J-P. Bingham
College of Tropical Agriculture and Human Resources
MBBE
FTE Distribution: 25% I; 75% R; 0% E

Education

Degree	University	Major

- Bachelors (1989-1991), School of Science, Griffith University, Brisbane, Australia; Biochemistry
- Bachelors with Honours (1992) School of Science, Griffith University, Brisbane, Australia; Clinical Chemistry/Toxinology
- PhD (1993 – 1998) Center for Drug Design and Development, Dept of Biochemistry, University of Queensland, Brisbane, Australia; Peptide synthesis/Proteomics

Professional Appointments

Title	Employer	Dates Employed

- **Associate Professor & Graduate Chair** – Dept. of Molecular Bioscience and Bioengineering, University of Hawaii, Honolulu, HI, 2014 - present
- **Assistant Professor** – Dept. of Molecular Bioscience and Bioengineering, University of Hawaii, Honolulu, HI, 2007-2014
- **Assist Research Professor** – Dept. of Biology, Clarkson University, Potsdam, NY 2003-2007
- **Post-doctoral position II** – Dept. of Pharmacology, Yale School of Medicine, New Haven, CT 2000-2003
- **Post-doctoral position I** – Mass Spectrometry Facility, Dept of Pharmaceutical Chemistry, University of California, San Francisco, CA, 1998-2000

Courses Taught

- MBBE 402 Biochemistry (4 Cr)
- MBBE 402L Biochemistry Laboratory (2 Cr)
- MBBE 610 Building a better Graduate Community (1-3 Cr)
- MBBE 610 Professional Development Seminar (1 Cr)
- MBBE 691 Fermentation Biochemistry (3 Cr)
- MBBE 691 Lectureship Preparation (1-2 Cr)

Publications (reverse chronological order)

Book Chapters

Bingham J-P., Likeman R.K, Hawley J.S., Yu P.Y.C., and Halford Z. A. (2014) Conotoxins. In: Manual of Security Sensitive Microbes and Toxins, Ed. D. Liu; CRC Press ISBN: 1466553960. p.467-484.

Bingham J., Jones, A., Alewood, P. F, and Lewis, R. J. (1996) Conus Venom Peptides (Conopeptides): Inter-Species, Intra-Species and Within Individual Variation Revealed by Ionspray Mass Spectrometry. In: Biochemical Aspects of Marine Pharmacology, pp13 – 27. Ed Lazarovici, P., Spira, M. E. and Zlotkin, E., Alaken Inc., Fort Collins, Colorado, USA

Refereed Journal Publications

Teng E.S., **Bingham J-P**., Amore T.D. (2019) Identification and Quantification of Anthocyanidins in Modern Poinsettia Cultivars Using High Performance Liquid Chromatography (HPLC). HORTSCIENCE 54 (9) S58-S59.

Toves P.J., **Bingham J-P**., Amore T.D. (2019) Identification of Anthocyanidins in Anthurium Hybrids By High-Performance Liquid Chromatography HORTSCIENCE 54 (9) S305-S306.

Anderson T.W., Kantar M. Radovich T.J.K., **Bingham J-P**. (2019) Assessing Commercial Cultivar Potential in Sweet Potato (U'ala) Derived from Hawaiian Germplasm Using Phenotypic Data HORTSCIENCE 54 (9) S318-S319.

Tavares K.L.T., Radovich T.J.K., **Bingham J-P**., Calpito J., Amjad A., Kirk E., Teves G., Motomura S., Silva J., Uyeda J. Sugano J., Nakamura-Tengan L., (2019) Yield and Quality of Turmeric and Related Germplasm on Maui HORTSCIENCE 54 (9) S319-S320 .

Laczko R, Chang A, Watanabe L, Petelo M, Kahaleua K, **Bingham JP**, Csiszar K. (2019) Anti-inflammatory activities of Waltheria indica extracts by modulating expression of IL-1B, TNF-alpha, TNFRII and NF-kappa B in human macrophages. Inflammopharmacology. 2019 Nov 4. doi: 10.1007/s10787-019-00658-6

Oeser SG., **Bingham J-P.**, Collier AC. (2018) Regulation of Hepatic UGT2B15 by Methylation in Adults of Asian Descent. Pharmaceutics, 10 (1) 6 ; doi: 10.3390/pharmaceutics10010006

Mau A, **Bingham JP**, Soller F, Jha R (2018) Maturation, spawning, and larval development in captive yellowfoot limpets (Cellana sandwicensis). Invertebrate Reproduction and Development, 62, 239-247.

Mau A, Fox K, **Bingham JP** (2017) The Reported Occurrence of Hermaphroditism in the Yellowfoot Limpet (Cellana sandwicensis Pease, 1981). Annals of Aquaculture Research, 4, 1045.

Zhang R-Y., Thapa P., M.J. Espiritu M.J., Menon V., **Bingham JP**. (2017) From Nature to Creation: Going around in Circles, the Art of Peptide Cyclization. Bioorganic & Medicinal Chemistry, 26 (6): 1135-1150.

Thapa P., Cabalteja C.C., Philips E.E. 3rd, Espiritu M.J., Peigneur S., Mille B.G., Tytgat J., Cummins T.R., **Bingham J.P**. (2016) t-boc synthesis of huwentoxin-i through native chemical ligation incorporating a trifluoromethanesulfonic acid cleavage strategy. Biopolymers. 106(5):737-45

Maldonado A., Johnson A., Gochfeld D., Slattery M., Ostrander G.K., **Bingham J.P**., Schlenk D. (2016) Hard coral (Porites lobata) extracts and homarine on cytochrome P450 expression in Hawaiian butterflyfishes with different feeding strategies. Comp Biochem Physiol C Toxicol Pharmacol., 179:57-63.

Carlos-Hilario L., Shimshock R., Ng C., **Bingham J-P.,** David A. Christopher D.A. (2015) Screening Carica papaya native promoters driving stilbene synthase expression in Arabidopsis thaliana for resveratrol glucoside (piceid) synthesis. Plant Biotechnology Reports 9, (5) 307–317.

Griffis, J. L., Jr., McDonald, T. G., Manners, M. M., **Bingham, J. P** (2015) Some Effects of Refrigerated Storage on Postharvest Quality of Ripe Fruits of the Tropical, Purple-Fruited Pitanga (Eugenia uniflora L.) ACTA HORTICULTURAE 1088, 113-118.

Halford Z.A., Yu P.Y.C, Likeman R.K., Hawley-Molloy J.S, Thomas C. and **Bingham J-P**. (2015) Revised first aid and clinical interventions for cone snail envenomation. The Journal of Diving and Hyperbaric Medicine, 45(3):200-7.

Lina H-T., Jan P. Amendb J.P, LaRoweb D.E., **Bingham J-P.,** Cowena J.P (2015) Dissolved amino acids in oceanic basaltic basement fluids. Geochimica et Cosmochimica Acta Vol. 164 (Sept.);175–190

Espiritu M.J, Collier A.C, **Bingham J-P**. (2014) A 21st Century Approach to Age Old Problems: the ascension of biologics over the small molecule therapeutics. Drug Discovery Today 19 (8), 1109–1113.

