

HISTORIAL CIENTÍFICO DEL GRUPO DE INVESTIGACIÓN FLAVORSEN (2018–2023)



1–Composición del equipo de investigación

El grupo FlavorSen del Instituto de investigación en Ciencias de la Alimentación (CIAL) es un grupo de reciente creación (año 2021), joven y muy dinámico, cuyas investigadoras presentan una gran experiencia (más de 20 años) en el campo de la química del aroma y sabor de los alimentos y en la investigación en la percepción químico–sensorial.

Está formado por dos investigadoras senior, la responsable de grupo Dra. María Ángeles del Pozo Bayón y la Dra. Carolina Muñoz–González, investigadora asociada. Además, en el grupo hay actualmente dos investigadoras predoctorales: Celia Criado y Paula Calvo, otro investigador contratado: Rafael Izaí Velázquez Martínez, y un técnico del programa Yo investigo de la CAM, Paula Martínez Oca.

La directoras del estudiante predoctoral serán las doctoras Maria Angeles del Pozo y Carolina Muñoz–González

2. Trabajos de investigación desarrollados.

La trayectoria investigadora del grupo y su experiencia en la temática viene abalada por los distintos proyectos conseguidos en los últimos 10 años. Así las investigadoras del grupo han liderado los proyectos de la AEI: AGL201678936R

“Diferencias interindividuales en la fisiología oral: impacto sobre la liberación del Aroma durante el consumo de vino y en la respuesta hedónica y emocional del Consumidor”(20162020).

Actualmente lideran los proyectos PID2019111734RBI00 (“Relación entre fenotipos sensoriales y preferencias del Consumidor: desde la percepción hasta los mecanismos químicos y bioquímicos implicados en el procesamiento oral· (20202023), este último en colaboración con investigadores del IMIDRA. También investigadores del grupo (Dra. MuñozGonzález), lideran el proyecto del Programa de Atracción de Talento de la CAM (2019T1 / BIO13748) (20202024) AROMABIOTA dedicado a estudiar la Relación entre la microbiota oral y el Índice de Masa Corporal de individuos, así como su implicación en la percepción de aroma retronasal y las preferencias alimentarias (aceptabilidad o liking) entre personas”. Hemos mantenido en los últimos años proyectos de investigación con

diferentes Universidades internacionales (Universidad de Quilmes, Argentina, o con el CSGAINRA, Dijon en Francia). Actualmente también mantenemos proyectos de investigación con diferentes Universidades Españolas (Alfonso X el Sabio), y con grupos de investigación internacionales a través de diferentes proyectos como con Universidad de Moquegua en Perú (Estudio “Evaluación de la aptitud de cepas de levadura autóctonas de la región de Moquegua para la producción de piscos de alta calidad aromática y sensorial”) y hemos participado recientemente en proyectos de la UE (EIT FoodFood Solutions) y en la acción COST22 (Flavoursome) que agrupa a numerosos grupos de investigación relacionados con la química del aroma y del sabor de alimentos a base de proteínas vegetales, en el que participan más de 20 países.

3. Proyectos de I+D (nacionales e internacionales).

Entidad financiadora: Programa ICOOP+2017 de cooperación internacional para el desarrollo –CSIC.

Referencia del proyecto: COOPB20346

Título: “Evaluación de la capacidad de hidrolisis de precursores glicosilados y de la producción d metabolitos odorantes en vinos inoculados con cepas enológicas patagónicas de bacterias lácticas”

Organismos participantes: CIAL& Universidad Nacional de Quilmes (Argentina)

Duración: 1 enero 2018–31 diciembre 2019

Cantidad financiada: 16550 €

Investigador principal: M. Ángeles Pozo Bayón

Entidad financiadora: MINECO, Plan Nacional, Proyectos de Investigación fundamental no orientada

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CIAL) (CSIC–UAM)

Investigador principal: M. Ángeles Pozo–Bayón

Título: “Diferencias interindividuales en la fisiología oral: impacto sobre la liberación del Aroma durante el consumo de vino y en la respuesta hedónica y emocional del Consumidor (WINEFISIOAROMA)”

Duración del proyecto: 20162019

(3 años) (30/12/201630/ 12/2019)

Cantidad financiada: 135.000 €

Entidad financiadora: CSIC. CVCSIC–AEPP–AYUDAS EXTRAORDINARIAS PREPARACION PROYECTOS 2019

