

AMGS Cross Mentoring Research Activity 2018-2019

- Research Syllabus

I . Mentor

1. Personal Information

Name	Yeong L. Ha, Ph.D.
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School or Institute	HK Antiaging Institute
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Major	Applied biochemistry

2. Education

	Year	Name of University	Major	Degree	Nation
Bachelor's degree	1973	Gyeongsang National University	Agricultural Chemistry	B.S.	Rep. of Korea
Master's degree	1979	Graduate School, Gyeongsang National University	Food Science	M.S.	Rep. of Korea
Doctorate	1986	Graduate School, University of Minnesota-Twin city	Nutritional Biochemistry	Ph.D.	USA
Dissertation	Alpha-tocopherol oxidation mediated by superoxide anion.				

3. Experiences

Duration	Position	Institute or University
1975-1978	Researcher	National Institute of Agricultural Science, Rep. of Korea
1978-1980	Researcher	Korea Tobacco & Ginseng, Rep. of Korea
1985-1991	Post-Doctor Fellow in Toxicology	University of Wisconsin-Madison, USA
1991-2016	Assistant ~ Professor	Gyeongsang National University, Rep. of Korea

	in Biochemistry	
2003-2005	Chief evaluator in functional foods	Korea Institute of Planning & Evaluation for Technology in Food, Agriculture and Forestry
2005-2007	Vice President in Research	Gyeongsang National University
2010-2011	Advisory member	Presidential Advisory Council on Science & Technology, Rep. of Korea
2016 to date	Director	HK Antiaging Institute, Rep. of Korea
2016 to date	Emeritus Professor	Div. of Applied Life Science, Gyeongsang National University

4. Honors and Awards

Year	Title	Remarks
1979	Outstanding Research Award	Korea Tobacco & Ginseng
2001	Best Researcher Citation	Ministry of Sci. and ICT, Rep. of Korea
2002	Best Research Award	Korean Society of Food Science and Nutrition Rep. of Korea
2005	Best Research Award	Ministry of Agriculture, Food and Rural Affairs Rep. of Korea
2009	Outstanding Research Award in Science & Technology	Gyeongnam Province, Rep. of Korea
2016	Presidential Citation	President, Rep. of Korea

5. Professional Societies

-1985-2016: Member, Institute of Food Technologist, USA.

-1985-2015: Member, American Chemical Society, USA.

-1987-2005: Member, American Oil Chemical Society, USA.

-2000-present: Vice President, Gyeongnam Branch, Korean Federation of Science and Technology Society.

-2002-2003: Vice President, Korean Society of Food Science and Nutrition

Rep. of Korea.

- 2004-2006: Editor, e-CAM (SCI), USA.

-2003-prresent: Advisory Committee Member, Korean Federation of Science and Technology Society (KFSTS).

-2008-2009: President, Korean Society of Life Science.

II . Syllabus

1. Course Title & Criteria

Course Title	Vitamin D and Health Influence
Criteria	<input type="checkbox"/> Biology & Applied Biology
	<input type="checkbox"/> Chemistry
	<input type="checkbox"/> Energy & Environmental Science
	<input type="checkbox"/> Integrated Science
	<input checked="" type="checkbox"/> Medicinal Science (Nutritional Biochemistry
	<input type="checkbox"/> Nano Science
	<input type="checkbox"/> Physics
	<input type="checkbox"/> Others

2. Course Objectives & Description

This course is designed to encourage high school students to evoke curiosities about vitamin D for maintenance of human health conditions. Currently, vitamin D studies are equally important to other medicinal fields of studies in science as it focus on the clinical use.

The course will provide basic knowledge on vitamin D study and also provide avenue to help encourage young mentees to understand the importance of vitamin D as a medicine. At the end of the course, the mentee will be able to accomplish the follows:

- Develop skills in creating a good question and on the research process in general.
- Develop abilities to evoke scientific curiosities about vitamin D and other medicines.
- Conduct a proposed study.
- Write a scientific paper/report.

3. Required Textbook or papers:

-Reading assignments will be posted later.

4. Final Outcome

Mid-term Report	[] Due date:
Final Report	[] Due date:
Research Article for APEC Youth Scientist Journal	[<input checked="" type="checkbox"/>] Due date: April 19, 2019

5. Schedule

Week	Date	Topics and Activities	Assignments & Other Instructions
1	Jan. 1 ~ 5	Introduction to the course -Why do humans require vitamins, especially, vitamin D? -Mentee will formulate 3 questions related to vitamins (assignment I) and submit to me via e-mail.	-Reading assignment I on vitamins which will be supplied to mentee.
2	Jan. 6 ~ 12	Biological synthesis of vitamin D in skin -Mentee will read the historical background and biosynthesis of vitamin D in skin section of the Assignment II, formulate 3 questions, and submit to me via e-mail.	-On line discussion on the chosen questions -Reading assignment II on the metabolism, physiology, and function of vitamin D by Hector F. Deluca (e-copy will be provide to mentee.
3	Jan.13 ~ 19	Chemistry of the vitamin D -Mentee will read the chemistry of vitamin D section of the Assignment II, formulate 3 questions, and submit to me via e-mail.	-On line discussion on the chosen questions
4	Jan. 20 ~ 26	Vitamin D metabolism in human body -Mentee will read the metabolism of vitamin D section of the Assignment II, formulate 3 questions, and submit to me via e-mail.	-On line discussion on the chosen questions
5	Jan.27~Feb.2	Biological functions and mechanistic actions of vitamin D -Mentee will read the biological functions of mechanistic actions of vitamin D section of the Assignment II, formulate 3 questions, and submit to me via e-mail.	-On line discussion on the chosen questions

6	Feb.3 ~ 9	<p>Regulation of the metabolism and function of vitamin D</p> <p>-Mentee will read the regulation of metabolism and function of vitamin D section of the Assignment II, formulate 3 questions, and submit to me via e-mail.</p>	-On line discussion on the chosen questions
7	Feb.10 ~ 16	Break	
8	Feb.17 ~ 23	<p>Measurement of vitamin D metabolites</p> <p>-Mentee will read the measurement of vitamin D metabolite section of the Assignment II, formulate 3 questions, and submit to me via e-mail.</p>	-On line discussion on the chosen questions
9	Feb.24~Mar.2	<p>Human requirement of vitamin D</p> <p>-Mentee will read the daily allowance of vitamin D section of the Assignment II, formulate 3 questions, and submit to me via e-mail.</p>	-On line discussion on the chosen questions
10	Mar.3 ~ 9	<p>Treatment of calcium and phosphorus disorder with vitamin D</p> <p>-Mentee will read the treatment of calcium and phosphorus disorder with vitamin D section of the Assignment II, formulate 3 questions, and submit to me via e-mail.</p>	-On line discussion on the chosen questions
11	Mar.10 ~ 16	<p>Other health consequence of vitamin D deficiency</p> <p>-Mentee will read the health consequences of vitamin D deficiency section of the Assignment II, formulate 3 questions, and submit to me via e-mail.</p>	-On line discussion on the chosen questions
12	Mar.17 ~ 23	Guide mentees to write research article for APEC Youth Scientist Journal	Daily report of activity
13	Mar.24 ~30	Guide mentees to write research article for APEC Youth Scientist Journal	Daily report of activity
14	Mar.31~Apr. 6	Guide mentees to write research article for APEC Youth Scientist Journal	Daily report of activity
15	Apr. 7 ~ 13	Submission and report of final article	On line defense of the research article
16	Apr. 19	Mentees should submit their research articles to AMGS admin team	