Cleveland V., **Bingham J-P**., Kan E. (2014) Heterogeneous Fenton degradation of bisphenol A by carbon nanotube-supported Fe3O4. Separation and Purification Technology 133, 388–395.

Thapa P., Espiritu M.J., Cabalteja C.C., **Bingham J-P**. (2014) Conotoxins and their regulatory considerations. Regulatory Toxicology and Pharmacology, 70 (1) 197-202.

Negi V.S., **Bingham J-P**., Li Q.X., Borthakur D. (2014) A Carbon-Nitrogen Lyase from Leucaena leucocephala Catalyzes the First Step of Mimosine Degradation. Plant Physiology, 164 (2) 922-934.

Takacs Z., Imredy J.P., **Bingham J-P**., Zhorov B.S., Moczydlowski E.G. (2014) Interaction of the BKCa channel gating ring with dendrotoxins, Channels, 8 (5) 421-432.

Yafuso J.T, Negi V.S., **Bingham J-P**., Borthakur D. (2013) Characterization of O-acetylserine (thiol) lyase from Leucaena leucocephala. The FASEB Journal, 27:580.3

Yafuso J.T, Negi V.S., **Bingham J-P.,** Borthakur D. (2014) An O-Acetylserine (thiol) Lyase from Leucaena leucocephala Is a Cysteine Synthase But Not a Mimosine Synthase. Applied Biochemistry and Biotechnology 173 (5) 1157-1168.

Espiritu M.J., Cabalteja C.C., Sugai C.K., **Bingham J-P**. (2014) Incorporation of post-translational modified amino acids as an approach to increase both chemical and biological diversity of conotoxins and conopeptides. Amino Acids 46 (1)125-151

Thapa P., Espiritu M.J., Cabalteja C.C., **Bingham J-P.** (2014) The Emergence of Cyclic Peptides: The Potential of Bioengineered Peptide Drugs. International Journal of Peptide Research and Therapeutics, 20 (4): 545-551.

Thapa P., Zhang R-Y., Menon V., **Bingham J-P.** (2014) Native Chemical Ligation: A Boon to Peptide Chemistry. Molecules Molecules 19(9):14461-83.

Bergeron Z.L, Chun J.B., Baker M.R, Sandall D.W, Peigneur S., Yu P.YC, Thapa P., Milisen J.W, Tytgat J., Livett B.G, **Bingham J-P.** (2013) Analysis of the milked venom from the mollusk-hunting cone shell Conus textile – Peptides, 49, 145–158.

Kapono CA, Thapa P., Cabalteja CC, Guendisch D. Collier AC and **Bingham J-P**. (2013) Conopeptide truncation as a post-translational modification to increase the pharmacological diversity within the milked venom of Conus magus – Toxicon 70, 170–178

Negi V.S., **Bingham J-P**., Li Q.X., Borthakur D. (2013) midD-encoded 'rhizomimosinase' from Rhizobium sp. strain TAL1145, catabolizes Lmimosine into 3-hydroxy-4-pyridone, Amino Acids. 2013 Jun;44(6):1537-47

Devappa R.K., **Bingham J-P**. and Khanal S.K. (2013) New and modified high performance liquid chromatography method for rapid quantification of phorbol esters in Jatropha curcas seed. Industrial Crops and Products 49:211-219

Bergeron ZL, **Bingham JP** (2012) Scorpion Toxins Specific for Potassium (K+) channels: A Historical Overview of Peptide Bioengineering. Toxins 4,1082-1119.

Bingham JP, Andrews EA, Kiyabu SM*, Cabalteja CC (2012) Drugs from Slugs, Part II – Conopeptide Bioengineering. Chemico-Biological Interactions 200 (2012) 92–113.

Bingham JP, Baker MR, Chun JB. (2012) Analysis of a cone snail's killer cocktail - The milked venom of Conus geographus. Toxicon. Nov;60(6):1166-70.

Chun JB, Baker MR, Kim D H, Leroy M, Toribo P, **Bingham JP** (2012) Cone snail milked venom dynamics – a quantitative study of Conus purpurascens. Toxicon. 60(1):83-94.

Bingham JP., Mitsunaga E., Bergeron Z.L. (2010) Drugs from Slugs – Past, Present and Future Perspectives of omega-Conotoxin Research. Chemico-Biological Interactions 183 pp. 1-18.

Bingham JP, Chun JB, Ruzicka MR, Li QX, Tan ZY, Kaulin YA, Englebretsen DR, Moczydlowski EG. (2009) Synthesis of an iberiotoxin derivative by chemical ligation: a method for improved yields of cysteine-rich scorpion toxin peptides. Peptides. 30(6):1049-57.

Townsend, A., B. G. Livett, **J.-P. Bingham**, H.-T. Truong, J. A. Karas, P. O'Donnell, N. A. Williamson A. W. Purcell, D. Scanlon, Mass Spectral Identification of Vc1.1 and Differential Distribution of Conopeptides in the Venom Duct of Conus victoriae. Effect of Post-Translational Modifications and Disulfide Isomerisation on Bioactivity. Int. J. Pept. Res. Ther., (2009)15 (3): 195-203.

Xiao Y, **Bingham JP**, Zhu, W, Moczydlowski E, Liang S, Cummins TR. (2008) Tarantula Huwentoxin-IV inhibits neuronal sodium channels by binding to receptor site 4 and trapping the domain II voltage sensor in the closed configuration. J Biol Chem. 3;283(40):27300-13.

Bingham, J-P., Bian, S. Tan, Z-Y., Takacs Z. and Moczydlowski E. (2006) Synthesis of a Biotin Derivative of Iberiotoxin: Binding Interactions with Streptavidin and the BK Ca2+-activated K+ Channel Expressed in a Human Cell Line. Bioconjugate Chem.; 17(3):689 – 699.

Krishnan M. N., **Bingham, J-P**., Lee, S. H., Trombley, P. and Moczydlowski E. (2005) Functional Role and Affinity of Inorganic Cations in Stabilizing the Tetrameric Structure of the KcsA K+ Channel. J Gen Physiol.;126(3):271 – 83.

Bingham J-P., Broxton N. M., Livett L.G,. Down, J. G., Jones A. and. Moczydlowski E.G. (2005) Optimizing the connectivity in disulfide-rich peptides: conotoxin SII as a case study. Anal. Biochem. 338(1):48 – 61.

Jakubowski, J.A., Keays, D.A.* Kelley, W.P., Sandall, D.W, **Bingham, J-P**., Livett, B.G., Gayler, K.R. and Sweedler, J.V., (2004) Determining Sequences and Post-Translational Modifications of Novel Conotoxins in Conus victoriae Using cDNA Sequencing and Mass Spectrometry. Rapid communications in Mass. Spect; 34: 548 – 557.

Marshall, J., Kelley, W.P., Rubakhin, S. S., **Bingham J-P**., Sweedler and Gilly W.F. (2002) Anatomical Correlates of Venom Production in Conus californicus. The biological Bulletin 203, p 27 – 41

Hill J. M., Oomen C. J., Miranda L. P., **Bingham J-P**., Alewood P. F., and Craik D. J. (1998) Three-Dimensional Solution Structure a of α-Conotoxin MII by NMR Spectroscopy: Effects of Solution Environment on Helicity. Biochem, 37, 15621.