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CIAL) (CSICUAM)

Investigador principal: M. Ángeles Pozo Bayón

Título: “Diferencias interindividuales en la fisiología oral: impacto sobre la liberación del Aroma durante el consumo de vino y en la respuesta hedónica y emocional del Consumidor (WINEFISIOAROMA)”

Duración: (01/01/202015/10/2020)

Cantidad financiada: 22.809,19 €

Entidad financiadora: MINECO, Plan Nacional, Proyectos de Investigación fundamental no orientada. Ref proyecto: PID2019–111734RB–I00

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CIAL) (CSICUAM)

Investigador principal: M. Ángeles Pozo Bayón

Título: “Relación entre fenotipos sensoriales y preferencias del Consumidor: desde la percepción hasta los mecanismos químicos y bioquímicos implicados en el procesamiento oral del vino”. Duración del proyecto: 20202023

(3 años) (01/06/2019– 31/12/2023)

Cantidad financiada: 155.000 €

Entidad financiadora: Comunidad de Madrid, Programa de Atracción de Talento Investigador. Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CIAL) (CSICUAM). Investigador principal: C. Muñoz–González.

Título: “Relación entre el índice de masa corporal y la microbiota oral y su impacto en el aroma y las preferencias alimentarias (2019T1/BIO13748)”. AROMABIOTA. Duración del proyecto: 2020–2024 (años) (01/09/202031/ 08/2024). Cantidad financiada: 170.546 €.

Entidad Financiadora: Universidad Alfonso X El Sabio

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CSICUAM)

Investigador principal: Carolina Muñoz González

Título: ““Estudio metagenómico aplicado en odontología para evaluar la influencia de la microbiota oral en tejidos duros y blandos. Estudio poblacional”.

Duración del Proyecto: 01/09/2022–31/06/2022

Dotación: 18000 €

Entidad financiadora: MICIN Plan Nacional, Proyectos de Investigación fundamental no orientada

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CIAL) (CSIC–UAM)

Investigador principal: M. Ángeles Pozo–Bayón y Carolina Muñoz González

Título: "Propiedades mucoadhesivas y de retención de aroma de polímeros enológicos para la mejora de la percepción del aroma durante el consumo de vino" (WINENHANCE)

Duración del proyecto: (01/10/2023–31/09/2026)

Cantidad financiada: 187.500 €

4. Publicaciones

Brizuela, N. S., Bravo–Ferrada, B. M., PozoBayón, M. Á., Semorile, L., & Tymczyszyn, E. E. (2018). Changes in the volatile profile of Pinot noir wines caused by Patagonian *Lactobacillus plantarum* and *Oenococcus oeni* strains. *Food Research International*, 106, 2228.

EstebanFernández, A., MuñozGonzález, C., JiménezGirón, A., PérezJiménez, M., & PozoBayón, M. Á. (2018). Aroma release in the oral cavity after wine intake is influenced by wine matrix composition. *Food Chemistry*, 243, 125– 133.

MuñozGonzález, C., Feron, G., Canon, F. (2018). The role of human saliva in flavour perception and its contribution to the nutritional status of individuals. *Proceedings of the Nutrition Society*, 77(4):42343.

MuñozGonzález, C., Feron, G., Brulé, M., Canon, F. (2018). Understanding the release and metabolism of aroma compounds using micro–volume saliva samples by ex vivo approaches. *Food Chemistry*, 240 (1).

Pérez-Jiménez, M., Rocha-Alcubilla, N., & Pozo-Bayón, M. Á. (2019). Effect of saliva esterase activity on ester solutions and possible consequences for the in-mouth ester release during wine intake. *Journal of texture studies*, 50(1), 6270

Pérez-Jiménez, M., Chaya, C., PozoBayón, M. A. (2019), Individual differences and effect of phenolic compounds in the immediate and prolonged in-mouth aroma release and retronasal aroma intensity during wine tasting. *Food Chemistry*, 285, 147155.

PérezJiménez, M.; PozoBayón M.A. (2019). Development of an in-mouth headspace sorptive extraction method (HSSE) for oral aroma monitoring and application to wines of different chemical composition. *Food Research International*, 121, 97–101.

