

## Suggested research topics

### Winter semester of the academic year 2019/2020

Course name in Arabic: **الأمراض والسموم التي تنتقل بواسطة الطعام**

Course name in English: **Food Borne Diseases and Toxicology**

Professor Dr.: **Ibrahim Ibrahim Al-Hawary**

Level: **Third**

Department: **Fish Processing and Biotechnology**

No	Research title	Research items
1	<b>Infection Bacterial food poisoning</b>	<ol style="list-style-type: none"> <li>1- Sources of bacterial contamination in fish and fish products</li> <li>2- Types of bacteria food Infection</li> <li>3- Toxic -Infection bacteria</li> <li>4- Organoleptic properties of spoiled fish due to bacteria</li> <li>5- Prevention and control</li> </ol>
2	<b>Intoxication Bacterial food poisoning</b>	<ol style="list-style-type: none"> <li>1- Sources of bacterial contamination in fish and fish products</li> <li>2- Types of bacteria food intoxication</li> <li>3- Toxic -Infection bacteria</li> <li>4- Organoleptic properties of spoiled fish due to bacteria</li> <li>5- Prevention and control</li> </ol>
3	<b>Fish borne mycotoxins</b>	<ol style="list-style-type: none"> <li>1- What are mycotoxins</li> <li>2- Impact of mycotoxins on fish</li> <li>3- The risk of fish and fish products contamination with mycotoxins on human health</li> <li>4- Strategy to decrease mycotoxins load on fish</li> <li>5- How to protect human from mycotoxins residues</li> </ol>
4	<b>Food borne viruses</b>	<ol style="list-style-type: none"> <li>1- Types of food borne viruses</li> <li>2- Effect of food borne viruses on human health</li> <li>3- Methods for detection of viruses in food and infected people</li> <li>4- Strategies to prevent and protect human from infection with food borne viruses</li> </ol>
5	<b>Fish borne parasites</b>	<ol style="list-style-type: none"> <li>1- Main types of parasites infecting fish</li> <li>2- Types of zoonotic parasites infecting human from fish and fish products</li> <li>3- Preventive measures to protect human from fish borne parasites</li> <li>4- Fast methods for detection of parasites in fish and infected people</li> </ol>
6	<b>Potential Food Poisoning toxins in seafoods</b>	<ol style="list-style-type: none"> <li>1- Types of Potential Food Poisoning toxins in sea foods</li> <li>2- Corelation between Potential Food Poisoning and fish</li> <li>3- Main types of Potential Food Poisoning bacterial toxins involved in seafoods</li> <li>4- Effects of Potential Food Poisoning toxins on human health</li> <li>5- How to protect and prevent human from Potential Food Poisoning toxins exposure</li> </ol>

7	<b>Marine biotoxins in seafoods</b>	<ol style="list-style-type: none"> <li>1- Main types of marine biotoxins</li> <li>2- Marine biotoxins effects on human health</li> <li>3- Prevention and control of marine biotoxins</li> <li>4- What should I do If you have been exposed to marine biotoxins</li> </ol>
8	<b>Antinutrients</b>	<ol style="list-style-type: none"> <li>1- Antinutrients definitions</li> <li>2- Types of Antinutritive factors</li> <li>3- Top Antinutrients to avoid</li> <li>4- Disabling antinutrients</li> <li>5- The prevention of food adulteration</li> </ol>
9	<b>Antimicrobials residues in fish</b>	<ol style="list-style-type: none"> <li>1- Main types of antimicrobials used in aquaculture</li> <li>2- Occurrence of antimicrobial residues in fish and fish products</li> <li>3- Effects of antimicrobial residues on human health</li> <li>4- How to elucidate antimicrobial residues in fish and human</li> </ol>
10	<b>Pesticides: Toxicology and residues in fish</b>	<ol style="list-style-type: none"> <li>1- Effects of pesticides on fish</li> <li>2- Main types of pesticides residues in fish and fish products</li> <li>3- Effects of pesticides residues on human health</li> <li>4- How to protect human from pesticides residues</li> </ol>
11	<b>Hormone residues in fish and Fish products</b>	<ol style="list-style-type: none"> <li>1- Uses of hormones in aquaculture</li> <li>2- Main types of hormone residues in fish and fish products</li> <li>3- Effects of hormone residues on fish, environment and human</li> <li>4- Methods for detection of hormone residues in fish and people</li> </ol>
12	<b>Food Irradiation</b>	<ol style="list-style-type: none"> <li>1- Food Irradiation concept and benefits</li> <li>2- How does food irradiation done</li> <li>3- Types of food irradiation</li> <li>4- Advantages and disadvantages of food irradiation</li> <li>5- Most common irradiated food all over the world</li> </ol>
13	<b>Disinfection and Sterilization</b>	<ol style="list-style-type: none"> <li>1- Types of Disinfectants and Sanitizer</li> <li>2- Disinfection and Sterilization concept and mechanism</li> <li>3- Natural products used as disinfectants at homes</li> <li>4- Most safer Disinfectants and sterilizers used for personal hygiene</li> <li>5- Most common Disinfectants and sterilizers used in industry, health cares, laboratories and homes</li> </ol>

14	<b>Polychlorinated biphenyls (PCBs) and Dioxins residues in fish</b>	<ol style="list-style-type: none"><li>1- What are PCBs and Dioxins and their properties</li><li>2- Uses and Sources of PCBs and Dioxins</li><li>3- Effect of PCBs and Dioxins on fish and human</li><li>4- How to control accumulation of PCBs and Dioxins in fish and human</li></ol>
15	<b>Heavy Metals residues in Fish</b>	<ol style="list-style-type: none"><li>1- Main types of heavy metals released in aquaculture</li><li>2- Heavy metals toxicity on fish</li><li>3- Effects of heavy metals on human health</li><li>4- How to control heavy metals residues in fish , fish products and human</li></ol>

**Course Instructor:**

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