Broxton, N., Down, J., Loughnan, M., Gehrmann, J., **Bingham, J-P.,** Miranda, L., Alewood, P. and Livett, B.G. (1997) Potent α-conotoxins with selectivity for nicotinic receptor subtypes. Proc. Australian Neurosci. Soc. 8: 139.

Jones A., **Bingham J-P**., Gehrmann J., Bond T., Loughnan M., Atkins A., Lewis R. J., and Alewood P. F. (1996) Isolation and Characterization of Conopeptides by High-performance Liquid Chromatography Combined with Mass Spectrometry and Tandem Mass Spectrometry. Rapid communications in Mass. Spect,. 10, 138.

Editorials/Extensions

Lewis R. J., **Bingham J.,** Jones A., Alewood P. F., and Andrews P. R. (1994) Drugs from the peptide venoms of marine Cone Shells. Australian Biotechnology. 4 298 – 300.

Duda , T.F. Jr. **Bingham, J.P.,** Livett, B.G. Kohn, A.J., Massilia, G. R., Schultz J.R., Down J., Sandall, D., Sweedler J.V. (2004) How much at risk are cone snails? Science. 2004 Feb 13;303(5660):955 – 7

Bingham J-P., (2010) It's about being compliant – Insight into the new regulations that govern Federal training awards and grants CTAHR Research News. July-August. Vol, 6 Iss. 6 (50). 19- 23. (

Bingham J-P., Chun J., Kim D.H. and Milisen J. (2010) Local 'killer' slugs provide novel leads for medical science and pesticide development. CTAHR Research News. Jan. Vol, 6 Iss. 1 (45). 3-10.

Other works

Scientific Advisor: in documentaries, Media production, textbook contributions, Public Education: KHON2 Local News (2013) (Producer: Ron Mizutani); Hawaii Public Radio (2013) (Producer: Molly Solomon); OC16 Tech Hawaii (2011) (Producer: Jay Fidel); Oelo 52 (2011) (Producer: Jay Fidel); Graber (2008) On the Tail of the Snail: Arts and Science for Kids (ASK) p 12-19; Kleinpaste R. (2008) Bug of the Month; Snorkeling at Night: New Zealand Growing Today, April p. 46.; Roberson M-R. (2008) Creature Comforts – Animals provide healing help for Humans, Zoogoer, Vol. 37 No.6 p18- 23.; 60 Minutes "The bugman" – (2008) (Aust.) (Producer: Damien Comerford) – CD available; EcoGeeks - (2008) (Producer/interviewer Rob. Nelson; Wild Class Room) – CD available; Pearson Publishing BioAdventures (2008).

Videos on toxins and Cone Shells that will compliment every chapter of their new Miller and Levine High School Biology textbook (print 7 million copies a year for 9th graders); Animal Planet (2006): Buggin' With Ruud (New Zealand Natural History); Flipside (UK; 2006): 'Killer Sea Snails' – Louise Murray; Radio 4, BBC Scotland (2005): 'Danger! Venomous snails' – Louise Yeoman – CD available; Discovery Channel (2005; Canada): Daily Planet – Exploration Productions Inc.; Associate Press (2005): 'Farming killer cone snails for research is a risky affair' – A. Chang; National Public Radio (2005; USA): 'Pulse of the Planet': 'Cone Shells – Poison Tongued; Cone Shells – Fascination; Cone Shells – medical uses'; ScienCentral, Inc.: Medical textbook: A Colour Atlas of Tropical Medicine and Parasitology; ODYSSEY, Cobblestone Publishing – Children's Science Magazine: 'Possibility is everywhere...even in poisonous snails' – Steven R. Wills.

<u>Leadership Roles (Committees, Boards, Advisory, etc.)</u>

- Chaired Recruitment Search committees
  MBBE Plant Biochemistry, Position # 82027 (2016)
  MBBE Biomolecular Interactions, Position # #84193 (2019)
- Faculty mentorship NIH CORBA (2019) – Dr. Arif Momonda
- Faculty Advisory Committee for REEU (2019) MM and Ngh
- Appointed member of the CTAHR Associate Dean of Students Advisory Council (2017-18)
- Advisory Committee Dr. Ingelia White – Agpharmtech Windward CC
- Govern Appointment member of the Hawaii State Oversight Committee for Medical marijuana (2016 - present)
- Govern Appointment member of the Hawaii State Pesticide Board (2016 - present)
- Co-organizer of the inaugural CTAHR 3MEP (2016)
- Co-organizer of the Office of Graduate Education Three Minute Thesis competition (2016, 2017, 2018)
- Vice-President of the CTAHR Faculty Senate, 2013 – 2014
- Member of the CTAHR Faculty Senate Executive, 2011– 2014, Instructional Review Committee
- Participant in the UH-Manoa Strategic Planning Process Focus Group session (October 2010)
- Represented CTAHR at Teaching "SURVIVAL SKILLS" AND ETHICS 16th Annual Trainer-of-Trainers Conference Supported by NIH, June 21-26, 2010, Santa Fe, New Mexico
- Member of the CTAHR Faculty Senate, 2009 – 2010, Member of the Instructional Review Committee
- Represented CTAHR on Faculty Panel—Striking a Balance: Teaching, Research, Service-for the New Faculty Orientation (Jan. 2009)
- Member of MBBE Graduate Steering Committee (2009)
- Member of MBBE Curricula Committee (2009 - Present)
- Represented MBBE on Biology Steering Committee (2008-2009)

(Graduate Chair of MBBE (2014 - Present): Overseeing one of the largest Graduate Programs in the UH system requires significant effort in student requirement and retention. The MBBE program produces 48% of all CTAHR's Ph.D. graduates, typically 3-5/semester. The MBBE Graduate program typically consist of 65-80 student, 45% MS and 55% PhD. The efforts of the Graduate Chair encompass many different tasks and coordination between various UH offices to ensure our students are advised correctly and progress through the degree at the minimal time. Student compliance, resolving student issues is a major part of the position. As we improve and advance the MBBE program, we have specific recognition from faculty, and UHM Graduate Division as being an innovator in graduate education and management.

Graduate Chair 2014-Present, implementation of new student tools:

- Student recruitment and orientation to the program; 1:1 interactions with each GR student
- New MBBE Student orientation seminar
- MBBE Academic Planner (MS and PhD)
- MBBE Student Handbook
- MBBE Student Guidebook
- MBBE Student Filling Handbook
- MBBE PhD. and MS – Proposal calculator
- MBBE PhD and MS Proposal Rubric and Student evaluation sheet
- MBBE PhD Flyer
- How Well do you know the rules that govern your graduate degree?
- MBBE Individual Professional Development Plan (IDP) – presently under development

This appointment has provided essential mentoring, managerial skills and networks to advance my own

skills as an accomplished graduate mentor.

(ii) Director of the INBRE III PATHways Program (2017/ Year 5 INBRE III summer - present): INBRE (IDeA Networks of Biomedical Research Excellence) is a Hawaii statewide grant program involving most of our undergraduate-based institutions and nearly all of our UH community colleges. The core mission of INBRE is to get UG students involved in biomedical research right from the beginning of their college experience. INBRE also supports a cadre of young investigators (new tenure-track faculty) as sites for the INBRE intern experience. http://inbre.jabsom.hawaii.edu/?page_id=11.
INBRE IV represents UH's second largest single grant, equally $19,010,077.00 (2018 – 2022).