Carolina Chaya, Celia Criado, Maria Angeles Pozo-Bayón, Andrea Echevarrias Marco, Amanda Dupas de Matos (2019). A new index for predicting differences in repeatability of Time-Intensity curves: Time-Intensity Reliability Index (TIRI). *Food Quality and Preference* 76 (2019): 3338

MuñozGonzález, C.; Canon F., Feron G., Guichard E., PozoBayón M.A. (2019). Assessment wine aroma persistence by using an in vivo PTR-ToF-MS approach and its relationship with salivary parameters. *Molecules*, 24, 7:1277

Criado, C., Chaya, C., FernándezRuíz, V., Álvarez, M. D., Herranz, B., & PozoBayón, M. Á. (2019). Effect of saliva composition and flow on inter-individual differences in the temporal perception of retronasal aroma during wine tasting. *Food Research International*, 126, 108677

Muñoz-González, C., Brulé, M., Feron, G., & Canon, F. (2019). Does interindividual variability of saliva affect the release and metabolization of aroma compounds ex vivo? The particular case of elderly suffering or not from hyposalivation. *Journal of texture studies*, 50(1), 36–44

MuñozGonzález, C., PérezJiménez, M., Criado, C., & PozoBayón, M. Á. (2019). Effects of Ethanol Concentration on Oral Aroma Release After Wine Consumption. *Molecules*, 24(18), 3253.

PérezJimenez, M.; EstébanFernández, A.; MuñozGonzález, C.; PozoBayón M.A.(2020). Interactions among odorants, phenolic compounds and oral components and their effects on wine aroma volatility. *Molecules* 2020, 25(7), 1701

MuñozGonzález, C., PérezJiménez, M., & PozoBayón, M. Á. (2020). Oral persistence of esters is affected by wine matrix composition. *Food Research International*, 109286.

María, PérezJiménez; Carolina, MuñozGonzález; PozoBayón M a r í a Angeles . (2020) Understanding human salivary esterase activity and its variation under wine consumption conditions. RSC Advances, 2020, vol. 10, no 41, p. 2435224361

“Criado, C.; MuñozGonzález, C., & PozoBayón, M. Á. (2021). Differences in salivary flow and composition between age groups are correlated to dynamic retronasal aroma perception during wine consumption. Food Quality and Preference, 87, 104046

Brizuela, N. S., Franco-Luesma, E., Bravo-Ferrada, B. M., Pérez-Jiménez, M., Semorile, L., Tymczyszyn, E. E., & Pozo-B a y o n M . A. (2021). Influence of Patagonian Lactiplantibacillus plantarum and Oenococcus oeni strains on sensory perception of Pinot Noir wine after malolactic fermentation. Australian Journal of Grape and Wine Research, 27(1), 118127

Herranz, B., Criado, C., PozoBayón, M. Á., & Álvarez, M. D. (2021). Effect of addition of human saliva on steady and viscoelastic rheological properties of some commercial dysphagia-oriented products. Food Hydrocolloids, 111, 106403

MuñozGonzález, C.; Criado, C.; PérezJiménez, M.; PozoBayón, MA (2021). Evaluation of the Effect of a Grape Seed Tannin Extract on Wine Ester Release and Perception Using In Vitro and In Vivo Instrumental and Sensory Approaches. Foods, 10, 93

Brizuela, N. S., Arnez-Arancibia, M., Semorile, L., PozoBayón, M. Á., Bravo-Ferrada, B. M., & Tymczyszyn, E. E. (2021). β -Glucosidase Activity of Lactiplantibacillus plantarum UNQLp 11 in Different Malolactic Fermentations Conditions: Effect of pH and Ethanol Content. Fermentation, 7(1), 22.

PérezJiménez, M., MuñozGonzález, C., & PozoBayón, M. A. (2021). Oral Release Behavior of Wine Aroma Compounds by Using In-Mouth Headspace Sorptive Extraction (HSSE) Method. Foods, 10(2), 415

PérezJiménez, M., Sherman, E., PozoBayón, M. A., & Pinu, F. R. (2021). Application of untargeted volatile profiling and data driven approaches in wine flavoromics research. Food Research International, 110392.

