

## Participants of Undergraduate Research Fellowship (URFP) Programme

\*Excellence in Poster Presentation

#Best Presenter

### 2018-19

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Gu Jiacheng	BSc(4)	4	Role of Long Non-coding RNAs in Cancer Stem Cells	Dr Jiangwen Zhang, School of Biological Sciences	Role of Phosphorylation of Ybx1 in the Translation Control of Maternal sqt RNA and Nodal Signaling Pathway in Zebrafish Embryogenesis	Prof Karuna Sampath, Warwick Medical School, The University of Warwick
Ho Sik Yin	BSc(4)	4	Use of CombiGEM-CRISPR in screening potential novel drug combinations for liver cancer	Dr Alan S L Wong, School of Biomedical Sciences	--	--
Kwan Hiu Lam Rachel*#	BSc(4)	4	Role of TRPC1-induced Ca <sup>2+</sup> -signaling in neuromuscular synapse development	Dr Chi Wai Lee, School of Biomedical Sciences	Role of TRPC1-induced Ca <sup>2+</sup> -signaling in neuromuscular synapse development	Dr Chi Wai Lee, School of Biomedical Sciences
Lai Siu Lun Michael	BSc(4)	4	Using transparent brain to investigate spreading of neurodegeneration in Parkinson's disease	Dr Raymond C C Chang, School of Biomedical Sciences	Using neuronal tracing and passive transparent brain to visualize neuronal pathway	Dr Raymond C C Chang, School of Biomedical Sciences
Lee Tak Wang Terence	BSc(4)	4	IAV PB1-F2 cytotoxic sequence mediates NLRP3 inflammasome activation via oxidative stress induction	Prof Dong-Yan Jin, School of Biomedical Sciences	Influenza A virus PB1-F2 cytotoxic motif promotes self aggregation to elicit NLRP3 dependent IL-1 $\beta$ release	Prof Dong-Yan Jin, School of Biomedical Sciences
Leung Tsz Kin Calvin	BSc(4)	4	Oviposition preference and thermal tolerance of stag beetles (Family: Lucanidae)	Dr Timothy C Bonebrake, School of Biological Sciences	--	--
Leung Yee Man	BSc(4)	4	Chloroplast genomes comparison of mycoheterotrophic Exacum paucisquamum and autotrophic Exacum tetragonum	Prof Richard Saunders, School of Biological Sciences	--	--
Shukla Yash Sanjaykumar	BSc(4)	4	Autonomously-produced synthetic push-pull motif	Dr Julian A Tanner, School of Biomedical Sciences	Autonomously-produced synthetic push-pull motif	Dr Thomas Ouldrige, Department of Bioengineering, Imperial College London
Wan Lok Yee	BSc(4)	4	Preparation of recombinant protein of adiponectin in E. coli and testing of its bioactivity in cell lines with adiponectin receptor expression and its potential effects on promoter activation of pituitary hormones	Prof Anderson O L Wong, School of Biological Sciences	Preparation of recombinant protein of adiponectin in E. coli and testing of its bioactivity in cell lines with adiponectin receptor expression and its potential effects on promoter activation of pituitary hormones	Prof Anderson O L Wong, School of Biological Sciences
Wang Chuwen	BSc(4)	4	Uniruled Projective varieties	Prof Ngai Ming Mok, Department of Mathematics	--	--

### 2017-18

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Chan Chun Ngai	BSc(4)	4	Holocene climate changes in marginal Asian monsoon regions	Dr Zhonghui Liu, Department of Earth Sciences	Field investigation of lake status in Inner Mongolia	Dr Zhonghui Liu, Department of Earth Sciences
Cheung Man Him	BSc(4)	4	Elicidating the role of Dlc18 in motor neuron development	Dr Martin Cheung, School of Biomedical Sciences	--	--
Chu Ka Chi	BSc(4)	4	Investigation and Validation on Gene Expression During Development of nucleus Pulposus	Prof Kathryn S E Cheah, School of Biomedical Sciences	Investigation and Validation on Gene Expression During Development of Nucleus Pulposus - Hox Genes and Cell Surface Markers	Prof Kathryn S E Cheah, School of Biomedical Sciences

