



CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date 12/12/2021

First name	Esther		
Family name	Nova		
Gender (*)	Female	Birth date (dd/mm/yyyy)	20/02/1969
Social Security, Passport, ID number	ID: 07525873C		
e-mail	enova@ictan.csic.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-1995-2955		

(*) Mandatory

A.1. Current position

Position	Scientist		
Initial date	19/07/2008		
Institution	Consejo Superior de Investigaciones Científicas (CSIC)		
Department/Center	Institute of Food Science and Technology and Nutrition	ICTAN	
Country	Spain	Teleph. number	915492300
Key words	Human nutrition, immunological biomarkers, microbiota, functional foods and ingredients, cardiometabolic risk biomarkers.		

A.2. Previous positions (research activity interruptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
01/09/2001 - 31/12/ 2002	Postdoctoral Researcher/School of Food Biosciences, The University of Reading/United Kingdom
01/02/2003 – 31/01/2006	Investigador contratado I3P Doctor/Instituto del Frío, CSIC

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
BSc in Biology	Complutense University of Madrid	1992
BSc in Biochemistry	Complutense University of Madrid	1997
MSc in Human Nutrition	King Juan Carlos University (Madrid)	2001
PhD in Biology	Complutense University of Madrid	1999

Part B. CV SUMMARY (max. 5000 characters, including spaces)

Dr. Nova holds a Scientist position in the Institute of Food Science, Technology and Nutrition (ICTAN)-CSIC since 2008. PhD in Biology (Complutense University of Madrid, UCM, 1999), BSc. in Biochemistry (UCM, 1997) and MSc. in Human Nutrition (King Juan Carlos University, 1999). Postdoctoral Fellow at the University of Reading for 2 years (2001-2002). I am a member of the Immunonutrition group at CSIC with two main research lines: 1) Bioactivity and health effects of functional foods and food ingredients, and 2) Nutritional status of populations and risk factors in diseases related to nutrition. I have conducted nutritional studies using *in vitro* and *in vivo* techniques, especially through human studies and the use of immuno-inflammatory markers and up-to-date analytical techniques. One main topic in the last ten years has been the assessment of the immunomodulatory properties of probiotics, with 6 projects/contracts and one PhD Thesis directed (2019), which resulted in 3