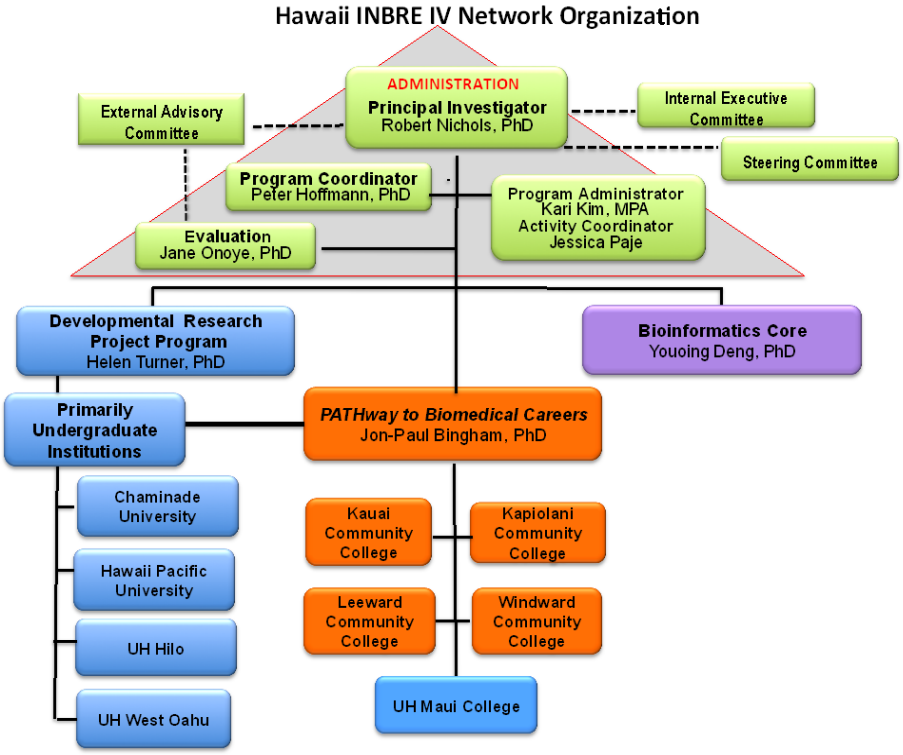

Figure 2. Organizational Chart

As INBRE PATHways Director I coordinate **all** UG research activities, and have implemented a number of new programs that have seen the increase in student participation and retention across the state.

INBRE IV Number of Students by Institution Type & Campus
Last update: 11/13/19
Status (Multiple Items)

Count of Last Name, First Name	Column																					Grand Total
	INBRE III															INBRE IV					
	Year 1		Year 2			Year 3			Year 4			Year 5			Year 1			Year 2		
Row Labels	2 - Fall	3 - Spring	1 - Summer	2 - Fall	3 - Spring	1 - Summer	2 - Fall	3 - Spring	1 - Summer	2 - Fall	3 - Spring	1 - Summer	2 - Fall	3 - Spring	1 - Summer	2 - Fall	3 - Spring	1 - Summer	2 - Fall		
UH	15	27	24	22	22	31	22	23	32	25	35	41	40	36	36	41	39	46	43		600
Hawai i Community College		2		2	3	2	3	1	2	3	5	1									24
Kapiolani Community College (KCC)	6	8	9	7	6	6	7	5	7	3	6	3	6	8	8	8	7	8	8		126
Kauai Community College	1	3	4	2	1	3	2	2	1	2	1	4	1	1							28
Leeward Community College (LCC)	1	3	6	1		9	1	4	10		2	10			13		6	17	5		88
University of Hawaii at Manoa (UHM)	3	2	1	1	1	4	3	6	8	10	11	16	25	21	13	20	22	20	22		209
University of Hawaii Maui College (UHMC)	1	5		5	5		4	4		6	6		3	5		4	3		2		53
Windward Community College (WCC)	3	4	4	4	6	7	2	1	4	1	4	7	5	1	2	9	1	1	6		72
PUI	10	11	7	13	14	15	13	13	13	14	16	12	19	30	27	34	39	21	29		350
Chaminade University (CUH)	2	2	1	4	3	2	3	2	2	3	2	5	4	3	3	4	1	1	2		49
Hawai i Pacific University (HPU)	3	4	2	4	5	9	4	3	6	6	7	5	10	13	10	10	18	11	11		141
University of Hawaii at Hilo (UHH)	5	5	4	5	6	4	6	8	5	5	7	2	4	12	13	16	16	5	11		139
University of Hawaii West Oahu (UHWO)													1	2	1	4	4	4	5		21
Grand Total	25	38	31	35	36	46	35	36	45	39	51	53	59	66	63	75	78	67	72		950

This appointment has allowed me the opportunity to build a strong collaborative network with faculty across 9 Hawaiian institutes, as too providing a strong foundational network with senior UH

administration. It has also provided me the ability to promote the MBB (UG) and MBBE Graduate programs, and develop and novel pilot UG educational milestones to advance and prepare Hawaii's UGs for both the workforce and professional graduate education.

(iii) Implementation of Responsible Conduct of Research (RCR) training as a semester graduate program with in MBBE (MBBE 610 Seminar – When a PhD. is not enough), which is now being adapted as template to meet needs of the whole UHM system.

Graduate Students

Category	Current Number of Students	Number Graduated (Career)
Chair of Master's Committees.	5	17
Chair of PhD Committees	1	5
Member of Master's Committees	5	9
Member of PhD Committees	4	15

Grant Support

Title of Grant: Proteomic Analysis of Nonconforming Conopeptide Profiles in *Conus Striatus* to Uncover Novel Classification
Source of Grant: UROP
Total Dollar Value: $4,626.48
Dates of Grant: May 2019
Role (PI, CoPI): PI

Title of Grant: INBRE IV - Hawaii Statewide Research and Education Partnership (HiSREP)
Source of Grant: NIHMGS
Total Dollar Value: $140,000.00 (Total Grant: $19,010,077.00)
Dates of Grant: 04/01/2018
Role (PI, CoPI): Director of INBRE PATHways

Title of Grant: Expanding the Market for Hawaiian Turmeric with High Yielding and High Curcumin Varieties.
Source of Grant: AGRICULTURE, DEPT-HI
Total Dollar Value: $20,000.00
Dates of Grant: 02/23/2018
Role (PI, CoPI): Co-PI

Title of Grant: Investigation of Peptide Toxin Cyclotides as a Novel Approach to Insecticide Development
Source of Grant: Hatch Supplement Funding
Total Dollar Value: $56,000.00
Dates of Grant: FY 2018- 2019
Role (PI, CoPI): PI

Title of Grant: Exploring the life-history of Hawaiian limpets using oxygen isotope records
Source of Grant: UROP
Total Dollar Value: $9,493.00
Dates of Grant: Nov 2018
Role (PI, CoPI): PI

Title of Grant: Impact of configurations in a-conotoxins in *Conus virgo* in the development of

anthelmintic drugs
Source of Grant: UROP
Total Dollar Value: $8,727.76
Dates of Grant: Nov 2018
Role (PI, CoPI): PI