Ding Anyang	BSc(4)	4	Palaeobiogeographic Analysis of Coelurosaurian Evolution	Dr Michael D Pittman, Department of Earth Sciences	--	--
Ling Yuet Fung	BSc(4)	4	Upper-ocean stratification in the polar North Atlantic and its impact on deep-water ventilation during past interglacials	Dr Benoit Thibodeau, Department of Earth Sciences	Upper-ocean stratification in the polar North Atlantic and its impact on deep-water ventilation during past interglacials	Dr Benoit Thibodeau, Department of Earth Sciences
Man Pui Hei Marcus*#	BSc(4)	4	Modulation of the cGAS-STING pathway by MERS-CoV	Prof Dong-Yan Jin, School of Biomedical Sciences	Modulation of the cGAS-STING pathway by MERS-CoV	Prof Dong-Yan Jin, School of Biomedical Sciences
Ng John Joson Quimpo	BSc(4)	4	Synthesis of fluorescent chemical probes for detection of superoxide ions	Dr Ho Yu Au-Yeung, Department of Chemistry	--	--
Poh Wei Church	BSc(4)	4	Design (modification), Synthesis, Characterization and Photophysical Study of Phosphorescent Organometallic Complexes	Prof Vivian W W Yam, Department of Chemistry	Probing the Influence of the R-Zn-R Bond Angle in Dialkylzinc Complexes on the Lewis Acidity of the Zinc Metal Centre and Implications for Zinc Activities	Prof Ulrich Fekl, Department of Chemical and Physical Sciences, University of Toronto Mississauga
Wang Jen-chieh	BSc(4)	4	Studies on the effects of stereochemistry on (4+3) cycloaddition to synthesize perhydroazulenes diastereoselectively	Prof Pauline Chiu, Department of Chemistry	Studies on the effect of stereochemistry on (4+3) cycloaddition to synthesize perhydroazulenes	Prof Pauline Chiu, Department of Chemistry
Wang Jianian	BSc(4)	4	Discrete-time series analysis on nomadic migration of historical china	Dr Guodong Li, Department of Statistics & Actuarial Science	--	--
Yan Junran	BSc(4)	4	Role of centromere and kinetochore proteins in anoxia-induced suspended animation and recovery in <i>S. cerevisiae</i>	Dr Karen W Y Yuen, School of Biological Sciences	The role of centromere, kinetochore and cell cycle checkpoint proteins in anoxia-induced suspended animation and recovery in <i>S. cerevisiae</i>	Dr Karen W Y Yuen, School of Biological Sciences
Zeng Ji	BSc(4)	3	L2 Estimates of d-bar Operator on Complex Manifolds	Prof Ngaiming Mok, Department of Mathematics	--	--
Zhou Ruiyi	BSc(4)	4	Adapting Scalable Correlated Electronic Structure Theory to Born-Oppenheimer Molecular Dynamics Simulations of Molecular Excited Electronic State	Dr Jun Yang, Department of Chemistry	Adapting Scalable Correlated Electronic Structure Theory to Born-Oppenheimer Molecular Dynamics Simulations	Prof Roberto Car, Department of Chemistry, Princeton Institute for the Science and Technology of Materials

#### 2016-17

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Ho Julian Xi Wei	BSc(4)	5	Role of miRNA-1 and -499 in maturation of human embryonic stem cell-derived cardiomyocytes in 3D tissue culture	Dr Wendy W Y Wong & Dr Kwok Ming Yao, School of Biomedical Sciences	--	--
Ni Haozheng	BSc(4)	4	Bootstrap approximation in time series modeling	Dr Guodong Li, Department of Statistics & Actuarial Science	--	--
Rabbani Mashiat*#	BSc(4)	4	Evaluating Nucleoside Analogs as Potential Anti-Cancer Drugs	Prof Alice S T Wong, School of Biological Sciences	Novel mechanisms for targeting Cancer Stem cells using nucleoside analogues and nanotechnology based drug delivery	Prof Peng Ling, Department of Chemical Biology, Centre National de la Recherche Scientifique (CNRS)
Tse Yuen Cheong	BSc(4)	4	Design and Synthesis of Luminescent Metal Complexes	Prof Vivian W W Yam, Department of Chemistry	Design, Synthesis and Photophysical Study of Cyclometallated N <sup>C</sup> N Alkynylplatinum(II) Complexes	Prof Vivian W W Yam, Department of Chemistry
Wong Thomas Hin Fung	BSc(4)	4	The Anticancer components from <i>Hedyotis diffusa</i>	Prof Chi Ming Che, Department of Chemistry	--	--
Zhang Zhiqian	BSc(4)	4	CRISPR/Cas9 mediated isolation and genomic cloning of EBV strains from clinical EBV-infected cell samples	Prof Dong-Yan Jin, School of Biomedical Sciences	--	--