Q1 JCR papers as corresponding author (c.a.). While carrying out these projects I have introduced in the group cell culture techniques such as trans-well co-culture of PBMCs and Caco-2 cells with probiotic bacteria, the measurement of inflammatory biomarkers in fecal samples and assessment of intestinal health with validated questionnaires of bowel habits and symptoms. Another relevant topic was the study of plant based products rich in antioxidants, fiber or bioactive compounds. Within this line I have been Principal Investigator (PI) of two projects of competitive calls from the Spanish Ministry of Science and Innovation; both are randomized, double-blind, placebo-controlled clinical trials, to assess high-antioxidant apple juice and the *Moringa oleifera* (MO) plant, respectively. The NUTRIMOL-DB study (AGL2017), recently finished, on the effects of MO to improve glycemic control in prediabetic patients, is the basis for the present proposal. I have published 3 Q1 papers as c.a. from these two projects, so far, and two more are compromised for next months. While developing this projects I have open collaborations with hospital specialists and Primary Care practitioners, all incorporated in our research team, which support the translational capacity of this team. In 2019, I was tutor of Ivan Vicente's final-year Project entitled "Evaluation of the hypoglycemic activity of a food supplement of *Moringa oleifera* leaf in subjects with prediabetes", derived from the AGL2017 project. Efforts were made pursuing the PhD Thesis possibility for this candidate; he held an Intro-ICUs contract during eight months but he finally refused to commit for a PhD Thesis, unfortunately. The study of the Nutritional status in populations at risk was also approached in several projects. The study of risk factors influencing immune system development in infants at risk of celiac disease resulted in one PhD Thesis (2013) and 3 papers (2 Q1 and c.a.). The onset of adaptive mechanisms in Anorexia nervosa patients leading to preserved cellular immunity were also pointed out in another PhD Thesis (2021) and in 2 recent papers (both, c.a.). I have consolidated in the group the integral approach of psychoneuroimmunology, accompanied by the use of immunoassay panels for multiple analytes. Further research interests involve the associations between fermented alcoholic drinks and cardiometabolic markers and gut microbiota composition, approached in the observational study ALMICROBHOL that I have coordinated (funded by the European Foundation ERAB as a collaborative study with the University of Primorska), and three research grants from other national foundations (obtained as PI from CICS and FICYE) and that resulted in 2 Q1 and 2 Q2 original articles (c.a. in 3 of them). In the last years I have introduced the team to the study of the gut microbiota in feces samples by qPCR and 16S RNA gene amplicon sequencing plus bioinformatics analyses. Overall, I have published 81 research papers with JCR impact (44% as first, last or corresponding author) and 60 book chapters on nutrition and immunity. I have been PI of 2 competitive projects of the R+D+I Plan, 4 research grants from Foundations and 2 research contracts with private entities. I have participated in 21 competitive projects and in 28 contracts with the industry. I have given 26 invited speaker presentations in scientific congresses and more than 155 oral or poster participations. I am member of 5 scientific societies. I perform frequent academic activities as invited lecturer in Masters University programs and as evaluator and referee in scientific committees and scientific journals. I have supervised four PhD Thesis. I am regular tutor of Final Project students at University BSc. and Master's degrees, as well as supervisor of students performing graduate and postgraduate training programs within our group (Erasmus+, JAEIntro, FPI fellowships, etc).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. Gómez-Martínez S, Díaz-Prieto LE, Vicente Castro I, ...Nova E (CA). (11/11) 2021. *Moringa oleifera* leaf supplementation as a glycemic control strategy in prediabetic subjects. A double-blind, randomized, placebo-controlled clinical trial. *Nutrients*, under review.
2. González-Zancada N, Redondo-Useros N, Díaz LE, Gómez-Martínez S, Marcos A, Nova E (CA). Association of Moderate Beer Consumption with the Gut Microbiota and SCFA of Healthy Adults. *Molecules*. 2020 Oct 17;25(20):E4772.
3. Nova, E. (CA), Redondo-Useros, N., Martínez-García, R. M., Gómez-Martínez, S., Díaz-Prieto, L. E., & Marcos, A. Potential of *Moringa oleifera* to Improve Glucose Control for the



- Prevention of Diabetes and Related Metabolic Alterations: A Systematic Review of Animal and Human Studies. *Nutrients*, 2020; 12(7), 2050.
4. Bezek, K., Petelin, A., Pražnikar, J., Nova, E., Redondo, N., Marcos, A., & Jenko Pražnikar, Z*. Obesity Measures and Dietary Parameters as Predictors of Gut Microbiota Phyla in Healthy Individuals. *Nutrients*. 2019; 12(9), 2695.
 5. Redondo-Useros, N., Gheorghe, A., Díaz-Prieto, L. E., Villavisencio, B., Marcos, A., & Nova, E (CA). (2019). Associations of Probiotic Fermented Milk (PFM) and Yogurt Consumption with *Bifidobacterium* and *Lactobacillus* Components of the Gut Microbiota in Healthy Adults. *Nutrients*. 2019 Mar 18;11(3):651.
 6. Nova E (CA), I. San Mauro, L. E. Díaz-Prieto, A. Marcos. (2019). Wine and beer within a moderate alcohol intake is associated with higher levels of HDL-c and adiponectin. *Nutrition Research* 63:42-50
 7. Redondo N, García-Gonzalez N, Díaz LE, Olmedilla-Alonso B, Martín-Diana AB, Asensio-Vegas C, Nova E(CA). Effect of ewe's (semi-skimmed and whole) and cow's milk-yogurt consumption on inflammation markers and gut microbiota of subjects with borderline-high cholesterol levels. A crossover study. *Eur J Nutr*. 2019 Apr;58(3):1113-1124
 8. Nova E (CA), Pérez de Heredia F, Gómez-Martínez S, Marcos A. (2016) The Role of Probiotics on the Microbiota: Effect on Obesity. *Nutr Clin Pract*. 31(3):387-400.
 9. Soriano-Maldonado A, Hidalgo M, Arteaga P, de Pascual-Teresa S, Nova E (CA). Effects of regular consumption of vitamin C-rich or polyphenol-rich apple juice on cardiometabolic markers in healthy adults: a randomized crossover trial. *Eur J Nutr*. 2014;53(8):1645-57.
 10. Pozo-Rubio T, Mujico JR, Marcos A, Puertollano E, Nadal I, Sanz Y, Nova E (CA). Immunostimulatory effect of faecal *Bifidobacterium* species of breast-fed and formula-fed infants in a peripheral blood mononuclear cell/Caco-2 co-culture system. *Br J Nutr*. 2011 Oct;106(8):1216-23.