Title of Grant: Chemical Synthesis of Novel GnRH-like peptides for aquaculture of Hawaiian limpets (*Cellana spp*.)
Source of Grant: UROP
Total Dollar Value: $6,988.00
Dates of Grant: Nov, 2017
Role (PI, CoPI): PI

Title of Grant: Opihi Aquaculture Year 5 & 6: Improving hatchery technology and production.
Source of Grant: OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA)
Total Dollar Value: $50,000.00
Dates of Grant: 09/13/2017
Role (PI, CoPI): PI

Title of Grant: Opihi Project Year 5 & 6: Improving hatchery technology and production
Source of Grant: OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA)
Total Dollar Value: $98,098.00
Dates of Grant: 06/05/2017
Role (PI, CoPI): PI

Title of Grant: Aquaculture of Opihi YR2 (YR4)
Source of Grant: OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA
Total Dollar Value: $5,302.00
Dates of Grant: 05/19/2017
Role (PI, CoPI): PI

Title of Grant: Aquaculture of Opihi
Source of Grant: OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA)
Total Dollar Value: $20,128.00
Dates of Grant: 04/07/2017
Role (PI, CoPI): PI

Title of Grant: Aquaculture of Opihi
Source of Grant: OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA)
Total Dollar Value: $500.00
Dates of Grant: 02/07/2017
Role (PI, CoPI): PI

Title of Grant: Aquaculture of Opihi
Source of Grant: OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA)
Total Dollar Value: $18,582.00
Dates of Grant: 01/15/2016
Role (PI, CoPI): PI

Title of Grant: Investigation of Peptide Toxin Cyclotides as a Novel Approach to Insecticide

Development
Source of Grant: Hatch Supplement Funding
Total Dollar Value: $54,000.00
Dates of Grant: FY 2016-2017
Role (PI, CoPI): PI

Title of Grant: Isolation, Sequence, Synthesis, and Pharmacological Analysis of a Novel Peptide from *Conus striatus*
Source of Grant: UROP
Total Dollar Value: $4,970.00
Dates of Grant: Nov, 2014
Role (PI, CoPI): PI

Title of Grant: From Chemistry to Consumption: Exploiting the unique chemical constituency of hot peppers (*Capsicum spp*) to develop a novel Pacific Island crop.
Source of Grant: HI Dept. Ag.
Total Dollar Value: $20,000.00
Dates of Grant: Nov 2014
Role (PI, CoPI):PI

Title of Grant: Evaluating the physical and biological availability of pesticides and contaminants in agricultural ecosystems (W2082 / project No. HAW00595-R): Development and evaluation of cyclotide molluscicides.
Source of Grant: HATCH
Total Dollar Value: $76,421.00
Dates of Grant: 2013-2015
Role (PI, CoPI):PI

Title of Grant: Discovery of new peptide pesticides
Source of Grant: USDA-HATCH
Total Dollar Value: $28,000.00
Dates of Grant: 2007-2014
Role (PI, CoPI): PI

Title of Grant: Mechanism of Selenoprotein Synthesis
Source of Grant: NIH (R01)
Total Dollar Value: $54,000.00
Dates of Grant: 04/01/2011- 03/31/2016
Role (PI, CoPI): Subcontract

Title of Grant: Post-Harvest Management of slugs and snails potentially carrying Rat Lungworm (*Angiostronglus cantonensis*) in Hawaii
Source of Grant: USDA-NIFA
Total Dollar Value: $35,000.00
Dates of Grant: 09/01/2011- 08/31/2014
Role (PI, CoPI): Co-director

Title of Grant: Comparative Study of Korean Natural Farming vs Conventional and Organic Farming
Source of Grant: RMA TRIX-PCR project.
Total Dollar Value: $12,000.00
Dates of Grant: 2014

Role (PI, CoPI): Co-director

Title of Grant: Increasing instrumental detection capacity for research, instruction and training in Bioanalytical chromatography – a proven shared resource within CTAHR
Source of Grant: CTAHR Instructional, Extension or Research Awards
Total Dollar Value: $14,861.00
Dates of Grant: 2013
Role (PI, CoPI): PI

Title of Grant: Travel award – American Peptide Symposium
Source of Grant: UHRC
Total Dollar Value: $1,000.00
Dates of Grant: 2013
Role (PI, CoPI):PI

Title of Grant: Investigating the application of peptide pesticides: Diversifying Molluscicide targeting capabilities and Enhancing Biodelivery.
Source of Grant: USDA-CSREES
Total Dollar Value: $100,000.00
Dates of Grant: 2010-2012
Role (PI, CoPI):PI

Title of Grant: Evaluating the Risk of Diphacinone Rodenticide Pellets to Hawaiian Trigger Fish
Source of Grant: Fisheries and Wildlife Services & Dept. of Land and Natural Resources (HI)
Total Dollar Value: $19,200.00
Dates of Grant: 2011-2012
Role (PI, CoPI):PI

Title of Grant: Strengthening CTAHR educational, teaching and research capabilities in analytical Biochemistry
Source of Grant: USDA- HATCH/CTAHR
Total Dollar Value: $31,150.00
Dates of Grant: 2012
Role (PI, CoPI):PI

Title of Grant: Venom variation in *Conus*
Source of Grant: SeaGrants
Total Dollar Value: $10,000
Dates of Grant: 01/01/08– 12/31/08
Role (PI, CoPI):PI

Title of Grant: Application of Fluorescent Peptide Toxins in Cellular Imaging of Selective Ion Channels Underlining LQT Syndromes
Source of Grant: American Heart Association
Total Dollar Value: $260,000
Dates of Grant: 01/01/05– 12/31/09
Role (PI, CoPI):PI

Title of Grant: Development of isoform specific sensory neuronal sodium channel blockers

Source of Grant: NIH/NINDS – R21
Total Dollar Value: $90,000
Dates of Grant: 02/01/07 – 02/01/10
Role (PI, CoPI): Subcontract

Title of Grant: Value-added Processing of Sugarcane-Ethanol Vinasse: Production of Protein-rich Fungal Biomass as a Fish Feed ingredient
Source of Grant: USDA – Specific Cooperative Agreement
Total Dollar Value: $8,000.00
Dates of Grant: 09/29/08 – 9/29/10
Role (PI, CoPI): CoPI

Presentations at Conferences (due to nature of material last 5 yrs of posters not provided)

Bergeron ZL., Sandall DW., Livett BG. and **Bingham J-P.** (2013) Analysis of Milked Venom from the Mollusc-hunting Cone Snail, *Conus textile*. Abstract #: 86032; 23rd American Peptide Symposium & 6th International Peptide Symposium, Hilo HI, June 22-27, 2013.

Bergeron ZL., Collier AC. and **Bingham J-P.** (2013) 23rd American Peptide Symposium & 6th International Peptide Symposium, Hilo Hi, June 22-27, 2013.

Thapa P. and **Bingham J-P.** (2013) Optimization of Thiol-Ester ligation for expanding the potential of Native Chemical ligation. Abstract # 86605. 23rd American Peptide Symposium & 6th International Peptide Symposium, Hilo Hi, June 22-27, 2013.