## 2015-16

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Fan Ruolin*	BSc(4)	4	Systemic exploration in the regulating network of hypertrophic-chondrocyte-to-osteoblast differentiation	Prof Kathryn S E Cheah, School of Biomedical Sciences	--	--
Guo Fengyi	BSc(4)	4	Impacts of Urbanization on Spotted Dove Communication	Dr Timothy C Bonebrake, School of Biological Sciences & Dr Caroline E Dingle, Department of Earth Sciences	--	--
Hassan Ayon Ahmed	BSc(4)	4	Determining the effect of shear stress on the adhesion of tumor cells in cancer metastasis	Prof Alice S T Wong, School of Biological Sciences	--	--
Husain Abdullah	BSc(4)	4	Screening of G-protein-coupled receptors cDNA library for dimerization with Human Secretin Hormone Receptor	Prof Billy K C Chow, School of Biological Sciences	--	--
Leung Yi Lok Enoch*#	BSc(4)	4	Reconstruction of mass distribution of galaxy cluster(s) via gravitational lensing	Dr Jeremy J L Lim, Department of Physics	Studying the UV luminosity functions of galaxies at high redshifts	Dr Jeremy J L Lim, Department of Physics
Liu Yangdongling	BSc(4)	4	Design, Synthesis and Photophysical Study of Luminescent Metal Complexes	Prof Vivian W W Yam, Department of Chemistry	--	--
Luo Di	BSc(4)	4	New Time Evolution Methods for Matrix Product States of Tensor Network in Quantum Calculation	Prof Guanhua Chen, Department of Chemistry & Dr Shizhong Zhang, Department of Physics	Investigation on Tensor Network Renormalization Group	Prof Garnet Kin-Lic Chan, Department of Chemistry, the Chan Group, Princeton University
Sun Chenyue*	BSc(4)	4	Visible-light mediated synthesis of dihydrofuran derivatives with ruthenium photoredox catalysts	Prof Chi Ming Che, Department of Chemistry	Red-light induced carbon disulfide release from a cobalt complex	Prof Peter C Ford, Department of Chemistry and Biochemistry, University of California, Santa Barbara, USA
Wen Boya*	BSc(4)	4	Fermat-type functional equations and binary form	Prof Tuen Wai Ng, Department of Mathematics	--	--
Wu Teng	BSc(3)	4	Exploring properties of Bayesian & Frequentist hybrid confidence interval	Prof Stephen M S Lee, Department of Statistics & Actuarial Science	--	--
Xiong Lingyun*	BSc(4)	4	Functional Role of hnRNP A1 on FOXM1 alternative splicing	Dr Kin Hang Kok, School of Biomedical Sciences	--	--
Zhang Yongquan	BSc(4)	4	Complex Manifolds	Prof Ngaiming Mok, Department of Mathematics	From Holomorphic Functions to Complex Manifolds	Prof Ngaiming Mok, Department of Mathematics

**2014-15**

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Cai Weixin*	BSc(3)	3	Buffered Autoregressive Model with Exogenous Variables	Dr Philip L H Yu, Department of Statistics & Actuarial Science	Semiparametric Heteroscedastic Modeling for Seasonal Time Series	Dr Prabir Burman, University of California, Davis
Chan Ho Wang*	BSc(3)	3	Anammox Bacteria in Animal System	Dr Jidong Gu, School of Biological Sciences	Molecular Diagnosis of Anammox Bacteria	Dr Jidong Gu, School of Biological Sciences
Chan Hok Fung	BSc(3)	5	Physiologically - relevant doses of UVA exposure alters human skin keratinocytes growth	Dr Jetty C Y Lee, School of Biological Sciences	--	--
Cheng Tsz Fung	BSc(3)	3	Roles of BART microRNAs in Epstein-Barr virus-induced epithelial transformation	Prof Dong-Yan Jin, Department of Biochemistry	Roles of BART microRNAs in Epstein-Barr virus-induced epithelial transformation	Prof Dong-Yan Jin, Department of Biochemistry

**2013-14**

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Li Yu	BSc(3)	2	Complex Differential Geometry	Prof N Mok, Department of Mathematics	--	--
Pan Wenqi	BSc(3)	2	The role of Suppressor of fused in mouse hindbrain development	Dr M H Shum, Department of Biochemistry	The role of Suppressor of fused in the formation of mouse cranial facial skeleton and outflow tract of embryonic heart	Prof C C Hui, University of Toronto
Sun Lianyi	BSc(ActuarSc)(3)	3	Analysis of large data sets: new tools from random matrix theory	Dr J F Yao, Department of Statistics & Actuarial Science	--	--
Wong Mo Dick	BSc(ActuarSc)(3)	2	Markov chains on a continuous state space	Dr J F Yao, Department of Statistics & Actuarial Science	Particle methods with financial applications	Dr P Del Moral, INRIA-Bordeaux-Sud-Ouest Research Centre
Yang Shihao*	BSc(ActuarSc)(3)	2	Valuing contingent options: A discounted density approach	Dr H L Yang, Department of Statistics & Actuarial Science	--	--

