

IAN M. BRIGHT

EDUCATION

PhD **University of California, Berkeley**
December 2018

Comparative Biochemistry
Research on biochemical mechanisms of microbes
Professor Ikura Wasabi, Chair

BA **University of California, Santa Cruz**
June 2012

B.A. in Biology
B.A. in Environmental Studies

RESEARCH SKILLS

BROAD KNOWLEDGE OF BIOLOGY AND CHEMISTRY

Working in a multidisciplinary laboratory environment. Research integrated microbiology, biochemistry, and natural products chemistry.

PROTEIN PURIFICATION

HPLC and column chromatography, SDS-PAGE, Western blotting, protein Quantification. Experience with membrane proteins and detergent extraction.

ENZYME INHIBITION

Created new assays, especially microplate adaptations for cuvette methods to increase efficiency and throughput (Molecular Devices readers and Softmax software).

MICROSCOPY

PC, DIC, fluorescent; digital image capture and manipulation

SMALL COMPOUND CHARACTERIZATION

HPLC, thin layer chromatography, rotary evaporation

STRUCTURE-ACTIVITY ANALYSIS

Qualitative and quantitative using ChemDraw, Chem3D, Trips'Alchemy and SciVisions' SciQSAR & SciLogP, Beilsteins' CrossFire

EXPERIENCE

ADMINISTRATION

Coordinated between professor, 8 lab members, and office staff to facilitate ordering, personnel hiring and management, budget monitoring and grant management, and compliance with university regulations.

OPERATIONS

Taught other lab members proper lab procedures, especially related to scientific equipment and computers. Instituted standardization of tests. Organized shared duties among lab members and monitored progress. Facilitated communication in a multilingual work environment.

Obtained new lab space. Coordinated logistics of lab move of over 3,000 square feet of equipment, furniture, and supplies. Mediated decisions among lab members for placement of items.

Maintained and repaired equipment of diverse types either by self or with assistance of campus technicians or company service representatives. Formed group of faculty to share relevant equipment purchases and maintenance costs, and retain common lab space for this equipment.

COMPUTER SKILLS

Designed, setup, and maintained networked PC's. Software applications setup and training. Familiar with SigmaPlot, Photoshop, Illustrator, others.

Standardized laboratory software applications to streamline intra-lab communications and customized software with macro programming to optimize research and publications.

GRANT WRITING

Initiated search for new grant opportunities, initiated conceptualization and writing of grants, co-wrote with PI. Written over 10 grants to agencies including NIH, NSF, USDA, EPA, California AIDS, and various UC grants.

PATENTS

Actively participated in the patent process of two technologies related to fungal control.

APPLICATIONS

Decided on equipment and assay methods, validated the assays, and taught them to visiting scientist.

TEACHING

Taught undergraduate courses: Biochemistry, Chemical Ecology, and Biology of Drugs. Mentored two undergraduates and taught research methodology and experimental design.

SCIENTIFIC PRESENTATIONS

Interdepartmental Symposium in Microbiology, March 2018
39th ICAAC, San Francisco, California, September 2012
Western Biotech Conference, San Diego, California, October 2011

EMPLOYMENT

UNIVERSITY OF CALIFORNIA, BERKELEY
2013-2018

Research Assistant. Lab Manager second year.

UCLA COGNITIVE STUDIES
RESEARCH CENTER
summers 2011 & 2012

Research Assistant. Aid in neurophysiological research. Conducted experiments with human subjects, computer data acquisition and analysis, maintenance of networked computer systems.

WHOLLY GOOD FOODS
summer 2009

Retail sales, stocking. Explained function of vitamins and herbs to customers.

PUBLICATIONS

Wasabi, I. and **Bright, I.M.**

Antimicrobial activity of the cocoa bean flavor compounds. *J. Agric. Food Chem.* 43:1629-1633.

Wasabi, I. and **Bright, I.M.**

Phytochemical potentiators of polymyxins against *Pseudo38nas aeruginosa* and *Escheria coli*. *Antimicrob. Agents Chemother.* 40:1943-1441.

Grant, U.S., Grant, T.N., **Bright, I.M.**, and Wasabi, I.
1996.

In vitro antifungal susceptibilities of *Candida albicans* and other fungal pathogens to polygodial, a sesquiterpene dialdehyde. *Nature.* 65: 204-208.

Bright, I.M. and Wasabi, I.

Effect of polygodial on the mitochondrial ATPase of *Saccharomyces cerevisiae*. *Antimicrob. Agents Chemother.* 44: 1943-1953.

Wasabi, M., **Bright, I.M.**, and Wasabi, I.

Polyphenol oxidase activation of a plant growth inhibitor from *Mucuna* seeds. *J. Chem. Ecol.* (submitted)

Bright, I.M. and Wasabi, I.

Structure-activity relationships of polygodial's reactivity toward amino acids and the suppressive effect on antifungal action. *J. Agric. Food Chem.*