Negi VS., **Bingham J-P.**, Li QX., and Borthakur D. (2013) Biochemistry of *Rhizobium* and *Leucaena leucocephala* enzymes for degradation of mimosine. Abstract # TBA. 22nd North American Symbiotic Nitrogen Fixation (NASNFC) Conference University of Minnesota, Minneapolis July 14-17, 2013.

Yafuso JT., Negi, VS., **Bingham J-P.,** Borthakur D. (2013) Characterization of O-acetylserine (thiol) lyase from *Leucaena leucocephala*. Abstract # 580.3 American Society for Molecular Biology and Biochemistry Annual Meeting, Experimental Biology, Boston Convention and Exposition Center in Boston, MA, April 20-24, 2013.

Cleveland V., **Bingham J-P.** and Kan E. (2013) Simultaneous Adsorption and Heterogeneous Oxidation of Endocrine Disrupting Compounds in Wastewater Using Nano Metal Catalyst- Deposited Carbon Nanotubes. Abstract # 325879 AICHE (American Institute of Chemical Engineers) National Meeting, San Francisco, November 3-8, 2013.

Williams N., Pineda F., Lam TT., Bruce C., Bergeron ZL., **Bingham J.P.**, Cantely L., et al. (2013) Edman Sequencing and Amino Acid Analysis in the Modern Age. Abstract # C161 ASBMB 2013 Annual Meeting, Experimental Biology Boston Convention and Exposition Center in Boston, MA, April 20-24, 2013.

Bergeron ZL. and **Bingham J.P.** (2013) Bioengineering Peptide Toxins for the Development of Novel Molluscicides and the Protection of Food Crops from Tropical Pathogens in Hawaii. Achievement Rewards for College Scientists (ARCS) Foundation, Scientific Symposium - Poster Session, Honolulu, HI April 20, 2013.

Andrews E., Milisen J. and **Bingham J-P.** (2013) Effects of Diet Manipulation on Conotoxin Profiles in Fish-Eating *Conus striatus*. Abstract #1. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Cabalteja C., Thapa P., Kiyabu S., Chun J., Sandall D., Livett B. and **Bingham J-P.** (2013) Expanding the α-Conotoxin Repertoire through Disulfide Bond Permutations. Abstract #6. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Epiritu MJ. and **Bingham J-P.** (2013) Determination of the biochemical effects of naturally produced post translationally modified conotoxins in comparison to synthetic variants. Abstract #13. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Halford Z. and **Bingham J-P**. (2013) 'On-glowing' connections: Diversifying the approaches to fluorescent peptide bioengineering for investigating Potassium (K+) Channels Abstract #17. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Murphy J., Richmond RH. and **Bingham J-P.** (2013) Analyzing Changes to Coral Health and Metabolism in an Oxygen-Poor Environment. Abstract #29. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Slater D. and **Bingham J-P.** (2013) Evaluating the Risk of Diphacinone Rodenticide Pellets to Hawaiian Trigger Fish. Abstract #36. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Sugai C., Espiritu M., and **Bingham J-P.** (2013) Characterization of Milked Venom from *Conus obscurus* in Search for Novel Bioactive Compounds. Abstract #39. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Wheeler K., McDonald T., Griffis J., Radovich T.J.K. and **Bingham J-P.** (2013) Method development and high performance liquid chromatographic analysis of flavonols and anthocyanins from Purple-fruited Selections of *Eugenia uniflora L*. (Pitanga).Abstract #42. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Poster).

Thapa P., Phillips Z., Cabalteja C. and **Bingham J-P**. (2013) Optimization of novel Thiol-Ester ligation technique for expanding the potential of Native Chemical Ligation. Abstract #62. 25th CTAHR and COE search Symposium, University of Hawaii, Honolulu, April 12-13. (PhD. Student; Poster).

Yu P. and **Bingham J-P**. (2013) Cone Snails, Cyclized Peptides, and Fluorophores – A Gateway to Traceable Peptides. Abstract #96. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (UG. Student; Poster).

Kiyabu S. and **Bingham J-P.** (2013) Conotoxin Cyclization Linker Molecules Through the Use of Molecular Modeling applicationsAbstract #104. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (UG. Student; Oral).

Cleveland V., **Bingham J-P.**, and Kan E. (2013) Adsorption and Heterogeneous Oxidation of Endocrine Disrupting Compounds in Wastewater Using Nano Metal Catalyst-Deposited Carbon Nanotubes. Abstract #113. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (MS. Student; Oral).

Bergeron ZL., Collier AC., **Bingham J-P.** (2013) Validation of a Novel, Direct Conjugate Scorpion Toxin-Fluorophore for the Investigation of the Large Conductance Ca^{2+}-activated Potassium Channel, BK. Abstract #132. 25th CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 12-13. (PhD. Student; Oral).

Bergeron, ZL., Collier, AC., **Bingham, J-P.** Peptide Toxin Bioengineering - Advancement of Fluorescent Probe Design for Targeting Human K^+ Channels. John A Burns School of Medicine Spring Research Symposium (Honolulu, HI) (2012).

Andrews E., Milisen J., and **Bingham J-P.** (2012) "Effects of Diet Manipulation on Conotoxin Profiles in Fish-Eating *Conus striatus*". Abstract #24. 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; Poster).

Cabalteja C., Kiyabu S.#, Chun J., Sandall D., Livett B. and **Bingham J-P.** (2012) "Challenging the Dogma that Bioactive α-Conotoxins are Globular". Abstract #28. 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; Poster).

Halford Z. and **Bingham J-P.** (2012) "Making connections with azido-chemistry: A novel approach to bioengineering peptide toxin fluorophores. Abstract #33. 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; Poster).

Milisen J. and **Bingham J-P.** (2012) "Maximizing Conopeptide Production through Improved Snail Farming". Abstract #42 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; Poster).

Thapa P. and **Bingham J-P.** (2012) "Optimization of Thiol-Ester ligation for expanding the potential of Native Chemical ligation". Abstract #53 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; Poster).

Kiyabu S. and **Bingham J-P**. (2012) "Toxin folding patterns within the venom duct of the genus *Conus*". Abstract #69 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (UG. Student; Poster).

Yu P., Thapa P., and **Bingham J-P.** (2012) "Using an Optimized Methodology of TFMSA Cleavage in Peptide Synthesis Bioengineering". Abstract #93 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (UG. Student; Poster).

Slater D. and **Bingham J-P.** (2012) "Evaluating the Risk of Diphacinone Rodenticide Pellets to Hawaiian Trigger Fish". Abstract #95 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (UG. Student; oral).

Yafuso J., Negi VS., **Bingham J-P.**, and Borthakur D. (2012) "Isolation and characterization of cDNAs encoding enzymes for mimosine biosynthesis in *Leucaena leucocephala"*. Abstract #100 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; oral).

Mahi E., Nordschow A.#, Milisen J. and **Bingham J-P.** (2012) "Cultivation of Planktotrophic *Conus striatus* Larvae". Abstract #102 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (MS. Student; Oral).

Bergeron ZL., Collier A. and **Bingham J-P.** (2012) Peptide Toxin Bioengineering - Advancement of Fluorescent Probe Design for Targeting Human K^+ Channels. Abstract #118 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (PhD. Student; oral).

