

# Accepted Manuscript

Effects of dietary biotin supplementation on glucagon production, secretion, and action

Maria-Luisa Lazo de la Vega-Monroy, Ph.D., Elena Larrieta, Ph.D., Wilma Tixi-Verdugo, M.Sc., Rafael Ramírez Mondragón, B.Sc., Ileana Hernández-Araiza, M.Sc., Michael S. German, M.D., Cristina Fernandez-Mejia, P h.D.

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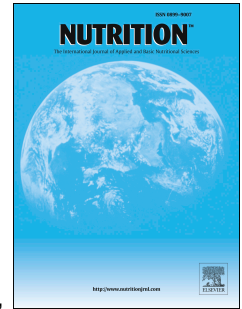
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1 **Effects of dietary biotin supplementation on glucagon production, secretion, and**  
2 **action**

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4 **Running title.** Biotin supplementation effects on glucagon

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6 Maria-Luisa Lazo de la Vega-Monroy, Ph.D.<sup>1,2</sup>, Elena Larrieta Ph.D.<sup>1-3</sup>, Wilma Tixi-  
7 Verdugo, M.Sc.<sup>1</sup>, Rafael Ramírez Mondragón B.Sc.<sup>1</sup>, Ileana Hernández-Araiza M.Sc.<sup>1</sup>,  
8 Michael S. German M.D.<sup>4</sup>, Cristina Fernandez-Mejia P h.D.<sup>1\*</sup>

9  
10 <sup>1</sup> Unidad de Genética de la Nutrición, Instituto de Investigaciones Biomédicas, Universidad  
11 Nacional Autónoma de México/ Instituto Nacional de Pediatría.

12 <sup>2</sup> Departamento de Ciencias Médicas, División de Ciencias de la Salud, Universidad de  
13 Guanajuato Campus León.

14 <sup>3</sup> Departamento de Gastroenterología. Instituto de Ciencias Médicas y Nutrición Salvador  
15 Zubirán.

16 <sup>4</sup> Diabetes Center/Center of Regeneration Medicine and Stem Cell Research, University of  
17 California San Francisco, USA.

18  
19 **Role of authors:** Maria-Luisa Lazo de la Vega-Monroy, Cristina Fernandez-Mejia and  
20 Elena Larrieta conceived and designed the study; Maria-Luisa Lazo de la Vega-Monroy,  
21 Elena Larrieta, Wilma Tixi-Verdugo, Rafael Ramírez Mondragón generated, collected and  
22 assembled the data; Maria-Luisa Lazo de la Vega-Monroy, Elena Larrieta, Cristina  
23 Fernandez-Mejia and Michael S. German analyzed and interpreted the data, drafted and  
24 critically revised the article.

25  
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27 carboxykinase; glucagon tolerance test, glycogen.

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31 \*Corresponding author and address for reprint requests: **Cristina Fernandez-Mejia.** Av.  
32 del Iman #1, 4<sup>th</sup> floor, Mexico City, CP 04530 Mexico.

33 email: [crisfern@biomedicas.unam.mx](mailto:crisfern@biomedicas.unam.mx) Tel. (5255) 5606 35 58,

34 **FAX** (5255) 5606 34 89

35  
36 **Abbreviations**

37 AMPK: AMP-activated protein kinase; AUC: Area under the curve; Cacna1d:\_Calcium  
38 Voltage-Gated Channel Subunit Alpha1 D; Foxa2: Forkhead box A2; Gcg: Glucagon; Gck:  
39 Glucokinase; Hnf4 $\alpha$ : Hepatocyte nuclear factor 4 $\alpha$ ; Pck1: Phosphoenolpyruvate  
40 carboxykinase; PDX-1: Pancreatic and duodenal homeobox 1.

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