C.2. Congress

1. TITULO: Moringa oleífera, control glucémico y microbiota. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Conferencia invitada en Mesa Redonda: Microbiota intestinal como mediadora de patologías. CONGRESO: XXX Reunión Científica de la Sociedad Española de la Nutrición. Salud Nutricional en el Siglo XXI. Virtual. 1 y 2 de Diciembre de 2021.
2. TITULO: El consumo moderado de cerveza se asocia con características de la microbiota intestinal en adultos sanos. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Conferencia invitada en Taller: Dieta mediterránea, bebidas fermentadas, salud y microbiota. Últimas evidencias. CONGRESO: 43º Congreso Nacional SEMERGEN. Zaragoza. 29/09/2021-02/10/2021
3. TITULO: Biomarkers of immunity: Moringa oleifera food supplement in a dietary intervention for the control of hyperglycemia and inflammation. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Speaker in the Session 4: OMICS for immunonutrition studies. CONGRESO: XII ISIN Conference on Immunonutrition, Pre- Conference Course. Virtual. 12-13 July 2021
4. TÍTULO: Effect of Moringa oleifera as a dietary supplement on the control of prediabetic subjects' glycaemia. AUTORES/AS: Iván Vicente, Sonia Gómez-Martínez, Lúgía E. Díaz-Prieto, César Jurado, Nerea Iturmendi, Mercedes Ceinos, María C. Martín-Ridaura, María J. Picón, Ascensión Marcos, Esther Nova. TIPO DE PARTICIPACIÓN: Oral. CONGRESO: Conferencia FINUT 2020 PUBLICACIÓN: *Ann Nutr Metab* 2020;76(suppl 4):73. Virtual. 11-13 Octubre 2020
5. TÍTULO: Effect of different doses of Moringa oleifera in postprandial glucose. Influence of participants' glucose control status. AUTORES/AS: Ligia E. Díaz-Prieto, Sonia Gómez-Martínez, María Dueñas, Iván Vicente- Castro, María José Picón, Ascensión Marcos, Esther Nova. TIPO DE PARTICIPACIÓN: Poster. CONGRESO: 13th European Nutrition Conference - FENS 2019. PUBLICACIÓN: *Proceedings of the Nutrition Society* , Volume 79 , Issue OCE2, 2020 , E544. Dublin, Irlanda. 15-18 Octubre 2019
6. TITULO: Impact of anorexia nervosa on immunological biomarkers. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Ponencia invitada en la mesa redonda "Nutrition and immune system related pathologies". CONGRESO: 10th Anniversary- International Society for Immunonutrition Symposium. Madrid. 17-19 Julio 2017.



7. TITULO: Relationship of alcohol consumption and other lifestyle habits with the microbiota composition in healthy adults. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Ponencia invitada. CONGRESO: Joint ERAB/EBC Meeting. Meeting between biomedical and brewing scientists. Ljubljana, Eslovenia. 14 Mayo 2017.

