

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel) : Effects of Clear Kefir on Biomolecular Aspects of Glycemic Status of Type 2 Diabetes Mellitus (T2DM) Patients in Bandung, West Java [Study on Human Blood Glucose, c Peptide and Insulin]

Jumlah Penulis : 7 orang (J Judiono, Suharyo Hadisaputro, K S Indranila, **Bambang Cahyono**, Meiny Suzery, Yuliati Widiastuti, Asep Iwan Purnawan)

Status Pengusul : penulis ke-4

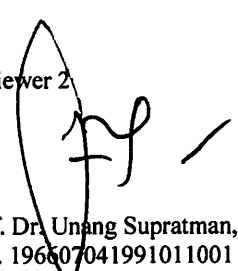
Identitas Jurnal Ilmiah : a. Nama Jurnal : The Functional Foods in Health and Disease (FFHD)
 b. Nomor ISSN : 2160-3855
 c. Vol, No., Bln Thn : Vol 4, No 8 (2014), PP 340-348
 d. Penerbit : Food Science Publisher
 e. DOI artikel (jika ada) : <http://dx.doi.org/10.31989/ffhd.v4i8.145>
 f. Alamat web jurnal : <https://www.ffhdj.com/index.php/ffhd/article/view/145>
 Alamat Artikel : <https://www.ffhdj.com/index.php/ffhd/article/view/145/307>
 g. Terindex : Web of Science, Google Scholar

Kategori Publikasi Jurnal Ilmiah : Jurnal Ilmiah Internasional
 (beri ✓ pada kategori yang tepat) Jurnal Ilmiah Nasional Terakreditasi
 Jurnal Ilmiah Nasional Tidak Terakreditasi

Hasil Penilaian *Peer Review* :

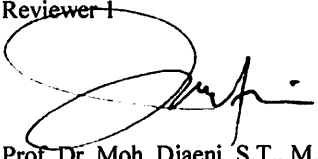
Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi jurnal (10%)	2,00	1,90	1,95
b. Ruang lingkup dan kedalaman pembahasan (30%)	5,00	5,85	5,43
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	5,00	5,85	5,43
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	6,00	5,85	5,93
Total = (100%)	18,00	19,45	18,73
Nilai Pengusul = (40% x 18,73)/6 = 1,25			

Reviewer 2


 Prof. Dr. Unang Supratman, M.Si
 NIP. 196607041991011001
 Unit Kerja : Dep.Kimia, FMIPA UNPAD

Semarang,

Reviewer 1


 Prof. Dr. Moh. Djaeni, S.T., M.Eng.
 NIP. 197102071995121001
 Unit Kerja : Teknik Kimia FT UNDIP

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel) : Effects of Clear Kefir on Biomolecular Aspects of Glycemic Status of Type 2 Diabetes Mellitus (T2DM) Patients in Bandung, West Java [Study on Human Blood Glucose, c Peptide and Insulin]

Jumlah Penulis : 7 orang (J Judiono, Suharyo Hadisaputro, K S Indranila, **Bambang Cahyono**, Meiny Suzery, Yuliati Widiastuti, Asep Iwan Purnawan)

Status Pengusul : penulis ke-4

Identitas Jurnal Ilmiah : a. Nama Jurnal : The Functional Foods in Health and Disease (FFHD)
 b. Nomor ISSN : 2160-3855
 c. Vol, No., Bln Thn : Vol 4, No 8 (2014), PP 340-348
 d. Penerbit : Food Science Publisher
 e. DOI artikel (jika ada) : <http://dx.doi.org/10.31989/ffhd.v4i8.145>
 f. Alamat web jurnal : <https://www.ffhdj.com/index.php/ffhd/article/view/145>
 Alamat Artikel : <https://www.ffhdj.com/index.php/ffhd/article/view/145/307>
 g. Terindex : Web of Science, Google Scholar

Kategori Publikasi Jurnal Ilmiah : Jurnal Ilmiah Internasional
 (beri ✓ pada kategori yang tepat) Jurnal Ilmiah Nasional Terakreditasi
 Jurnal Ilmiah Nasional Tidak Terakreditasi

