



北京大学  
PEKING UNIVERSITY

# Campus Asia Symposium

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Department of Nutrition and Food Hygiene

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Part **1**

# Our research group



## Something about our research group

- Department of Nutrition and Food Hygiene
- Professor **Wang Peiyu** and Professor **Zhang Yumei**
- 20 students
- Research fields: Nutritional epidemiology、 Nutrition and chronic diseases、 Maternal and infant nutrition

# 2018年硕士研究生学位论文答辩会



## Our research projects

- **Follow Up Studies:** Maternal and infant
- **Cross-sectional Studies:** Maternal and infant (cooperated with Nestlé) 、 Adults
- **Trials:** Lactobacillus paracasei N1115 & Sea buckthorn puree on Dyslipidemia & Pathoglycemia
- **Animal Experiments:** Exopolysaccharides (EPS) on healthy and Ulcerative Colitis rats



Part **2**

# My research project



## Random controlled trial(RCT)

# **Effects of Sea Buckthorn puree on people with Prediabetes: A crossover-controlled trial**

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Funded by Natural Science Foundation of China (NSFC)



# Sea buckthorn



# Sea buckthorn



Sandy soil and little rainfall

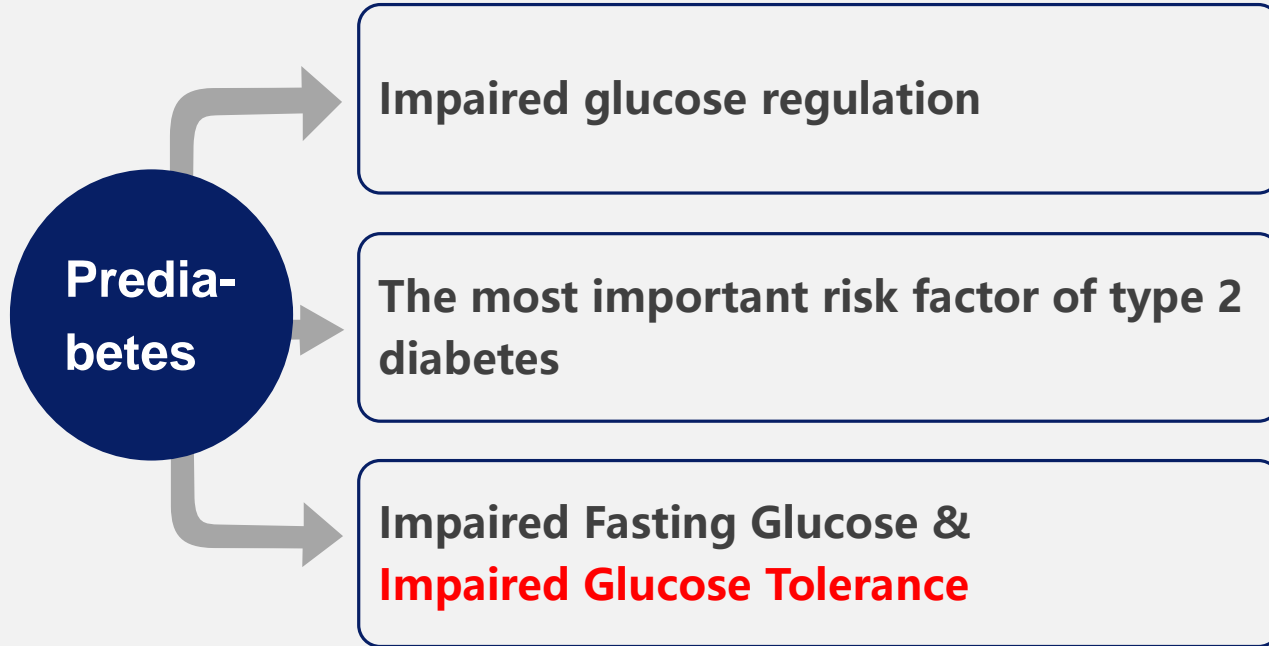
## Sea buckthorn

polysaccharose, dietary fiber, Vitamin, flavonoids, organic acid and so on

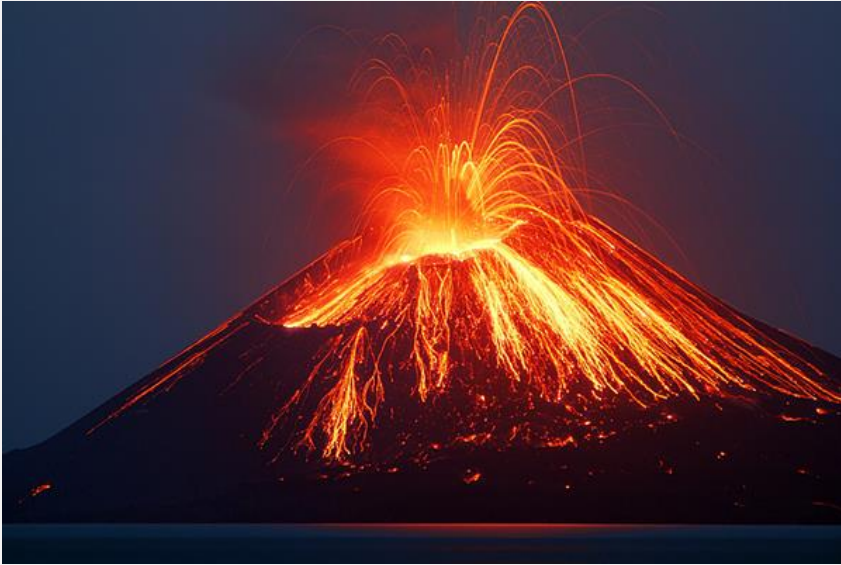
Rich in carotenoid and Vitamin C

Species	Vitamin C (mg/100g)
European SB	120-315
Alps SB	405-1100
Chinese SB	2500
Lemon	22

# Prediabetes



# Epidemiology of Prediabetes



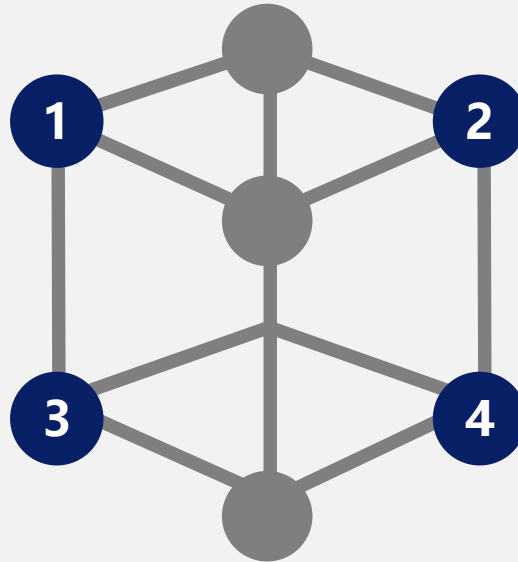
Reverse or Progress

6%-10% Impaired Glucose  
Tolerance progress into  
Type 2 Diabetes every year

We hope Sea Buckthorn can help us preventing the progression of Prediabetes.