PérezJiménez María, MuñozGonzález Carolina, PozoBayón María Ángeles (2021). Specificity of Saliva Esterases by Wine Carboxylic Esters and Inhibition by Wine Phenolic Compounds Under Simulated Oral Conditions. *Frontiers in Nutrition*, 8, 849

Schwartz, M., Neiers, F., Charles, J. P., Heydel, J. M., Muñoz-González, C., Feron, G., & Canon, F. (2021). Oral enzymatic detoxification system: Insights obtained from proteome analysis to understand its potential impact on aroma metabolization. *Comprehensive Reviews in Food Science and Food Safety*. 2021;20:55165547

MuñozGonzález, C., Brule, M., Martin, C., Feron, G., & Canon, F. (2021). Influence of prebiotic fructans on retronasal aroma from elderly individuals. *Molecules*, 26(10), 2906

MuñozGonzález, C., Feron, G., & Canon, F. (2021). Physiological and oral parameters contribute prediction of retronasal aroma release in an elderly cohort. *Food Chemistry*, 342, 128355.

PérezJiménez María, MuñozGonzález Carolina, Chaya Carolina, FernándezRuiz, Virginia; Álvarez, María Dolores, Herranz Beatriz, Maria Ángeles PozoBayón. (2022) Insights on the effect of age and gender on in-mouth volatile release during wine tasting. *Food Research International*, 155, 111100

Criado, C., MuñozGonzález, C., HernándezLedesma, B; PozoBayón M.A. Temporal changes in salivary composition induced by the oral exposure to different wine matrices and relationship with the amount of aroma retained in the mouth. *Food & Function*, 2022, published on-line 14 Mar 2022. <https://doi.org/10.1039/D1FO03887G>

PérezJiménez, M., Sherman, E., PozoBayón, M. Á., MuñozGonzález, C., & Pinu, F. R. (2023). Application of untargeted volatile profiling to investigate the fate of aroma compounds during wine oral processing. *Food Chemistry*, 403, 134307

CuadradoSilva, C. T., MuñozGonzález, C., Giraldo, R., PozoBayón. Ángeles, M., & Osorio, C. (2022). Bioconversion of Glycosidic Precursors from Sour Guava (*Psidium friedrichsthalianum* Nied.) Fruit by the Oral Microbiota into Odor-Active Volatile Compounds. *Molecules*, 27(4), 1269

Criado, C., MuñozGonzález, C., Mora, M., FernándezRuiz, V., Chaya, C., & PozoBayón,

M. A. (2022). Understanding If Differences in Salivary Flow Rate and Total Protein Content Triggered by Biological Factors (Sex and Age) Affect Aroma Perception and the Hedonic and Emotional Response of Wine Consumers. *Foods*, 11(19), 3104

López-Dávalos, P. C., Requena, T., Pozo-Bayón, M. Á., & Muñoz-González, C. (2023). Decreased retronasal olfaction and taste perception in obesity are related to saliva biochemical and microbiota composition. *Food Research International*, 167, 112660. (FI:7,425, 13/338, Food Sci.Tech ,Q1)

Criado., C.; Muñoz-González, C.; Fernández-Ruíz, V.; Arroyo, T.; Cabellos, M.; Palacios A.; Pozo-Bayón M.A (2023). Sensory perception and consumer's hedonic response to wines eliciting different orosensory and olfactory stimuli depending on PROP phenotype. *Food Quality and preference* (submitted)

Velazquez, R.I., Criado, C., Muñoz-González, C., Pozo-Bayón, M.A. (2023) Evaluation of the long-lasting flavor perception after the consumption of wines treated with different types of oenological additives considering two types of individual taste-phenotypes. *Food research International*. *Foods*, 2023, vol. 12, no 15, p. 2835.

5. Propiedad industrial (patentes, modelos de utilidad...).

Patents: Authors: M.A. PozoBayón, I. AndújarOrtiz, J.A. Mendiola, E. Ibáñez, M.V. MorenoArribas

Title: "Procedure for the elimination of odorant compounds present in inactivated dry yeast preparations marketed as oenological additives through the use of supercritical CO2" Application No: P200930366. Country of priority: Spain. Priority date: 26-06-2009 Entity holder: CSIC

6. Colaboración con empresas y otras entidades.

Entidad financiadora: Selección Mediterránea Fine Foods D.L.

