistant *Staphylococcus aureus*. American Society for Laser Medicine and Surgery (ASLMS). April 2-6, 2014. Phoenix, Arizona, USA

Masson-Meyers D.S., **Bumah V.**, Biener G., Enwemeka C., Effects of blue and infrared light irradiation on human fibroblasts in an *in vitro* wound healing model. Third Annual Meeting of the American College of Wound Healing and Tissue Repair, December 6th-7th, 2013 in Chicago, USA

**Bumah V.V.**, Masson-Meyers D.S., Awosika O., Zacharias S., Whelan H., Enwemeka C.S. *In vitro* effects of blue light on human cell viability. 4<sup>th</sup> Annual Milwaukee Regional Research Forum Viewpoint. October 24<sup>th</sup> 2013, Milwaukee USA

**Bumah V.V.**, Masson-Meyers D. S., Enwemeka C.S. Blue light eradication of methicillin resistant *Staphylococcus aureus* (MRSA) and human dermal fibroblast.

World Association for Laser Therapy Congress. September 27-30, 2012, in the Gold Coast, Australia

**Bumah V.V.**, Masson-Meyers D. S., Enwemeka C.S. Mechanisms of photo-eradication of methicillin-resistant *Staphylococcus aureus* (MRSA). American Society for Laser Medicine and Surgery (ASLMS). April 2012, Florida, USA

**Bumah V.V.**, Masson-Meyers D.S., Enwemeka C.S. The Antimicrobial Effect of Blue Light on Various Concentrations of methicillin-resistant *Staphylococcus aureus* (MRSA). 11<sup>th</sup> Annual North American Association for Laser Therapy (NAALT) Conference. September 22-24, 2011 in Milwaukee/Brookfield, Wisconsin

**Bumah V.V.**, Masson-Meyers D.S., Enwemeka C.S. Optimization of the antimicrobial effect of blue light on MRSA *In vitro*. 11<sup>th</sup> Annual North American Association for Laser Therapy (NAALT) Conference, September 22- 24, 2011 in Milwaukee/Brookfield, Wisconsin

**Bumah V.V.**, Ooij C.V., Titanji V.P.K., Kasturi H. Molecular analysis of parasite and human host determinants in sera for characterization of a potential candidate antigen vaccine against malaria. The individuals susceptible or immune to malaria, II. Pathogenesis and Control of Emerging Infections and Drug-Resistant Organisms (S4), Part of the Keystone Symposia Global Health Series, Supported by the Bill & Melinda Gates Foundation. Bangkok Thailand, October 22 - 27, 2008

**Bumah V.V.**, Ooij C.V., Titanji P.V.K., Haldar K. Identification and characterization of a recombinant antigen vaccine against malaria. IX World Conference on Clinical Pharmacology and Therapeutics, Quebec City July 27- August 01, 2008

**Bumah V.V.**, Agbedahunsi J.M., Eka O.U., Essien U.E. Effect of *Khaya grandifoliola* on enzymes and histology of organs in rats. 4th International Conference on Environmental Science and Technology, 2008 July 27-31, Houston, USA

**Bumah V.V.**, Ooij C.V., Titanji V.P.K., Kasturi H. Molecular analysis of parasite and human host determinants in sera from individuals susceptible or immune to malaria. 55<sup>th</sup> Annual meeting of the American Society of Tropical Medicine and Hygiene (ASTMH) Atlanta, November (2006)

Ngwa A., Akoachere J.F., **Bumah V.V.**, Ndeso S.A. Towards a sustainable water management policy in Cameroon. African Technology Policy Studies Network (ATPS). Annual Conference and Workshop, Addis Ababa, 2004

**Bumah V.V.**, Ngwa A.A. Biotechnology Systems of Innovation. A study of institutions and policies in Cameroon. African Technology Policy Studies Network (ATPS). Annual Conference and Workshop in Lesotho, 2003

**Bumah V.V.** The effects of *Khaya grandifoliola* (antimalarial plant) on red blood cells and bone mineral content in rats. The Federation of African Societies for Biochemistry and Molecular Biology. Fourth International Congress. Yaounde, Cameroon, 2003

**Bumah V.V.** The use of micro-algae to supplement the diet of school children in Northern Cameroon. Klotze Algae Factory, Bremen, Germany, 2003

**Bumah V.V.**, Essien E.U, Eka O.U. Effects of crude extract of *Khaya grandifoliola* traditionally used in the treatment and prophylaxis of malaria on some biochemical parameters in rats. XXV<sup>th</sup> West African Society for Pharmacology (WASP) Conference on HIV/AIDS in the West African Sub-region: Pharmacological Trends, 1999. Abstract No. MSC-07, p. 154

### **OTHER PROFESSIONAL ACTIVITIES**

1. Reviewer for several Journals and Grants, including:
  - Cells
  - Lasers in Surgery & Medicine
  - Photomedicine and Laser Surgery
  - Journal of Photochemistry & Photobiology, B: Biology
  - Diabetes Technology and Therapeutics
  - CTSI Pilot Translational and Clinical Studies Program, supported by
  - Advancing a Healthier Wisconsin (AHW) and the National Institutes of Health (NIH)
  - Proceedings of the 2015 South African Institute of Physics conference (SAIP2015)
2. Chair, Scientific Committee: North American Association for Photobiomodulation Therapy and World Association for Photobiomodulation Therapy (NAALT-WALT) Joint Congress holding in Arlington, VA on August 6-9, 2020
3. Supervision/mentoring of undergraduate and graduate students
  - I have mentored and supervised more than 15 undergraduate student's projects, MSc. and PhD theses
4. Examiner/Committee member of Graduate dissertations
  - I have examined theses in the Department of Biochemistry, University of Buea, Cameroon, Cardinal Stritch University, Milwaukee, Wisconsin and University of Johannesburg, South Africa