

# Purple Potato

Address: Panjiayuan South Lane 17th, Chaoyang District, Beijing, China;

Email: 1510122@pku.edu.cn

## EDUCATION

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### Peking Union Medical College

Master of Medicine

GPA: 90/100

**Relevant Courses:** Genomics (95/100); Oncology (93/100); Cancer Epidemiology and Clinical Research Methods (85/100); Applied Bioinformatics (87/100)

China

September 2020- Expected June 2023

### Peking University

Bachelor of Medicine

GPA: 3.8/4.0

**Relevant Courses:** Bio-Statistics (90/100); Epidemiology (90/100); Evidence-based Clinical Practice (94/100); Medical Genetics (96/100); Integrative Innovation Experiment (96/100)

China

September 2015 - July 2020

## PUBLICATIONS

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### Peer-Reviewed Journal Papers (按照重要性排序或时间倒序)

- **Purple.** et al. (2015). *Trichomonas gallinae* Persistence in Four Water Treatments. *J Wildl Dis.* 2015 Jul;51(3):739-42.
- **Purple.** et al. (2020). Sleep-related memory consolidation in the psychosis spectrum phenotype. *Neurobiol Learn Mem.* 2020 Oct;174:107273.
- **Purple.** et al. (2017). Auditory conditioned stimulus presentation during NREM sleep impairs fear memory in mice. *Sci Rep.* 2017 Apr 12; 7:46247.
- **Purple.** et al. (2019). Artificially decreased dissolved oxygen increases the persistence of *Trichomonas gallinae* in water. *Int J Parasitol Parasites Wildl.* 2019 Apr 7; 9:100-103.
- **Purple.** et al. (2015). Persistence of Two Isolates of *Trichomonas gallinae* in Simulated Bird Baths with and without Organic Material. *Avian Dis.* 2015 Dec;59(4):472-4.
- **Purple.** et al. (2023). Phenotypic divergence in sleep and circadian cycles linked by affective state and environmental risk related to psychosis. *Sleep.* 2023 Mar 9;46(3): zsa311.
- **Purple.** et al. (2002). Fibronectin fragments upregulate insulin-like growth factor binding proteins in chondrocytes. *Osteoarthritis Cartilage.* 2002 Sep;10(9):734-46.
- **Purple.** et al. (1965). Interaction of excitation and inhibition in the eccentric cell in the eye of *Limulus*. *Cold Spring Harb Symp Quant Biol.* 1965; 30:529-37.
- N Fukui, **Purple.** et al. (2001). Cell biology of osteoarthritis: the chondrocyte's response to injury. *Curr Rheumatol Rep.* 2001 Dec;3(6):496-505.
- Flavie Kersanté, **Purple.** et al. (2023). The GABA<sub>A</sub> receptor modulator zolpidem augments hippocampal-prefrontal coupling during non-REM sleep. *Neuropsychopharmacology.* 2023 Mar;48(4):594-604.
- Maria C Spriggs, **Purple.** et al. (2020). Detection of *Trichomonas gallinae* in Wild Birds Admitted to a Rehabilitation Center, Florida, USA. *J Wildl Dis.* 2020 Jul;56(3):733-735.
- Jennifer C Holt, **Purple.** et al. (2015). Use of FTA technology for detection of *Trichomonas gallinae*. *Vet Parasitol.* 2015 Sep 15;212(3-4):396-9.

### Conference Papers

- **Purple.** et al. (2023). Purple potatoes are the loveliest creatures in the world. *Journal of Clinical Oncology* 40, e12-e12. (American Society of Clinical Oncology 2022)

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### Under Review Papers (First Author Only)

- **Purple.** et al. (2023). Differences in treatment strategies towards purple potatoes among Chinese, Chinese American, and non-Chinese American patients. *Cookers.*

## RESEARCH PROJECTS

### Project 1

#### Construction and validation of an AI-based assessment model of drought recovery after water-stress treatment in crop plants

*September 2021 - present*

This project aims to construct and validate an artificial intelligence model to assess drought recovery and yield potential after water-stress treatment in wheat and maize. Based on multispectral imaging and plant phenomics data, we developed a model to support irrigation and cultivation decision-making. By collaborating with experts in plant physiology, agronomy, imaging science, and bioinformatics from multiple institutions, we established an effective tool for stress-response evaluation in crops.

Responsibility: project design, data collection, model construction, model validation

Skill Mastered: machine learning modeling, R programming, PlantCV/ImageJ, plant image processing, interdisciplinary communication and collaboration

### Project 2

#### Construction of a plant prognostic model based on copy number variation (CNV)

*January 2022 - present*

This project focuses on building prognostic models for disease resistance and yield stability in rice and soybean based on genomic copy number variation (CNV). Multiple analytical methods, including Cox regression, t-SNE, k-means clustering, and random forest-PAM clustering, were applied to establish robust predictive models for breeding and cultivation management. These studies can be further integrated with molecular marker screening to support precision breeding in the future.

Responsibility: model construction

Skill Mastered: machine learning, R programming, genome sequencing analysis, variant interpretation, scientific writing

## EXTRA-CURRICULAR ACTIVITIES

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- “Premier Cup” Plant Knowledge Competition, Peking University *December 2017*
- “Plant Alliance Cup” Plant Knowledge Competition for Beijing’s College Students *April 2017*
- *Volunteer*, “Home for the Elderly” activity, care home *September 2016*
- *Medical helper*, ward in Peking University Sixth Hospital *2015 - 2016*
- *Assistant*, Youth League committee of School of Basic Medical Sciences, Peking University *July 2017*
- *Participant*, social activity with the theme of “Love, Responsibility and Growth” *July 2017*
- *Volunteer*, “Medicine Chest” health education program, Hainan *July 2017*

## HONORS

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- Member of American Society of Clinical Oncology (ID: xxx)
- Excellent Graduate of Peking University, 2020
- Special Scholarship, Peking University, 2016, 2017
- Merit Student, Peking University, 2015, 2016
- Kwang Hua Scholarship, Peking University, 2015
- The Third Scholarship, Peking Union Medical College, 2021
- The second prize, competition of knowledge of winter Olympics, Chinese Academy of Medical Sciences, 2022
- The first prize, Biology Competition for Beijing’s College Students (2nd), 2016
- Champion, China Junior Table Tennis Championships, 2008

## SKILLS AND INTERESTS

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**Software:** R; Perl; GraphPad Prism; Python

**Statistics:** machine learning (LASSO, t-SNE, etc); meta-analysis; immuno-infiltration analysis (CIBERSORT; ssGSEA)