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CSICUAM)

Investigador principal: M. Ángeles del Pozo Bayón

Título: Evaluación del efecto de distintas técnicas de preparación de fondos culinarios en la intensidad del aroma y otros atributos sensoriales

Dotación del proyecto: 8000 euros

Duración del proyecto: 24/11/2017– 24/06/2018 (6 meses)

Entidad financiadora: Contrato de apoyo tecnológico REUTUPIÑA SOCIEDAD ANONIMA

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CSICUAM)

Investigador principal: M. Ángeles del Pozo Bayón

Título: Análisis de aminoácidos libres en mostos de cerveza con distintas dosis de proteasa en distintos puntos de elaboración del mosto Dotación: 500 €

Duración del proyecto: 01/04/2019–30/04/2019 (1 mes)

Entidad financiadora: Selección Mediterránea Fine Foods D.L.

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CSICUAM)

Investigador principal: M. Ángeles del Pozo Bayón

Título: Determinación del impacto de las condiciones de cocción en las aracterísticas Tecnofuncionales del grano de arroz

Dotación del proyecto: 5000 €

Duración del Proyecto: 16/07/2021–15/09/2021

Entidad Financiadora: Universidad Nacional de Moquegua (UNAM)

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CSIC–UAM)

Investigador principal: María Ángeles del Pozo Bayón

Título: “Evaluación de la aptitud de cepas de levadura autóctonas de la región de Moquegua para la producción de piscos de alta calidad aromática y sensorial”

Duración del Proyecto: 01/06/2022–31/11/2022

Dotación: 10000 €

Entidad Financiadora: Universidad Alfonso X El Sabio

Centro de ejecución: Inst. de Investigación en Ciencias de la Alimentación (CSICUAM)

Investigador principal: Carolina Muñoz González

Título: ““Estudio metagenómico aplicado en odontología para evaluar la influencia de la microbiota oral en tejidos duros y blandos. Estudio poblacional”.

Duración del Proyecto: 01/09/2022–31/06/2022

Dotación: 18000 €

7. Capacidad formativa del equipo de investigación.

El grupo aborda temáticas relacionadas con la química de las moléculas responsables de las características sensoriales de los alimentos, especialmente del aroma y el sabor, su impacto en la percepción sensorial y en las preferencias alimentarias. De especial interés y novedad, son los trabajos que desarrollamos relacionados con el impacto de la composición química de los alimentos, la fisiológica y bioquímica oral en el aroma retronasal durante el consumo de alimentos, y del vino en particular. En este sentido el grupo es un referente nacional e internacional y ha contribuido al desarrollo de esta línea de investigación con importantes aportaciones relacionadas con el impacto de la matriz vínica y la fisiología oral en la liberación y percepción del aroma del vino y en la aceptabilidad del vino por parte de los consumidores. En la actualidad un aspecto de interés en nuestra investigación está dirigido a evaluar en qué medida los diferentes fenotipos olfatorios influyen en las preferencias del consumidor, como estrategia para la elaboración de alimentos más personalizados y dirigidos a grupos específicos de consumidores (jóvenes, seniors etc.). El grupo es reconocido por su tarea formativa, ya que se han llevado a cabo 7 Tesis Doctorales, 15 Trabajos Fin de Master y 20 estancias por prácticas de investigación, 6 de ellas internacionales.

a) Tesis Doctorales:

Tesis doctoral: Comportamiento de los compuestos aromáticos en la boca durante el consumo de vino y su efecto en la liberación retronasal de aroma; Estudiante: María Pérez Jimenez; Directores: Dra M.Ángeles PozoBayón y Dra. Carolina Chaya;
Institución: UAM. Fecha: Julio 2018
Calificación: Sobresaliente cum laude

Tesis doctoral: Factores fisiológicos, biológicos y psicológicos (relacionados con las diferencias interindividuales en la percepción sensorial del sabor del vino y en su aceptabilidad por los consumidores
Estudiante: Celia Criado; Directores: Dra M.Ángeles PozoBayón y Dra. Carolina Muñoz;
Institución: UAM. Fecha: 17 abril 2023.
Calificación: Sobresaliente cum laude

Tesis doctoral: Evaluación del papel de la microbiota oral en el aroma retronasal, la percepción del sabor y las preferencias alimentarias en personas obesas como una estrategia para promover una alimentación más saludable; Estudiante: Paula Calvo;
Directores: Dra. Carolina Muñoz y Dra M.Ángeles PozoBayón;
Institución: UAM

Fecha: Octubre 2022(en ejecución) (defensa prevista Diciembre 2025).