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Internasional	Nasional Terakreditasi	Nasional Tidak Terakreditasi	
	20	<input type="checkbox"/>	<input type="checkbox"/>	
a. Kelengkapan unsur isi jurnal (10%)	2,00			2,00
b. Ruang lingkup dan kedalaman pembahasan (30%)	6,00			5,00
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	6,00			5,00
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	6,00			6,00
Total = (100%)	20,00			18,00
Nilai Pengusul = (40% x 18,00)/6 = 1,20				

Catatan Penilaian artikel oleh Reviewer :

- Kesesuaian dan kelengkapan unsur isi jurnal:**
 Artikel terdiri dari: Title, Abstract, Background, Method and Materials, Results and Discussion, Conclusion and Recommendation, Competing Interest, Abbreviations, Authors' Contributions, Acknowledgement, References dan ditulis sesuai dengan Guide for Author. Substansi artikel sesuai dengan bidang ilmu (Kimia) fokus pada Foodscience.
- Ruang lingkup dan kedalaman pembahasan:**
 Artikel membahas tentang clear kefir yang dapat digunakan untuk terapi penyakit diabetes militus (DM). Kajian difokuskan pada analisis efek clear kefir pada sifat biomolekuler glikemik pasien dengan diabetes militus tipe 2 (T2DM) di Bandung. Terdapat tiga metode analisis yang digunakan yaitu: HPLC, enzim level dan elisa. Data hasil penelitian sangat terbatas. Pembahasan dilakukan kurang komprehensif, karena hanya melibatkan 3 referensi yang disitasi dari total 26 yang ada dalam artikel ini. Pada section discussion juga kurang begitu jelas, karena data-data dari tabel tidak disitasi untuk dibandingkan dengan hasil penelitian lainnya yang relevan.
- Kecukupan dan kemutakhiran data/informasi dan metodologi:**
 Kemutakhiran artikel ini sangat baik. Hal ini ditunjukkan dengan jumlah referensi 10 tahun terakhir mencapai 22 dari 26 artikel (84%) adalah 10 tahun terakhir. Meskipun demikian, penulis tidak mampu mengeksploitasi potensi tersebut dalam pembahasan dengan maksimal. Metode penelitian dituliskan dengan runtut. Data yang disajikan dalam bentuk tabel (Tabel 1) cukup baik, sehingga secara umum artikel ini mudah untuk dipahami peneliti lainnya.
- Kelengkapan unsur dan kualitas terbitan:**
 Jurnal diterbitkan oleh Food Sciences Publisher, termasuk dalam Emerging Source Citation Index (ESCI) dari 2015, memiliki H index=12 dengan rata-rata sitasi per artikel 2,76. Tim editor terdiri dari 8 orang dengan komposisi negara: China (2), Jepang (2), US(4). Similaritas artikel berdasarkan turnitin sebesar 5%

Semarang,
 Reviewer 1


 Prof. Dr. Moh. Djaeni, S.T., M.Eng.
 NIP. 197102071995121001
 Unit Kerja : Teknik Kimia FT UNDIP

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel) : Effects of Clear Kefir on Biomolecular Aspects of Glycemic Status of Type 2 Diabetes Mellitus (T2DM) Patients in Bandung, West Java [Study on Human Blood Glucose, c Peptide and Insulin]

Jumlah Penulis : 7 orang (J Judiono, Suharyo Hadisaputro, K S Indranila, **Bambang Cahyono**, Meiny Suzery, Yuliati Widiastuti, Asep Iwan Purnawan)

Status Pengusul : penulis ke-4

Identitas Jurnal Ilmiah : a. Nama Jurnal : The Functional Foods in Health and Disease (FFHD)
 b. Nomor ISSN : 2160-3855
 c. Vol, No., Bln Thn : Vol 4, No 8 (2014), PP 340-348
 d. Penerbit : Food Science Publisher
 e. DOI artikel (jika ada) : <http://dx.doi.org/10.31989/ffhd.v4i8.145>
 f. Alamat web jurnal : <https://www.ffhdj.com/index.php/ffhd/article/view/145>
 Alamat Artikel : <https://www.ffhdj.com/index.php/ffhd/article/view/145/307>
 g. Terindex : Web of Science, Google Scholar

