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2nd MedSpring brokerage and venturing event on innovation

Berlin, Germany – 25/26 February, 2015

Scientific Food Center

Innovative Idea Call

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Jordan



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Scientific Food Center



R & D

Analysis

Scientific Services

Consultation

Training

Research & Development
Innovative Ideas
New food products



Center - Innovative Ideas

Innovation of ;

- **Functional mixture flour**
 - 1 - For production of low phenylalanine bakery products.**
 - 2 - For production free gluten bakery products.**
- **Functional mixture for production of low phenylalanine milk.**
- **Production of concentrated Phytochemicals from flora plants in Jordan**
- **Production of organic food such as ;olive oil ,dates ..**



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The Idea

**Innovation of (2) Functional mixtures
for Sensitivity patients**



**A- For production
Free gluten
Bakery products**

&



**B- For production
low phenylalanine
bakery products**



Review ;

Coeliac disease (CD)

is an auto immune and chronic disorder in which the mucous membrane of the small intestine is damaged in gluten - intolerant. CD is caused not only by a reaction to gliadin in wheat prolamin.



Phenylketonuria (PKU)

is an autosomal recessive disease caused by phenylalanine-hydroxylase (PAH) enzyme. The deficiency of this enzyme leads to the accumulation of phenylalanine in tissues and plasma of patients.





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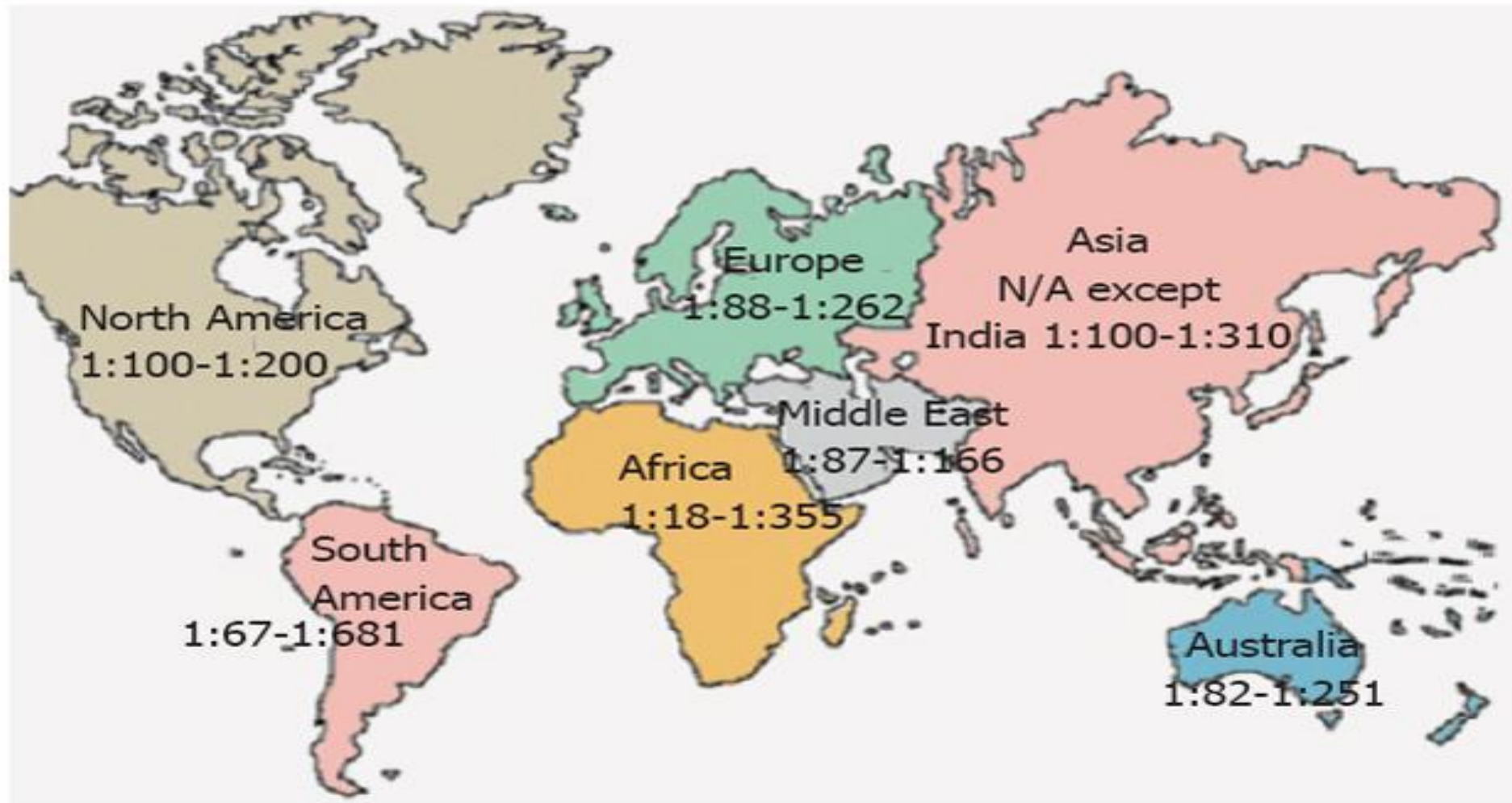