# Research Design

Random Controlled Trial



Crossover

Double-blind

Sea buckthorn puree VS.  
Placebo  
90mL/d

# Inclusion criteria

Basic  
Information



**Aged 50-70, male or female**

**Prediabetes**



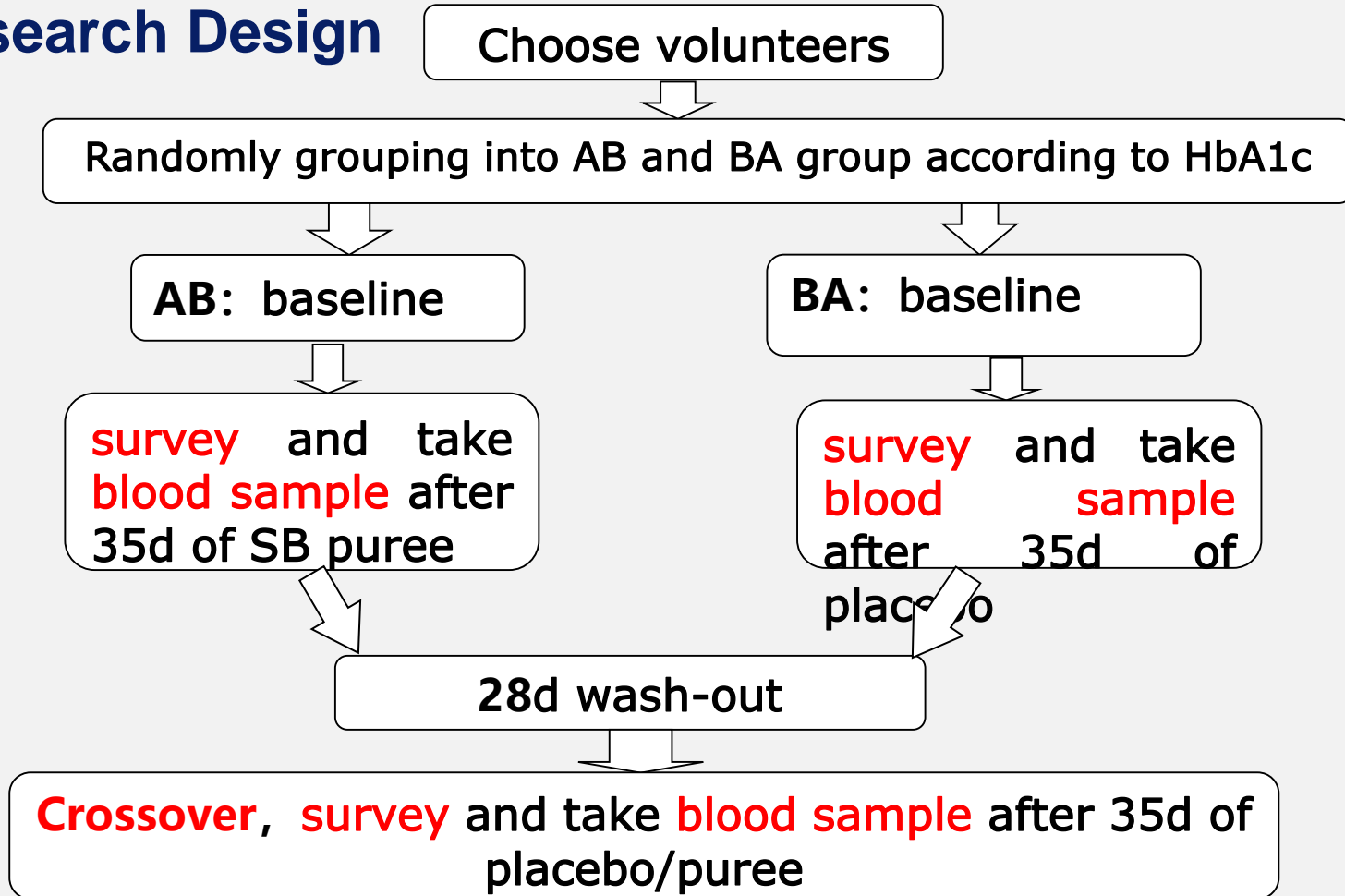
**6.1 < FPG < 7.0mmol/L and/or  
5.6% < HbA<sub>1c</sub> < 6.5%.**

## Exclusion criteria

1. Diabetes patients.
2. Who take hypoglycemic agent.
3. Who have impaired liver, thyroid, kidney function or blood disease.
4. Who have infectious diseases(HIV, hepatitis, tuberculosis .etc.)
5. Active period of gastric ulcer.
6. Who take dietary supplements which could affect this trial.
7. Who have irregular eating habit.
8. Who don' t have the ability to finish our survey, e.g.: confused-minded people.



# Research Design



# Survey



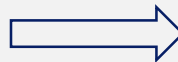
International Physical Activity Questionnaire  
(IPAQ)

Food Frequency Questionnaire (FFQ)  
& 24 hours dietary record



# Blood Sample

75g bread and 1 bag of milk



30min、60min、120min after meal

Fasting Blood Sample

Plasma glucose、insulin、C-peptide、HbA1c;