Kategori Publikasi Jurnal Ilmiah : Jurnal Ilmiah Internasional
 (beri ✓ pada kategori yang tepat) Jurnal Ilmiah Nasional Terakreditasi
 Jurnal Ilmiah Nasional Tidak Terakreditasi

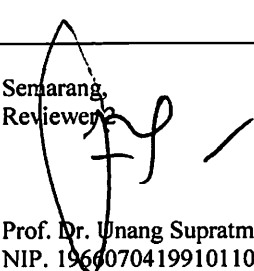
Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Internasional	Nasional Terakreditasi	Nasional Tidak Terakreditasi	
	<input type="text" value="20"/>	<input type="text"/>	<input type="text"/>	
a. Kelengkapan unsur isi jurnal (10%)	2,00			1,90
b. Ruang lingkup dan kedalaman pembahasan (30%)	6,00			5,85
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	6,00			5,85
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	6,00			5,85
Total = (100%)	20,00			19,45
Nilai Pengusul = (40% x 19,45)/6 = 1,29				

Catatan Penilaian artikel oleh Reviewer :

- Kesesuaian dan kelengkapan unsur isi jurnal:**
Isi jurnal telah sesuai dengan kaidah penulisan ilmiah
- Ruang lingkup dan kedalaman pembahasan:**
Kedalaman pembahasan cukup baik dan mendalam
- Kecukupan dan kemutakhiran data/informasi dan metodologi:**
Metodologi penelitian cukup mutakhir dan dihasilkan data yang baik
- Kelengkapan unsur dan kualitas terbitan:**
Kualitas penerbit cukup baik

Semarang,
Reviewer


 Prof. Dr. Unang Supratman, M.Si
 NIP. 196607041991011001
 Unit Kerja : Dep.Kimia, FMIPA UNPAD

Effects of clear kefir on biomolecular aspects of glycemic status of type 2 diabetes mellitus (T2DM) patients in Bandung, West Java [Study on human blood glucose, c ...

J Judiono, S Hadisaputro, KS Indranila... - Functional foods in ..., 2014 - ffhdj.com

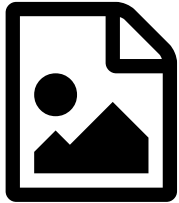
Background: Diabetes Mellitus (DM) triggers an excessive reaction of free-radicals. It increases reactive oxygen species and reduces antioxidants status as well as the β cell damage. Clear kefir was used for DM therapies, however it limited biomolecular exploration of its bioactive roles. Research aimed to investigate the effects of clear kefir on the biomolecular nature of the glycemic status of T2DM in Bandung. Methods: The randomized pretest-posttest control group was conducted by 106 T2DM patients. Research was done in ...

☆  [Dirujuk 15 kali](#) [Artikel terkait](#) [13 versi](#) 

ICI World of Journals (/search/form) / **Functional Foods in Health and Disease**

[← Back](#)

Functional Foods in Health and Disease



English title:

Functional Foods in Health and Disease

ISSN:

2160-3855

GICID:

n/d

DOI:

10.31989/ffhd.v5i12.220

Website:

<http://www.ffhdj.com> (<http://www.ffhdj.com>)

Publisher:

Food Science Publisher

Country:

US

Language of publication:

EN

Deposited publications: 248 > Full text: 100% | Abstract: 100% | Keywords: 94% | References: 0%

[Issues and contents](#)

[Journal description \(\)](#)

[Details \(\)](#)

[Scientific profile \(\)](#)

[Editorial office \(\)](#)

[Publisher \(\)](#)

[Metrics \(\)](#)

Got it!