**2012-13**

Name	Curriculum	Year	Project Title of Project/ Directed Studies Course	Supervisor of Project/ Directed Studies Course	Project Title of Summer Research Internship	Internship Supervisor
Chai Wai Yeeng	BSc(3)	2	Do endocrine disrupting chemicals affect cancer?	Dr A S T Wong, School of Biological Sciences	--	--
Choi Chek Hin	BSc(ActuarSc)(3)	3	Introduction to the gerber-shiu function in ruin theory	Dr E K C Cheung, Department of Statistics & Actuarial Science	Optimal portfolio with correlation constraints	Dr C Bernard, University of Waterloo
Chow Tai Cheong*	BSc(3)	2	Pax6 and neurodegeneration of Parkinson's disease	Dr Y Q Song, Department of Biochemistry	Neurodegeneration of parkinson's disease: the role of Pax6 in MPP+-induced apoptosis Parkinson's disease in vitro model	Dr Y Q Song, Department of Biochemistry
Lai Cheuk Hei	BSc(3)	1	Pathogenesis of influenza viruses	Dr Chan Wan Yi, Department of Pathology Dr Chan Chi Wai, School of Public Health	--	--

Lam Chun Ming	BSc(3)	2	Light controllable kinesin	Dr J D Huang, Department of Biochemistry	Meiotic spo11 recombination initiation complex in zea mays analysis using yeast two-hybrid system – cloning of spo11-1A, spo11-1B, and prd2	Dr Arnard Ronceret, University of California, Berkeley
Lau Wing Yan	BSc(3)	2	Molecular characterization of puerarin-protein interactions by proteomics and domain mapping	Dr J Rong, School of Chinese Medicine	Isolation of puerarin binding protein by biotin-streptavidin system	Dr J Rong, School of Chinese Medicine
Li Yu Ting Stephen	BSc(3)	2	The role of cell-cell junction proteins and actin regulatory proteins on germ cell migration and development during spermatogenesis	Prof W W M Lee, School of Biological Sciences	Unraveling the role of actin regulatory proteins on cytoskeleton during spermatogenesis	Dr C Y Cheng, Rockefeller University
Lin Tsun-yuan	BSc(3)	2	Analysing Fermi's data	Prof K S Cheng, Department of Physics	--	--
Ng Ngai Fung*	BSc(3)	2	Riemann surfaces and complex manifolds	Prof N Mok, Department of Mathematics	Studies on kahler manifolds	Prof N Mok, Department of Mathematics
Peng Jun	BSc(3)	1	Calculus of variation	Prof W S Cheung, Department of Mathematics	--	--
Shen Keren	BSc(3)	2	The generalization of Gibbard-Satterthwaite theorem	Dr T W Ng, Department of Mathematics	One candidate voting with a quorum	Dr T W Ng, Department of Mathematics
Song Yifan	BSc(3)	2	Data analysis for Fermi Satellite	Prof K S Cheng, Department of Physics	--	--
Tang Yunfan	BSc(ActuarSc)(3)	2	Option pricing under regime switching models	Prof H L Yang, Department of Statistics & Actuarial Science	--	--
Tse Man Nok	BSc(3)	2	The roles of Lmx1a gene in regulating Irx3/5 genes during inner ear development	Dr M H Sham, Department of Biochemistry	The roles of Lmx1a in regulating Irx3 and Irx5 genes in inner ear development	Dr M H Sham, Department of Biochemistry
Wan Ho Chi	BSc(ActuarSc)(3)	2	Dependance structures in multiple life insurances and annuities	Dr K C Cheung, Department of Statistics & Actuarial Science	A study in optimal reinsurance	Dr K C Cheung, Department of Statistics & Actuarial Science
Wong Kin Lam	BSc(3)	2	Modulation of secretin and secretin receptor gene regulations by NFAT5 in mouse hypothalamic cells	Prof K C Chow, School of Biological Sciences	The modulation of secretin receptor expression by hyperosmotic stress in mouse hypothalamic cells	Prof K C Chow, School of Biological Sciences
Wu Qihang*	BSc(3)	2	Tectonic evolution of the Chinese Altai	Prof M Sun, Department of Earth Sciences	A detailed structural study of Qiongkuer Region, China Altai: multiphase deformation and modification for terrane subdivision proposed	Prof M Sun, Department of Earth Sciences
Zheng Yao*	BSc(ActuarSc)(3)	3	Applications of nonlinear time series models	Prof W K Li, Department of Statistics & Actuarial Science	Applications of nonlinear time series models: fitting threshold models to veilleux's predator series	Prof W K Li, Department of Statistics & Actuarial Science