Negi VS., **Bingham J-P.**, Li QX., and Borthakur D. (2012) Characterization of mimosine- degrading enzymes from Rhizobium sp. strain TAL1145 and *Leucaena leucocephala*. Abstract #121 24rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 13-14. (PhD. Student; Oral).

Wheeler K., McDonald T., Griffis J., Radovich TJK., **Bingham J-P.** and Malcolm M. Manners. (2011) Flavonol and Anthocyanin Analyses of Purple-fruited Selections of *Eugenia uniflora L.* (Pitanga) by High Performance Liquid Chromatography. American Society for Horticulture Science. Waikola, HI. Sept. 25-28th

Cabalteja C., Kiyabu S. ,Chu nJ.,Sandall D.,Livett B.,and **Bingham J-P** (2011)Challenging the Dogma that Bioactive α-Conotoxins are Globular "Big Research, Little Island" Summer Showcase 2011 McNair Student Achievement Program, University of Hawaii, Honolulu, August 8-9.

Kiyabu S, Cabalteja C., Chun J., Sandall D., Livett B., and **Bingham J-P** (2011) Selective Disulfide Bond Formation in 〈−conotoxins INBRE SURI program, University of Hawaii, Honolulu, July 29th.

Chun JBS., Kim DH. and **Bingham J-P.** (2011) "Exploring different approaches to identify novel drug lead candidates within *Conus purpurascens*". Abstract #32. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Halford Z., and **Bingham J-P.** (2011) "Exploring Azido-chemistry: A Novel approach to peptide toxin bioengineering and fluorophore production". Abstract #34 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Mahi E., Nordschow A., Milisen J. and **Bingham J-P.** (2011) "Cultivation of planktotrophic *Conus textile* larvae". Abstract #48. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Milisen J., Mahi E., Leong J. and **Bingham J-P.** (2011) "Venom variability in *Conus striatus*" Abstract #50. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Nordschow A., Milisen J. and **Bingham J-P.** (2011) "Developmental analysis through protein quantification of *Conus striatus* veliger" Abstract #53. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (Undergraduate).

Spafford D., Cuttriss A., Christopher D., Smith C., and **Bingham J-P.** (2011) "Identification of photoprotective pigments in Gracilaria salicornia, an invasive red macroalga". Abstract #58. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Thapa P. and **Bingham J-P.** (2011) "Optimization of Thiol-ester mediated ligation for peptide synthesis and bioengineering" Abstract #60. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Wheeler K., McDonald T., Griffis J., Radovich TJK., **Bingham J-P.** and Manners. M.M (2011) "Flavonol and Anthocyanin Analyses of Purple-fruited Selections of *Eugenia uniflora* L. (Pitanga) by High Performance Liquid Chromatography". Abstract #63. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student).

Maldonado A., Milisen J. and **Bingham J-P.** (2011) "Demonstration of molluscicidal activity targeting *pomacea canaliculta* (Golden Apple Snail)". Abstract #90. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (Undergraduate)

Spann N. and **Bingham J-P.** (2011) "Non-Translationally Modified Toxins as Molluscicides" Abstract #96. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (Undergraduate).

Kapono C., Thapa P., Guendisch D. and **Bingham J-P.** (2011) "α-Conotoxin truncation – an investigation into the pharmacological and phyla specificity of venom peptides". Abstract #69. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (MS. Student) (oral).

Bergeron ZL., Milisen J., Chun J. and **Bingham J-P.** (2011) "Venom From A Far; How a Cone Shell Will Travel". Abstract #124. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (PhD. Student) (oral).

Yafuso E., **Bingham J-P.**, Chen J., Turano H., Teresita Amore T. and Paull R.E. (2011) "Functional characterization of a *Dendrobium* F5'3'H gene in the Petunia model system". Abstract #130. 23rd CTAHR and COE Research Symposium, University of Hawaii, Honolulu, April 8-9. (PhD. Student) (oral).

Kapono C. and **Bingham J-P.** (2010) Characterization of novel milked venom peptide M2450 from *Conus magus*. 22nd Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 9-10. Abstract No. 39 (MS. Student).

Milisen J., Nordschow A., Maldonado A. and **Bingham J-P.** (2010) Aquaculture and protein quantification of *Conus striatus* veliger. 22nd Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 9-10. Abstract No. 46 (MS. Student)

Leong JL., Chun J., Milisen J., Biggs J., Rivera C., LeRoy M. and **Bingham J-P.** (2010) Venom differentiation within the milked venom of *Conus striatus*. 22nd Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 9-10. Abstract No. 71 (Undergraduate Student)

Thapa P. and **Bingham J-P.** (2010) Alpha conotoxin peptide truncation as a potential novel means of post-translational modification for phyla selectivity and pharmacological selectivity 22nd Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 9-10. Abstract No. 80 (Undergraduate Student) (oral).

Chun J., Bergeron Z. and **Bingham J-P.** (2010) Application of mass spectrometry in the analysis of novel conotoxins. 22nd Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 9-10. Abstract No. 87 (MS. Student) (oral).

Kim DH., Marangoudakis S., Lipscombe D., and **Bingham J-P.** (2010) Bioengineering of ω- conotoxin GVIA: Probes for the N-type neuronal Ca^{2+} channel. 22nd Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 9-10. Abstract No. 90 (MS. Student).

Bergeron ZL., Collier A., Cummins TR. and **Bingham J-P.** (2010) Design development and application of a fluorescent probe to study changes in hERG channel density and trafficking; a mechanistic basis for cardiac arrhythmia J. FASEB, 24 (Meeting Abstract Supplement) Abstract No. 490.2

Thapa P., Morrison K., **Bingham J-P.** (2009) Alpha conotoxin peptide truncation – a potential novel means of post-translational modification for phyla and pharmacological specificity. 21st Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 3-5. Abstract No. 6 (undergraduate/high school intern). *Recipient of the Gamma Sigma Delta, Award of Merit, awarded in the category of Undergraduate Student Poster Presentation.

Kim DH., Welling P.A., Slesinger PA., **Bingham J-P.** (2009) Targeting RomK Channels; Tertiapin, a novel template for peptide toxin fluorophore bioengineering. 21st Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 3-5. Abstract No. 33 (MS. Student).

Chun JB., Sandall D., Livett BG., **Bingham J-P.** (2009) Assignment of disulfide bond connectivity within a ⟨-Conotoxin Vg1.0 using partial reduction, differential thiol-alkylation, and MS/MS. 21st Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 3-5. Abstract No. 19 (MS. Student).

Phillips EE., **Bingham J-P**. (2009) Thiol-ester Ligation of Huwentoxin-I Peptide Fragments: Increasing Synthetic Applications of a Novel Voltage-gated Sodium Channel Inhibitor. John A. Burns School of Medicine Biomedical Science Symposium, Honolulu, April 14th, 2009. Abstract No. 104.

Bergeron. ZL., Collier A., **Bingham J-P**. (2009) Correlation of Cardiac Arrhythmias and Drug Safety: Development of a toxin-fluorophore based hERG channel Screen. John A. Burns School of Medicine Biomedical Science Symposium, Honolulu, April 14th, 2009. Abstract No. 86.