The Functional Foods in Health and Disease (FFHD) journal is a peer-reviewed open access journal. Our journal discusses various aspects of functional foods, bioactive compounds, and chronic diseases. The FFHD journal develops research to better understand the mechanisms of disease and support the development of functional foods. At the FFHD journal, we believe the development of functional foods is essential to prevention and management of numerous diseases and health conditions. Through our journal's research, we keep the readers of the Functional Food Center newsletter, Academic Society for Functional Foods and Bioactive Compounds (ASFFBC), and public up to date with the latest advancements in functional foods, particularly their role in the prevention and management of chronic diseases. The readership of the Functional Food Center newsletter consists of more than 800,000 readers in various professions, including scientists, medical doctors, dietitians, and nutritionists.

Non-indexed in the ICI Journals Master List 2019

Evaluation pending

Archival ratings [▶](#)

Citations

Reports 2010-2019

7 - Number of journal citations

Included auto-citations - 0

MSHE points 2019: 20 pkt

Find similar [▶](#)

Main page (<http://jml.indexcopernicus.com>)

© 2019: 20 pkt - health sciences, medical sciences, pharmacology and pharmacy, veterinary science, nutrition and food technology



Functional Foods In Health And Disease

The Functional Foods in Health and Disease (FFHD) is a peer-reviewed, open-access international journal which serves as the journal of the Academic Society for Functional Foods and Bioactive Compounds (ASFFBC). The journal's overall focus is on Functional Food Science, which is a new and unique area of health and nutrition. Although currently a small scientific field, Functional Food Science is quickly expanding as studies show that functional food products can help manage chronic disease and promote overall wellness. This is reflected in our journal's rapidly growing citation score.

The articles we publish include cutting-edge biomedical research and development of functional foods. The goal is to provide research that can lead to the development of functional food products. The actual definition for these functional foods, as provided by the Functional Food Center (FFC) is as follows: "Natural or processed foods that contain biologically-active compounds; which, in defined, effective non-toxic amounts, provide a clinically proven and documented health benefit utilizing specific biomarkers, for the prevention, management, or treatment of chronic disease or its symptoms."

The journal also serves as an excellent resource for: PhD students, professors, public health professionals, medical doctors, dieticians, nutritionists, government representatives (FDA, NIH, USDA) and the general public for information regarding the latest advancements for the prevention, treatment, and management of chronic diseases or its symptoms using functional foods.

The FFHD journal has been published under the title Functional Foods in Health and Disease since February, 2011. You can submit your manuscripts here (<http://ffhdj.com/index.php/ffhd/about/submissions>) or directly to the Editorial Office at editor@ffhdj.com as an e-mail attachment.

Journal Citation and Indexing

The FFHD journal has been indexed in the Web of Science since 2011 and in the Emerging Sources Citation Index (ESCI) since 2015. The ESCI was a new database in the Web of Science that was launched in 2015 by Thomson Reuters. The ESCI aimed to expand the Web of Science publications by including excellent quality, peer-reviewed journals. Around 3,000 journals were selected for the launch, including the FFHD. Since then, a separate organization called Clarivate Analytics has produced the index starting in 2017.

The FFHD's citation score has more than doubled over the past two years. As of August 2019 our average citations per item is 2.76. This number is calculated by the sum of the times cited count divided by the number of results in the set. Our h-index is 12, which means there are h papers that have each been cited at least h times.

In addition, the FFHD's self-citation percentage is 5.11%. The self-citation percentage reflects the number of times an article published in a journal has cited a previously published article in the same journal.

The FFHD journal is also indexed in Index Copernicus International (ICI). The ICI has indexed over 6,000 journals. Our current value in ICI for 2017 is 78.41. The value is based on a multidimensional parametric assessment, with over 100 assessment criteria.

In addition, we are also cited the following databases: Chemical Abstract, EBSCO, and Google Scholar.