peripheral blood inflammatory factors: hs-CRP、IL-6、TNF- $\alpha$

## Some results

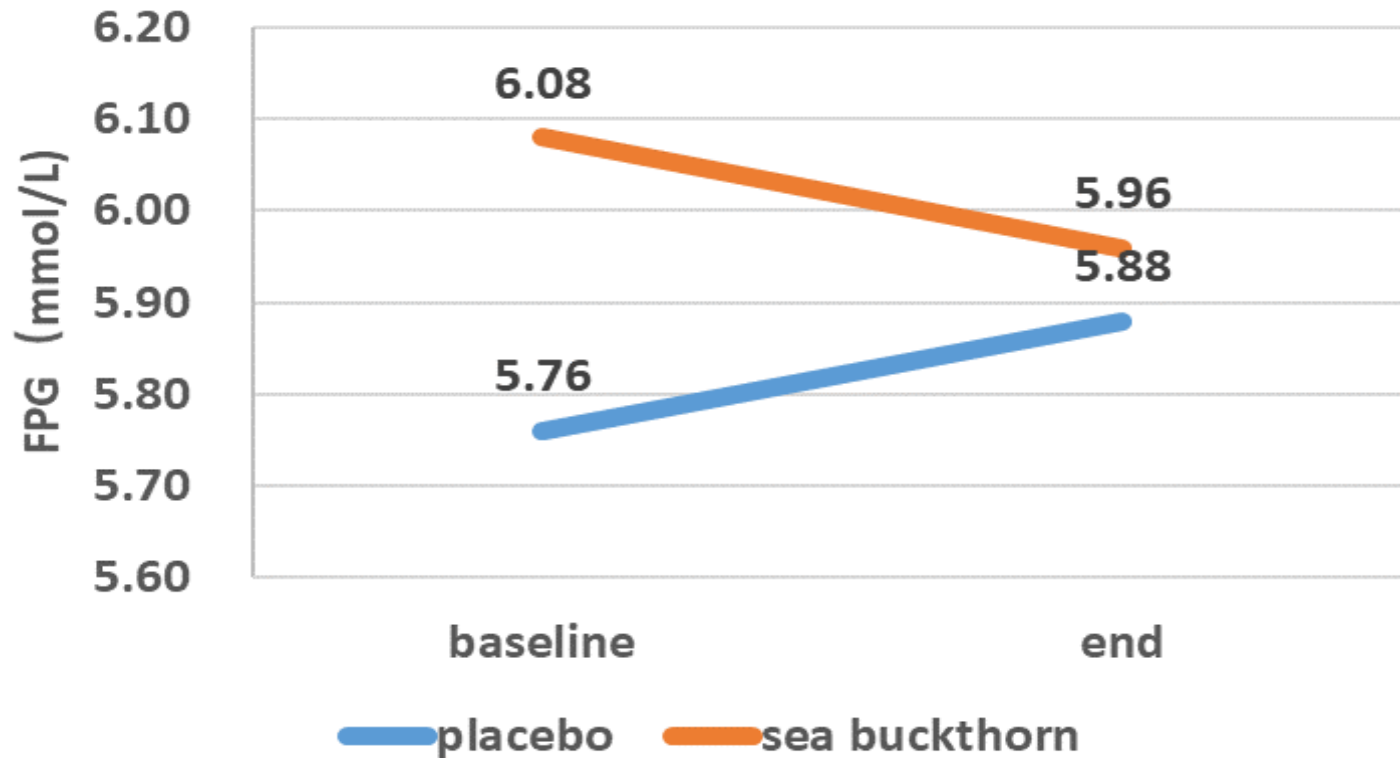


Figure 1. changes of FPG during intervention ( $p=0.045$ )