Tesis doctoral: Proteoma y actividades enzimáticas salivares y su relación con la percepción del aroma y la aceptabilidad de los alimentos;

Estudiante: Rafael Izaí Velazquez;

Directores: Dra M.Ángeles Pozo–Bayón y Dra. Carolina Muñoz–González;

Institución: Instituto de Investigación en Ciencias de la Alimentación (CIAL) CSICUM

Fecha: (en ejecución) (defensa prevista diciembre 2026).

Otros méritos (PREMIOS, GESTIÓN DE LA CIENCIA)

Los resultados de las investigaciones del grupo han recibido el reconocimiento a través de diferentes premios, como el “European PhD Flavor Research Awards” al mejor Proyecto de Tesis doctoral a la Tesis de María Perez Jimenez (2017), el premio ENOFORUM 2018 “Spanish research for development” por la innovación en la investigación enológica desarrollada, el premio PTV al mejor proyecto individual (proyecto WINESENSOTYPE (AGL2016–78936–R) liderado por la Dra. Pozo–Bayón, el premio de la Sociedad Francesa de Nutrición 2019 a jóvenes investigadores a la Dra. MulozGonzález.

Recientemente la Dra. PozoBayón ha aparecido en el ranking (primer cuartil) de las 5000 investigadoras españolas más citadas (datos recogidos de la plataforma google scholar). Además, en los últimos 5 años el grupo ha sido invitado para editar diferentes números especiales “Food Oral processing and Flavor” Molecules (Q1) (2021); “Determinants in Food Flavor Perception” Foods (Q1) (2022) y actualmente están editando el libro “Wine analysis and Testing protocols” de la prestigiosa editorial Springer.

Miembros del grupo, desarrollan otras actividades relacionadas con la gestión de la ciencia, así La Dra. Del PozoBayón, desarrolla diversas actividades entre las que destacan: a) Editora asociada de la revista ACS Food Science & Technology Journal (2020 actualidad), b) Revisora de artículos científicos en revistas SCI (26 revistas área Food Science and Technology), c) Miembro del comité editorial de la revista online ISRN–Chromatography (2011–presente) d) Miembro del Advisory board de Molecules (sección Flavour and Fragrance) e) Evaluador internacional para agencias de investigación nacionales (ANEP) e internacionales (Agence Nationale de la Recherche, Swiss National Science Foundation, Romanian National Council of Development and Innovation) f) Miembro de la Comisión de Evaluación de Proyectos (Retos y Excelencia) diseñada por el MINECO (2017) g) Experto técnico 6D para la evaluación de proyectos de I+D (ACIE,

EQA, DNV, OCAcert) h) Evaluador internacional en el tribunal para la posición " Chargè de Reserche " en el INRA (Francia) (2019) i) Representante del personal del CIAL (20142015) j) Jefa del Departamento de Biotecnología y Microbiología del CIAL enero 2015–enero 2016 y 2021–actualidad) k) Coordinadora de las Jornadas de Puertas Abiertas del CIAL (2013–2016)–Co–director del curso de postgrado del CSIC: "Current Research Trends in Enology" (20102016), l) Miembro del Comité Científico Internacional de la "International Conference on Raw materials to processed Foods",2018, Antalya, Turquía Miembro electo de la Comisión Mujer y Ciencia en el área de Ciencia y tecnología de los alimentos (2017) ;m)Representante deCIAL en la Comisión de Género CEI/UAMCSIC (2018) ; n) Miembro del Jurado "Distintivo de igualdad CSIC2019" Coordinación de jornadas de divulgación científica (11F día de la Mujer en la Ciencia, Noche de las científicas, etc.).

CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

| | | | |
|--|---------------------|------------|------------|
| First name | MARIA ANGELES | | |
| Family name | DEL POZO BAYÓN | | |
| Gender (*) | WOMEN | Birth date | 22/10/1973 |
| ID number | 09000951-Q | | |
| e-mail | m.delpozo@csic.es | URL Web | |
| Open Researcher and Contributor ID (ORCID) (*) | 0000-0002-3706-9306 | | |

A.1. Current position

| | | | |
|-------------------|--|----------------|-----------|
| Position | Research Scientist (Científico Titular CSIC) | | |
| Initial date | 01/04/2010 | | |
| Institution | Instituto de Investigación en Ciencias de la Alimentación (CIAL) | | |
| Department/Center | Biotechnology and Microbiology | | |
| Country | Spain | Teleph. number | 910017961 |
| Key words | Wine, aroma, matrix interactions, aroma release, oral processing, oral physiology, consumer's sensory perception | | |

A.2. Previous positions (research activity interruptions, indicate total months)

| Period | Position/Institution/Country/Interruption cause |
|-----------|---|
| 1998-2001 | Predoctoral Scientist (IFI, CSIC) |
| 2002-2003 | Postdoctoral Scientist (IFI, CSIC) |
| 2003-2005 | Postdoctoral Marie-Curie (UMRA-INRA, Dijon, France) |
| 2005-2007 | Research Associate (University of Minnesota, USA) |
| 2007-2009 | Postdoctoral Scientist, Jae-doc contract, (IFI, CSIC) |
| 2009-2010 | Ramón y Cajal contract, (CIAL, CSIC) |

A.3. Education

| PhD, Licensed, Graduate | University/Country | Year |
|-------------------------------------|----------------------------------|------|
| Degree in Biology | Universidad de Alcalá de Henares | 1996 |
| Degree In Food science & technology | Universidad Autónoma de Madrid | 1998 |
| PhD Food Science & technology | Universidad Autónoma de Madrid | 2002 |

Part B. CV SUMMARY

Dr Pozo-Bayón earned the Bachelor Degree in Biology in 1996 and in Food Science and Technology in 1998. From 1998 to 2002, she conducted her PhD studies at the Institute of Industrial Fermentations (IFI, CSIC). Her PhD Thesis received the maximum mark (sobresaliente "cum laude"). After this, she was granted with the prestigious Marie-Curie fellowship to continuing her research career at UMRA-INRA in Dijon (France) (2003-2005) (24 months), centre of excellence in the study of flavour chemistry. During this period, she also carried out short stays at the Physicochemical Unit of Macromolecules of the INRA of Nantes, to study the interaction between aroma compounds and starch using structural techniques (DSC and X-ray diffraction). In 2005, she was hired as Associate Researcher at the Food Science and Nutrition Department at the University of Minnesota (USA) (2005-2007) (24 months). Here, she worked in close collaboration with the R&D&I departments of important agro-food multinational companies on novel aspects related to the development of real-time analytical methodology based on PTR-MS and APCI-MS for monitoring aroma release. In 2007, she joined the Applied Oenological Biotechnology (BEA) group at the IFI with a JAE-Doc CSIC contract and in 2009, she was granted with a senior Ramón y Cajal contract. In 2010, she got a CSIC's Tenured Scientist with affiliation to CIAL. The training and experience acquired during her 24-year scientific career has allowed Dr Pozo-Bayón to be recognized nationally and internationally in the field of flavour chemistry and wine oral processing. Briefly, her main achievements are summarized as following:



Scientific and technical contributions

- She has developed a new line of research focused on the interactions of wine aroma compounds in the oral cavity during wine consumption, the role of wine matrix and oral physiology and the impact of these interactions on wine aroma perception and consumer preference. This has resulted in the creation of a new CIAL's (2021) research group (FlavorSen) for which she is responsible.
- Her experience has been recognized by 3 six-years research (last granted in 2016) and 4 five-years scientific-technological achievements (last granted 2020).
- High quality and relevance of the studies recognized by the publication of 108 scientific publications (including book chapters): 72 included in the SCI (62,4% Q1): 90% as 1st author or IP, and with 3160 total citations, h index: 35 (google scholar 2022).
- Principal researcher of 17 research projects & contracts in the last 10 years (3 of international collaboration).
- She is the author of 28 articles in monographs & collective volumes and 99 communications presented to congresses (71 international) most of them as oral communication.
- Consolidated international collaborations (University of Minnesota, CSGA-INRA, New Zeland Food&Plant Res., Universidad Nacional de Colombia, Universidad de Quilmes, Universidad de Moquegua), reflected in a high number of collaborative Publications (13 from 2014)
- Research awards: best European Thesis in Flavour Chemistry (Giract 2023 award) (Dr Perez-Jimenez, Supervisor Dr Pozo-Bayón); PTV Innovation Award 2020 to the best R&D&I project (WINEFISIOAROMA project, IP: Pozo-Bayón MA); ENOFORUM 2018-award Spanish research for development" for the innovative research in the oenological field; Co-author article nominated as "editor Choice" (Molecules, 25, 1701, 2020).