Vol 10, No 3 (2020): March 2020

Table of Contents

Research Articles

🏠 [Publisher Home \(https://www.ffhdj.com/index.php/index/index/index\)](https://www.ffhdj.com/index.php/index/index/index) |

👤 [Login \(https://www.ffhdj.com/index.php/ffhd/login\)](https://www.ffhdj.com/index.php/ffhd/login) |

🔑 [Register \(https://www.ffhdj.com/index.php/ffhd/user/register\)](https://www.ffhdj.com/index.php/ffhd/user/register)

[Home \(https://www.ffhdj.com/index.php/ffhd/index\)](https://www.ffhdj.com/index.php/ffhd/index) /

[About the Journal \(https://www.ffhdj.com/index.php/ffhd/about\)](https://www.ffhdj.com/index.php/ffhd/about) /

[Editorial Team \(https://www.ffhdj.com/index.php/ffhd/about/editorialTeam\)](https://www.ffhdj.com/index.php/ffhd/about/editorialTeam)

Editorial Team

Editors-in-Chief

- Yasuhito Shirai, PhD, Professor, Graduate School of Agricultural Science, Department of Agrobioscience, Kobe University, Kobe, Japan
- Mona Boaz, PhD, Professor, Chair, Department of Nutrition Sciences Ariel University, Ariel, Israel
- Danik Martirosyan, PhD, Functional Food Institute, Dallas, San Diego, United States

Editorial Board

- Hua-Feng Zhang, PhD, Associate professor, College of Food Engineering and Nutritional Science, Director of International Joint Research Center of Shaanxi Province for Food and Health Sciences, Shaanxi Normal University, Xi'an City, Shaanxi Province, P.R. China
- Barbara Shukitt-Hale, PhD, Research Psychologist, Neuroscience and Aging Lab, USDA, Tufts University, Boston, MA, United States
- Jun Nishihira, MD, PhD, Health Information Science Center, Hokkaido Information University, Ebetsu, Hokkaido, Japan
- Naresh Singh Redhu, PhD, Boston Children's Hospital, Harvard Medical School, Boston, MA, USA, Boston, MA, United States
- Debasis Bagchi, PhD, Professor, Department of Pharmacological and Pharmaceutical Sciences, University of Houston College of Pharmacy, Houston, TX, United States
- Baojun Xu, PhD, Professor, Beijing Normal University-Hong Kong Baptist University United International College, China

Field Editors

- Jin-Rong Zhou, PhD, Associate Professor, Harvard Medical School, Director, Nutrition and Metabolism Laboratory, Boston, MA, United States

🏠 [Publisher Home \(https://www.ffhdj.com/index.php/index/index/index\)](https://www.ffhdj.com/index.php/index/index/index)

👤 [Login \(https://www.ffhdj.com/index.php/ffhd/login\)](https://www.ffhdj.com/index.php/ffhd/login)

🔑 [Register \(https://www.ffhdj.com/index.php/ffhd/user/register\)](https://www.ffhdj.com/index.php/ffhd/user/register)

[Home \(https://www.ffhdj.com/index.php/ffhd/index\)](https://www.ffhdj.com/index.php/ffhd/index) / [Archives \(https://www.ffhdj.com/index.php/ffhd/issue/archive\)](https://www.ffhdj.com/index.php/ffhd/issue/archive) / [Vol 4, No 8 \(2014\) \(https://www.ffhdj.com/index.php/ffhd/issue/view/48\)](https://www.ffhdj.com/index.php/ffhd/issue/view/48)

Vol 4, No 8 (2014)

August 2014

Table of Contents

Research Articles

- | | |
|---|---|
| Effects of Clear Kefir on Biomolecular Aspects of Glycemic Status of Type 2 Diabetes Mellitus (T2DM) Patients in Bandung, West Java [Study on Human Blood Glucose, c Peptide and Insulin] (https://www.ffhdj.com/index.php/ffhd/article/view/145) | [Abstract]
(https://www.ffhdj.cc
[Full Article]
(https://www.ffhdj.cc
340-348 |
| J Judiono, Suharyo Hadisaputro, K S Indranila, Bambang Cahyono, Meiny Suzery, Yuliati Widiastuti, Asep Iwan Purnawan
Evidence-based modeling of mode-of-action for functional ingredients influencing Alzheimer's disease through neurotrophin pathway (https://www.ffhdj.com/index.php/ffhd/article/view/147) | [Abstract]
(https://www.ffhdj.cc
[Full Article]
(https://www.ffhdj.cc
362-369 |
| Erfan Younesi
Characterization and specificity of probiotics to prevent salmonella infection in mice (https://www.ffhdj.com/index.php/ffhd/article/view/148) | [Abstract]
(https://www.ffhdj.cc
[Full Article]
(https://www.ffhdj.cc
370-380 |
| Ana Andino, Nan Zhang, Sandra Diaz-Sanchez, Carrie Yard, Sean Pendleton, Irene Hanning | [Abstract]
(https://www.ffhdj.cc
[Full Article]
(https://www.ffhdj.cc
379-380 |