## Some results

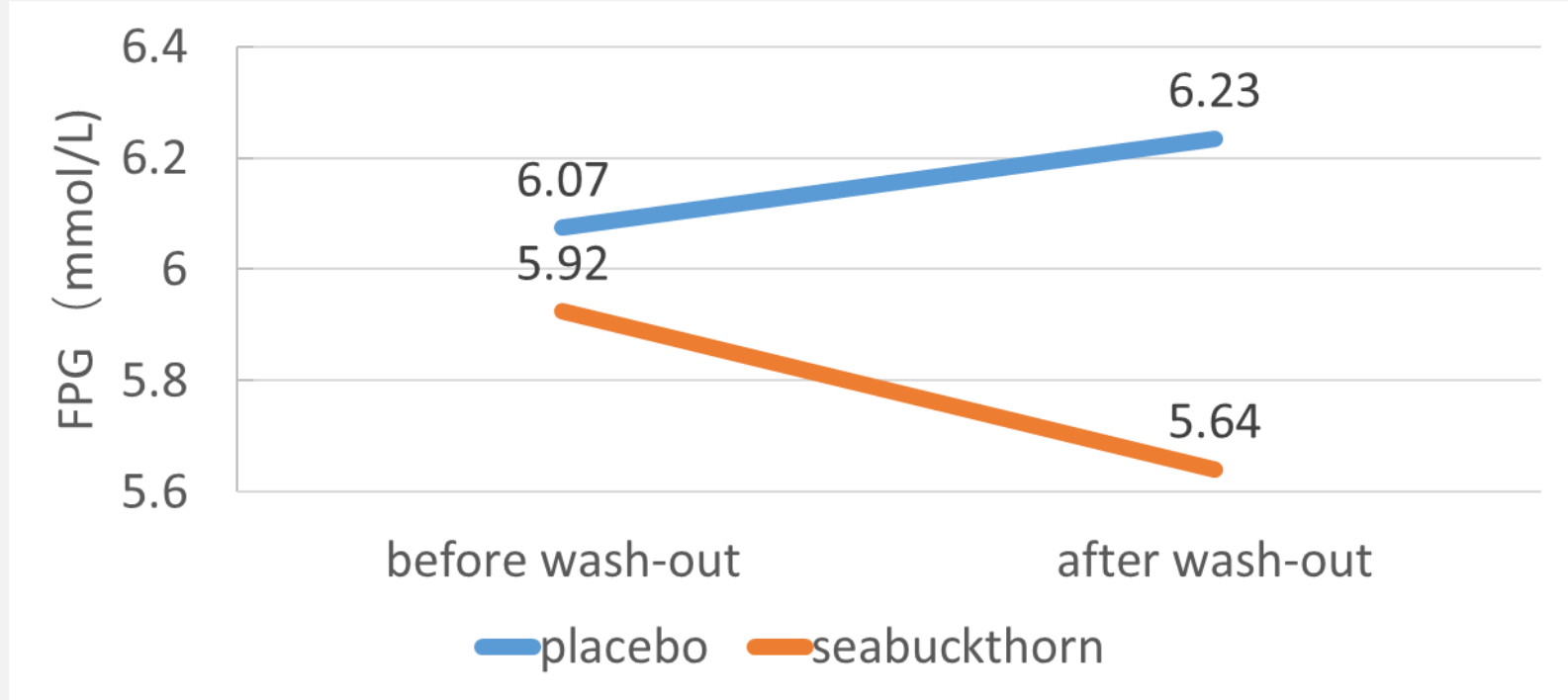


Figure 2. changes of FPG during wash-out period ( $p=0.043$ )



Part **3**

# My experience

# What I learned in CAMPUS Asia Project—Yonsei Univ.

- **Scientific Research**
- **Korean Traditional Culture**



## Scientific research

- Rigorous and serious scientific research attitude
- Adequate preparation
- Patience
- Combination between physical problems with mentality and sociology



# Traditional culture



경복궁

# Traditional culture

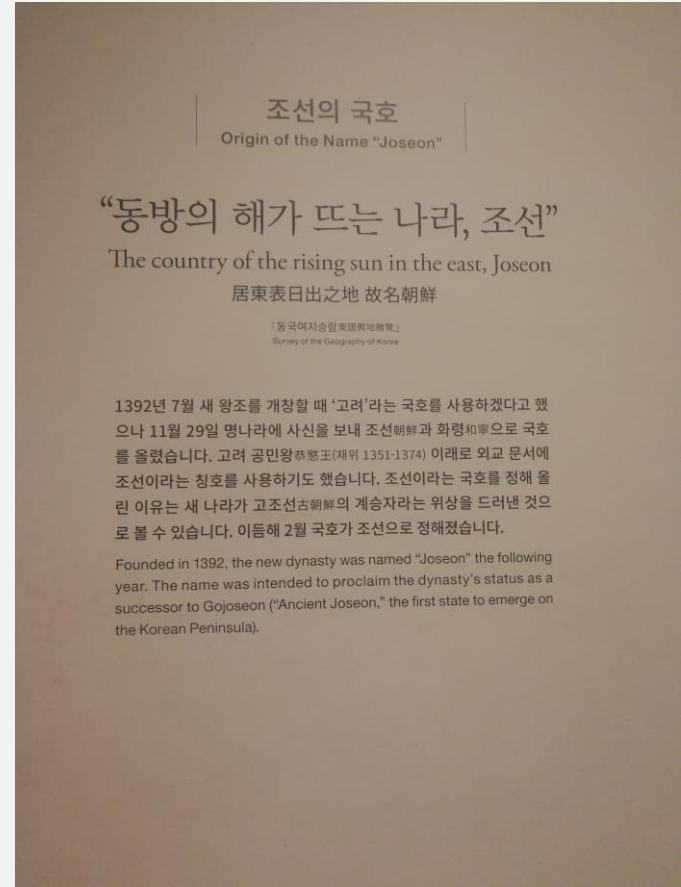


Carved the seal  
of our name in  
Korean

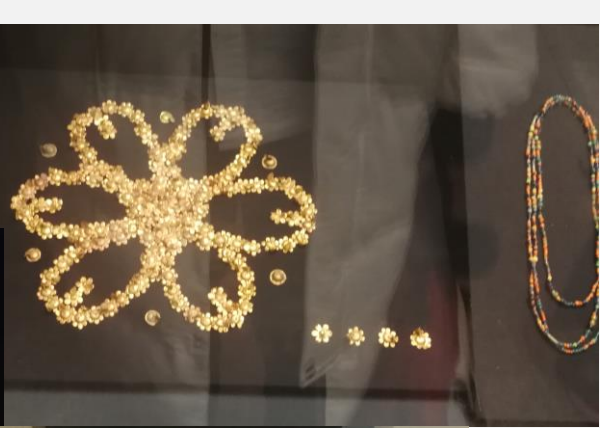
# National central museum of South Korea



## Korean history









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A dark blue graduation cap (mortarboard) with a tassel, positioned on the left side of the slide.

**Thanks for your attention!**

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