The problems ;

- The project has a global demand ,impact and interest in all countries and world organizations, including the European Union.
- The demand for low phenylalanine and free gluten bakery products is rising progressively and parallels the apparent or real increase in phenylketonuria (PKU) and Coeliac disease (CD) as evidenced by the increased range of these products on retail sale.



The range of CD prevalence around the globe





Incidence of PKU

Country	Incidence of PKU
<u>China</u>	1 in 18,000
<u>Finland</u>	<1 in 100,000
<u>Ireland</u>	1 in 4,500
<u>Japan</u>	1 in 120,000¹
<u>Korea</u>	1 in 41,000
<u>Norway</u>	<u>1 in 13,000</u>
<u>Turkey</u>	<u>1 in 2,600</u>
<u>India</u>	1 in 18,300
<u>United States</u>	1 in 15,000

In 2008 the National Jordanian Screening Program (NJSP) was established and according to this program the incidence of PKU in the Jordanian population is **1/4000**



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Needs of the target groups, final beneficiaries and Stakeholder s

Target groups	Consumers (families) & Producers	New products, Developments, Safety, Quality & Profit
Final beneficiaries	Phenylketonuria (PKU) and Coeliac disease (CD) patients	Food More Health More gladness
Stakeholder s	Ministry of health & Ministry of industry and trade.	Legislation improvements standards food control public health or human health

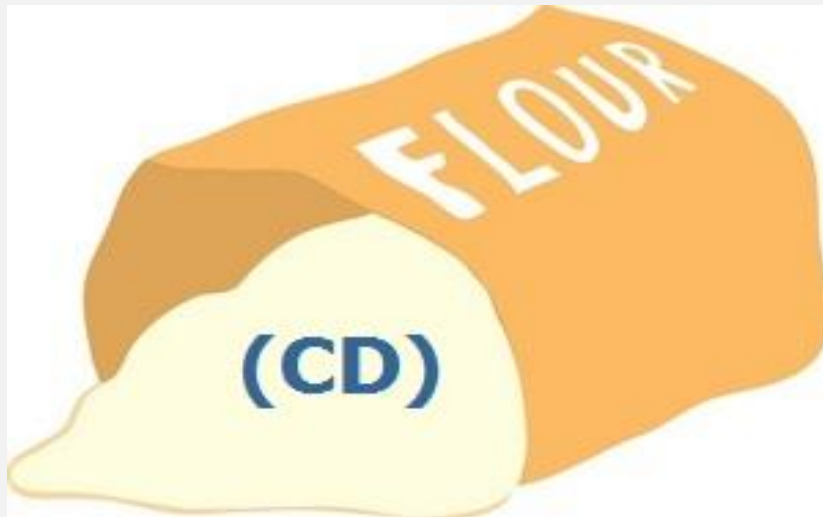


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Objectives ;

The aim my project to invent and to offer formulas of low phenylalanine and free gluten flour for produced bakeries for (PKU) and (CD) patients .