Review Articles

- | | |
|--|---|
| Gluten-free and casein-free diets in the treatment of autism (https://www.ffhdj.com/index.php/ffhd/article/view/146) | [Abstract]
(https://www.ffhdj.cc
[Full Article]
(https://www.ffhdj.cc
349-361 |
| Andreas Reissmann, Joachim Hauser, Ewelina Makulska-Gertruda, Loredana Tomsa, Klaus W. Lange | |

Related Publications

Effects of Clear Kefir on Biomolecular Aspects of Glycemic Status of Type 2 Diabetes Mellitus (T2DM) Patients in Bandung, West Java [Study on Human Blood Glucose, c Peptide and Insulin]

Judiono J^{1*}, Suharyo Hadisaputro², Indranila KS³, Bambang Cahyono⁴, Meiny Suzery,⁴ Yuliati Widiastuti⁵, Asep Iwan Purnawan⁶

¹Head of Nutrition Department, The Bandung Health Polytechnic, MOH R.I, Indonesia; ²Graduate School of Diponegoro University Semarang, Indonesia; ³The Clinical Pathology Specialist Division at Medicine Faculty of University Semarang, Indonesia; ⁴Science and Math Faculty University Semarang, Indonesia; ⁵Chief of Clinical Dietitian The Bandung Saint Borromeus Hospital, Indonesia; ⁶Nutrition Biomolecular Division, The Bandung Health Polytechnic, MOH R.I, Indonesia

***Corresponding author:** Judiono J., PhD, The Bandung Health Polytechnic, MOH R.I, Indonesia, Jl. Padjajaran No. 56 Bandung, West Java, 40173, Indonesia

Submission date: January 10, 2014; Acceptance date: July 29, 2014; Publication date: August 5, 2014

ABSTRACT

Background: Diabetes Mellitus (DM) triggers an excessive reaction of free-radicals. It increases reactive oxygen species and reduces antioxidants status as well as the β cell damage. Clear kefir was used for DM therapies, however it limited biomolecular exploration of its bioactive roles. Research aimed to investigate the effects of clear kefir on the biomolecular nature of the glycemic status of T2DM in Bandung.

Methods: The randomized pretest-posttest control group was conducted by 106 T2DM patients. Research was done in several hospitals in Bandung and Cimahi, West Java from 2012–2013. Samples were divided randomly into three groups: (1) T2DM with $HbA_{1c} < 7$ was fed a standard diet, supplemented with 200 ml/day of clear kefir, (2) T2DM with $HbA_{1c} > 7$ fed standard diet and supplemented 200 ml/day by clear kefir, (3) T2DM with HbA_{1c} was fed a standard diet as a control group. Dose response was obtained from a preeliminary vivo study, and then converted to human dosage by year 2011. Intervention was effectively done for 30 days. HbA_{1c} was measured by HPLC. Fasting blood glucose (FBG) and Postprandial blood glucose levels (PBG) were measured by enzymes levels. C Peptide and insulin were measured by Elisa. Data was analyzed by a statistics programme by significance $p < 0,05$. Study was approved by ethic committee.