Ishibashi J. and **Bingham J-P**. (2008) Peptide probes: Addressing Problems in design and synthesis. Pacific Region Diabetes Education Program NIDDK, NIH Diabetes conference, Ala Moana Hotel, Honolulu, August 10-11, 2008.

Bergeron Z., Collier A and **Bingham J-P**. (2008) The Correlation of Cardiac Arrhythmias and Drug Safety: Bioengineering of a Toxin-fluorophore High-throughput hERG Screen. 20th Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 11-12. Abstract No. 27.

Kim DH., Toribio P. and **Bingham, J-P**. (2008) Quantification of milked venom Conopeptide variability in *Conus purpurascens*. 20th Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 11- 12. Abstract No. 3.

Phillips E., Cummins T. and **Bingham J-P**. (2008) Bioengineering of Huwentoxin-I: A Novel Pharmacological Probe for Isoforms of the Voltage Gated Sodium Channel. 20th Annual CTAHR Student Research Symposium, University of Hawaii, Honolulu, April 11-12. Abstract No. 21.

Townsend, A., Scanlon, D., O'Donnell, P., Inserra, M., **Bingham, J-P**., Satkunanathan, N., Khalil Z., Purcell, A., Livett, B.G. (2006) Posttranslational modifications of venom components in *Conus victoriae*. IST World Congress, Glasgow, July 23-28, 2006. **2005**

Krishnan, MN., **Bingham J-P**., Lee S.H. and, Moczydlowski E. (2005) Role and Affinity of Inorganic Cations in Tetramer Stabilization of the KcsA K^+ Channel. Biophysical Society Meeting, Long Beach, CA.

Cummins, TR., Moczydlowski E., **Bingham J-P.** (2004) Differential Block of Voltage-gated Sodium Currents by a Tarantula toxin. Neuroscience, 34th Annual Meeting, Oct. San Diego.

Bian, S., **Bingham, J-P.,** Yan, Y., Sigworth, F., Moczydlowski, E. BK Channel Clustering On HEK293 Cells. Abstracts of the Biophysical Society 48th Annual Meeting, Feb. 14 – 18, 2004, Baltimore, Maryland. Biophysical Journal Supplement, Jan. 2004, Vol. 86(1), Part 2 of 2, p430a.

Bingham, J-P., Bian, S., and Moczydlowski E. (2003) Synthesis of iberiotoxin-D19K-LC-Biotin: application to BK channels. *Biophys. J.* 84: abstract. **2002**

Bingham, J-P., Whittal, R., Semchuk, P., Moczydlowski, E., (2002) The Milked venom from *Conus geographus* holds many surprises. 6th Asia-Pacific Congress on Animal, Plant and Microbial toxins, Cairns, Australia.

Sandall, D., Keays, D., Down, J., **Bingham, J-P.**, Livett, B. and Gayler, K. (2001) Conotoxin diversity in venom from Australian Cone shells. Proc. 26th Annual Conference on Protein Structure and Function, 7 – 11 February, Lorne, Australia, 26: A56.

Bingham, J-P., Burlingame, A., Moczydlowski, E., Gilly, W.F. (2000) A new highly selective conotoxin from *Conus californicus* that targets voltage-gated neuronal Na^+ channels of squid. General Physiology meeting, Woodshole, MA.

Bingham J-P., Medzihradszky K. F., Gilly W. F. and Burlingame A. L. (1999) The Venom of *Conus californicus* – its complexity and diversity as studied by various methods of Mass Spectrometry. UCSF Dept. meeting. Asilomar CA.

Broxton, N., Down, J., Loughnan, M., Miranda, L., Gehrmann, J., **Bingham, J-P.,** Alewood, P. and Livett, B.G. (1997) Potent alpha-conotoxins with selectivity for nicotinic receptor subtypes in muscle and chromaffin cells. Proc. 9th Int. Symposium on Chromaffin Cell Biology. May 29 – 30, 1997., Sapporo, Japan. p. 113.

Down J., **Bingham J-P.**, Miranda L., Alewood P., Gehrmann J., Livett BG., Broxton N., and Loughnan M. alpha-Conotoxins with Selectivity Towards Neuronal- and Muscle-type Nicotinic Acetylcholine Receptors. Lorne Protein Conference, Lorne, Australia 1997.

Broxton NM., **Bingham J-P**., Alewood P., Capon R., Down J., and Livett B.G. Search for Marine Natural Products and Conotoxins That Target Neuronal-Type Nicotinic Receptors. 2nd Australian Peptide Symposium, Kingfisher Bay., Australia 1996.

Bingham J-P., Jones A., Lewis RJ., and Alewood PF. A Comparative Study of Venom Components From *Conus textile* by Ion Spray Spectrometry (ISMS). 1st Australian Peptide Symposium, Day Dream Is., Australia 1995.

Jones A., **Bingham J-P.**, Lewis RJ., and Alewood PF. HPLC/MS and MS/MS in Drug and Receptor Discovery. Mass Spectrometry Workshop, Lorne Protein Conference, Lorne, Australia 1995.

Bingham J-P., Jones A., Lewis R.J., and Alewood PF. Novel Conotoxins in the milked Venom of Cone Shells, Lorne Protein Conference, Lorne, Australia 1995.

Jones A., **Bingham J-P.,** and Alewood PF. Application of HPLC/MS and MS/MS in Drug Receptor Discovery, 15th ANZMS Sydney, Australia 1995.

Jones A., **Bingham J-P.**, Lewis RJ., and Alewood PF. Characterising Peptides Isolated from *Conus* Venoms Using Ionspray HPLC/MS and MS/MS. ASMS, Altanta USA 1995.

Alewood PF, **Bingham J-P.**, Jones A., and Lewis RJ. Rapid Analysis of *Conus* Venoms Peptides by Ionspray Mass Spectrometry. Eilat Conference 1994.

Bingham J-P., Jones A., Alewood PF., and Lewis RJ. Bioactive Peptides from *Conus* Venom by ionspray HPLC/MS Lorne Protein Conference, Lorne, Australia 1994.

Jones A., **Bingham J-P.,** and Alewood PF. Disulfide Bond Connectivity Analysis in Small, Multiply Disulfide Bonded Peptides by Ionspray Mass Spectrometry, Lorne Protein Conference, Lorne, Australia 1994.

Bingham J., Jones A., Lewis RJ., and Alewood PF. Rapid Analysis of *Conus* Venoms Peptides by Ionspray Mass Spectrometry. Proceedings from the Eilat Conference 1994.

Jones A., **Bingham J-P.,** and Alewood PF. Determination of Bioactivity from *Conus* Venoms by Ionspray HPLC/MS and MS/MS. 41st Annual Conference on Mass Spectrometry and Allied Topics, San Francisco, ASMS, Santa Fe, USA 1993.

Jones A., **Bingham J-P.**, Lewis RJ., and Alewood PF. 43rd Annual Conference on Mass Spectrometry and Allied Topics, Atlanta, ASMS, Santa Fe, USA 1993.

Jones A., **Bingham J-P.**, Lewis RJ., and Alewood PF. Characterization of an Array of Bioactive Peptides from *Conus* Venoms by Liquid Chromatography/Mass Spectrometry. Twelfth International Symposium on HPLC of Peptides, Proteins and Polynucleotides, Sydney, Australia, 1992.