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The solution ;

In Jordan the local markets are lacking for low phenylalanine free gluten flour, **except** of some imported ones which are **very expensive** or **not available** **regulatory especially outside of Amman consumers** .

- **So that we will invent and to offer formulas of low phenylalanine and free gluten flour for produced bakeries for (PKU) and (CD) patients** .
- The results of this project also will be available for the neighbouring countries of Jordan, which it shares with the trade and economic relations and the transfer of experience .



Methodology

Needs and requirements

Planning ; activities , preparing & listing all requirements , personal , references

Experiment & formulations in lab scale

Lab experiments to identify ingredients, additives, types, sources, quality ,quantity of each one, Experiment design & Specification of products

Chemical, physical and sensory analysis

Test producers , protocols , evaluation producers , tools , method of analysis

Treatment and trials & analysis

Improvements , retrials for finalization for adoption the final formulas

Final of formulas , Specification and laboratory tests, production

Identify ingredients, additives, types, sources, quality & quantity of each one
Production steps, safety , quality factors & shelf life of products



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Estimated results

- 1. Identifying 2 types of functional flour recopies;**
 - **Free gluten bread and bakery products especially for Coeliac disease (CD) patients**
 - **Low phenylalanine bread and bakery products especially for sensitivity Phenylketonuria (PKU) patients**
- 2. Achievements in public health**
- 3. Achievement and development in food production in Jordan & for export**



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Within the 3 years we expect to ;

- Achieve a good reputation
- Having a name / trademark / markets
- Have the accreditation like ISO 22000
- Plan for produce a further of functional food products
- Have more of new world markets
- Increase the production and profits
- Achievement in R&D activates in both applied and /or Commercialisation



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Indicators of achievement

Call to the investors

The project has indicators for success and sustainability such as;

- 1. New products** manufacturing , will be produced in Jordan for **local and near countries**
- 2. Availability** of product in the market any time with a **low price**
- 3. Competitive advantages** with imported products.
- 4. Safe** and high **quality** of food products



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Added-value elements

- 1. Orientation in the production of functional food in Jordan**
- 2. Contributing to reduce expenses on diseases and treatments**
- 3. Achieve more public health by minimize the cases of diseases .**
- 4. Enhance the R&D in target sectors and apply the technology and developments**
- 5. Attainment to have more teamwork project in Jordan and world countries .**
- 6. The study will carry in privet research center which make more relations with target stakeholder .**



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From Lab scale to production line