Characterization and specificity of probiotics to prevent *salmonella* infection in mice

Ana Andino^{1**}, Nan Zhang^{1**}, Sandra Diaz-Sanchez¹, Carrie Yard¹, Sean Pendleton¹, and Irene Hanning^{*1,2}

¹University of Tennessee, Department of Food Science and Technology, Knoxville TN, 37996, USA; ²University of Tennessee, Department of Genome Sciences and Technology, Knoxville TN, 37996, USA

***Corresponding author:** Irene Hanning, Ph.D, Assistant Professor University of Tennessee, Department of Food Science and Technology, 2605 River Dr., Knoxville TN, 37996

*These authors contributed equally to the described work

Submission date: June 26, 2014; Acceptance date: August 28, 2014; Publication date: August 31, 2014

ABSTRACT

Background: Probiotic strains of bacteria can prevent *Salmonella* from causing disease by preventing the pathogen from colonizing the intestines. Two strains of probiotics, *Lactobacillus acidophilus* and *Pediococcus spp*, that were obtained from poultry fecal samples have been shown to be efficacious in poultry. The objective of this study was to determine if these strains of probiotics could prevent salmonellosis in a mouse model.

Methods: First, both strains of probiotics were evaluated for *in vitro* efficacy to inhibit the growth of and interfere with virulence gene regulation in *Salmonella enterica*. For *in vivo* efficacy, mice was used which models Typhoid illness. Mice were divided into 2 groups: Control and treatment, *Lactobacillus* and *Pediococcus* (LP; 10⁸ Log CFU). Two experiments were conducted. In the first experiment, the mice were treated with LP in water for the first two days of the experiment and challenged with *Salmonella* at day three. In the second experiment, the LP treatment was given in the water for 10 days and challenge was performed on day 11. In both experiments, at day 20 post-challenge, all mice were sacrificed, intestinal tracts and organs removed and cultured for *Salmonella*.

Results: The probiotic strains inhibited the growth of *Salmonella* and down-regulation of virulence genes was noted, but dependent on the strain of *Salmonella* being evaluated. For the *in vivo* experiment, the probiotics did not afford the mice protection from infection and increasing the length of time the probiotics were administered did not improve the efficacy of the probiotics.

Evidence-based modeling of mode-of-action for functional ingredients influencing Alzheimer's disease through neurotrophin pathway

Erfan Younesi

Department of Bioinformatics, Fraunhofer Institute for Algorithms and Scientific Computing, Schloss Birlinghoven, Sankt Augustin, 53754, Germany

Corresponding author: Erfan Younesi, Department of Bioinformatics, Fraunhofer Institute for Algorithms and Scientific Computing, Schloss Birlinghoven, Sankt Augustin, 53754, Germany

Submission date: May 1, 2014; Acceptance date: August 15, 2014; Publication date: August 23, 2014

ABSTRACT

Background: Brain-derived neurotrophic factor (BDNF) is the most widely expressed member of the neurotrophin family in the human brain and is crucially involved in the development of neural circuits, modulation of synaptic plasticity, and regulation of cognitive functions, including learning and memory. Many studies have shown the association of altered BDNF levels with neurodegenerative and neuropsychiatric disorders. However, BDNF is not able to cross the blood-brain barrier and, thus, its delivery to the nervous system is a challenge. Therefore, functional diets with the ability to induce production of BDNF in the brain may offer an alternative route. The objective of this study was three-fold: first, to find out diets that are causally linked to the agonistic activity of BDNF in the neurotrophin signaling pathway; second and mainly, to investigate mode-of-action of these functional diets through systems-based mechanistic modeling in the context of Alzheimer's disease; and third, to demonstrate the proof-of-concept application of systems biology methods, that are well established in the pharmaceutical sector, to the emerging field of functional food.

Methods: In the first step, two cause-and-effect models of BDNF signaling in two states, i.e. normal state and Alzheimer's disease state, were constructed using published knowledge in scientific literature and pathway databases. A "differential model analysis" between the two states was performed by which mechanistic mode-of-action of BDNF in neurotrophin signaling pathway could be explained with a high molecular resolution in both normal and disease states. The BDNF mode-of-action model was further validated using the "biomarker-guided validation" approach. In the second step, scientific evidence on the effect of various functional diets on BDNF levels and BDNF-related biological processes or outcomes was harvested from biomedical literature using a disease-specific semantic search. This information was then added to the mechanistic model of BDNF mode-of-action and used to substantiate the mode-of-action model.

Results: The differential model analysis resulted in a mechanistic mode-of-action model for