8. TITULO: Adipoquinas y otros marcadores relacionados con el sistema inmune en TCA. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Ponencia invitada en la mesa redonda "Biomarcadores y su evolución en el TCA". CONGRESO: XII Congreso Hispanolatino de Trastornos de la Conducta Alimentaria y Obesidad. Barcelona. 9-11 Noviembre 2016.

9. TITULO: "Resultados del estudio inmunológico en niños de riesgo (PROFICEL)". Sesión 5: Prevención y Terapia. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Ponente. CONGRESO: III congreso Nacional de la Sociedad Española de Enfermedad Celiaca. Oviedo. 29 de Noviembre-1 de Diciembre de 2012.

10. TITULO: Yogurt in the nutritional therapy of anorexia nervosa and malnourished children. AUTOR: Esther Nova. TIPO DE PARTICIPACIÓN: Ponencia en mesa redonda: "How do the microbiota and pro/prebiotics influence nutritional status?". CONGRESO: 10th Meeting of the International Scientific Association for Probiotics and Prebiotics. Cork, Irlanda. 1-3 Octubre de 2012.

C.3. Research projects

- AGL2017-86044-C2-1-R. Effects of Moringa oleifera leaves on glycemia, lipemia and inflammatory profile. Nutritional intervention study in prediabetic patients. Spanish I+D+I Program oriented to Societal Challenges. MINECO. Principal investigator: Esther Nova. Duration: January 2018 until December 2020. Funds: 84.700€. Participant's role: IP
- EA 14. 44. Effects of Alcohol Consumption on Gut Microbiota Composition in Adults (ALMICROBHOL) (European Foundation for Alcohol Research). 80.000 €. 31/01/2015 UNTIL: 30/01/2017. IP: Ascensión Marcos. Participación: Co-IP
- RTA2012-00113-C02-02. Ewe artisan yogurt: technological aspects, nutritional and sensory properties. Effects of ewe yogurt vs. cow yogurt on lipid and immunological profile of healthy subjects. Resarch I+D Project oriented to Agricultural technologies. MINECO. 2012 UNTIL: 2015. PI: Coordinated project: Carmen Asensio Vega. PI subproject: Begoña Olmedilla Alonso. 58.792€. Research team member.

C.4. Contracts, technological or transfer merits.

- Evaluation of the effect of alkaline water consumption on the inflammatory status and the intestinal microbiome in subjects with Crohn's disease (ALK-Crohn). Funding: Alkanatur. PI: María Monsalve. Duration: 2021- 2022 (31369 €). Research. team member
- Evaluation of the effect of the consumption of alkaline water on the intestinal flora and the inflammatory state (STOMAC-ALK). Nº REF: 050501190108. Funding: Alkanatur. PI: María Monsalve. Duration: 2020- 2021 (10.000 €). Research team member.
- Relationship between moderate beer consumption, intestinal microbiota, and short chain fatty acid production in healthy adults. FUNDING ENTITY: Asociación Cerveceros de España. (Spanish beerwe's association) PI: Esther Nova. DURATION: March-2019 UNTIL: February-2020. FUNDING: 21.000€.
- Effect of oral administration of iron protein-succinylate, iron sulfate and a gastro-resistant iron formula on iron deficiency and the intestinal microbiota in experimental animals. FUNDING ENTITY: ITF Research Pharma, S.L.U. PI: Ascensión Marcos. DURATION: Febrero-2018 UNTIL Julio-2019. SUBVENCIÓN: 39.349€. Research team member
- Effects of different arachidonic acid (ARA) formulations of infant formula on fatty acid status, immune markers, and infection rates in infants. FUNDING ENTITY: DSM nutritional products LLC. PI: Ascensión Marcos. DURATION: Mayo-2016 UNTIL: Mayo-2019. FUNDING: 369,385 €. Research team member
- Effects of ewe yogurt vs. cow yogurt on the intestinal microbiota of healthy adults. FUNDING ENTITY: Letur Artisan Cheeses S.A. PI: Esther Nova. DURATION: 01-04-2015 UNTIL 31-03-2016. FUNDING: 3.640 €.