Call to the investors

Call to financial partners

Looking for Funds

Marketing - Contracts



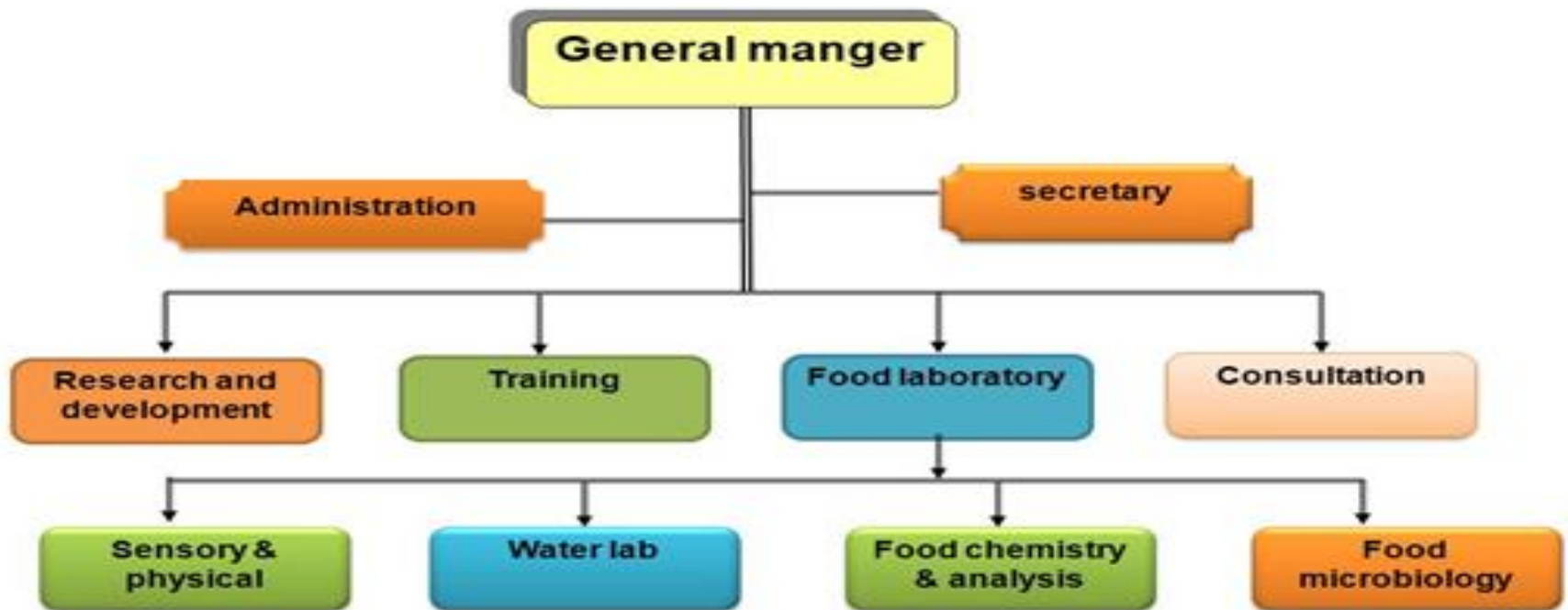


Why Scientific Food Center think for that ? what Duties ?

-
- **We are research center ! we have Vision, Mission & goals**
 - **The center support applied and commercialization research .**
 - **The center offer ; Experts ,Facilities ,Capacities, Scientific services.**
 - **The action designed by the owner of center ;Dr Hanee Al-Dmoor who is a researcher in cereal chemistry and technology having more than 12 published papers in flour and bakery products.**



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Research & Development

The most important areas of development;

1. Fulfil **applied** and /or **Commercialisation** researches.
2. The production of **new products**
3. Developing **traditional** food products
4. An improvement in the manufacturing **process** and **components** to develop the properties and qualities of food products.
5. Follow-up products **Stability** on shelf Life
6. Know the **consumers needs** .
7. Developed in **analysis , legislation , food additives ...**



Scientific Food Center R&D Experts team

- The center has / works with (20) of Jordanian experts ;
- (12) of Experts having PhD. , 4 M.sc. and 4 B.sc. researchers
- Faculties members - differ in the experience, in fields , in works
 - Food science & technology
 - Nutrition
 - Biotechnology
 - Agriculture- Plant – animal
 - Water.



Innovative and Research Idea Calls

1. Wheat / renovate grain quality parameters during wholesale
2. Olive oil quality and adulteration
3. Aflatoxins *occurrence*, detection and limitations
4. Hormone, antibiotic residues in food
5. Pesticides residues in food
6. GM FOOD detection ,effects
7. Bisphenol A and/ or emigrant compounds in food and drinks from plastic packaging materials
8. Acrylamide in food
9. Functional food new products
10. Nanotechnology applications



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How to find - Scientific Food Center

https://www.linkedin.com/profile/view?id=69031716&trk=nav_responsive_tab_profile



<http://www.facts-center.com/Home>



<https://www.facebook.com/pages/Scientific-Food-Center/207186282763769>



<https://twitter.com/foodfactscenter>





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Thanks for your interest

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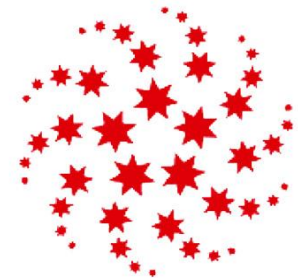
gm@facts-center.com

With a lot of thanks the establishment of the center was



JEDCO

المؤسسة الأردنية لتطوير المشاريع الاقتصادية
Jordan Enterprise Development Corporation



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