Society contributions

- Co-inventor of one patent and principal scientist of eight contracts with the industry.
- More than 20 articles in dissemination journals.
- Member of Scientific and Organizing Committees of national and international conferences and Workshops.
- Participation and Coordination of dissemination activities: "Jornada de Puertas Abiertas", "CIAL Forum", "EIT Food activities", "Semana de La Ciencia", "Noche de I@s investigador@s". Participation in CAM-CSIC scientific seminars for the CAM educative system (15 seminars since 2020).
- Elected member of the Women and Science Commission in the Food Science and technology area (2017-), CIAL's Representative in the CEI/UAM-CSIC Gender Commission (2018-), and CIAL's member of the gender Committee (2022-)

Training of young researchers, scientific management, and Evaluation activity

- She has directed 7 PhDs (1 international, 3 under execution), 20 DEA &TFMs, 1 postdoc (JdC-incorporación2018), technical staff, and international and visiting students.
- Teaching assignments for different universities (UAM, UNIR) and Masters programs (Diploma, Master, and PhD).
- Appointment to senior positions at CIAL, such as Head of the Department Biotechnology Microbiology Group (2020-), Leader of the FLAVORSEN Group (2021-), and Member of the CIAL Scientific Committee (2020-)
- Evaluation of research projects for different national (AEI, DEVA-AAC) and international (ANRS, SNSF, FONCyT) entities.
- Participation as a member of examining boards (tenured position and postdoctoral contract), doctoral Theses (8) and TFM (2).
- Editor of the book "Wine analysis and testing techniques" (Springer, expected release: July 2023) and different special issues (2) in SCI Journals (Molecules, Foods)
- Associated Editor of the ACS-Food Science & technology (2020-) and Molecules (Flavour and Fragrance section) and regular reviewer of more than 50 high-impact journals.

Part C. RELEVANT MERITS

C.1. Publications (*corresponding author)

1. Criado, C., Muñoz-González, C., Mora, M., Fernández-Ruiz, V., Chaya, C., & **Pozo-Bayón, M. A***. (2022). Understanding If Differences in Salivary Flow Rate and Total Protein Content Triggered by Biological Factors (Sex and Age) Affect Aroma Perception and the Hedonic and Emotional Response of Wine Consumers. *Foods*, 11(19), 3104.



2. Criado, C., Muñoz-González, C., Hernández-Ledesma, B., & **Pozo-Bayón, M. Á***. (2022). Temporal changes in salivary composition induced by oral exposure to different wine matrices and the relationship with the behaviour of aroma compounds in the mouth. *Food & Function*, 13(8), 4600-4611.
3. **Pozo-Bayón, M. A*** & Muñoz-González, C. (2022). Oral Processing of Wine. Oral Processing and Consumer Perception, 283-298. RSC, B. Wolf, S. Bakalis & J. Chen.
4. Criado, C.; Muñoz-González, C., & **Pozo-Bayón, M. Á***. (2021). Differences in salivary flow and composition between age groups are correlated to dynamic retronasal aroma perception during wine consumption. *Food Quality and Preference*, 87, 104046.
5. Pérez-Jiménez, M.; Estéban-Fernández, A.; Muñoz-González, C.; **Pozo-Bayón M.A***. (2020). Interactions among odorants, phenolic compounds and oral components and their effects on wine aroma volatility. *Molecules* 2020, 25(7), 1701; (selected as editor choice).
6. Muñoz-González, C., Pérez-Jiménez, M., & **Pozo-Bayón, M. Á***. (2020). Oral persistence of esters is affected by wine matrix composition. *Food Research International*, 109286
7. Criado, C., Chaya, C., Fernández-Ruiz, V., Alvarez, M. D., Herranz, B., & **Pozo-Bayón, M. Á***. (2019). Effect of saliva composition and flow on inter-individual differences in the temporal perception of retronasal aroma during wine tasting. *Food Research International*, 108677.
8. Perez-Jiménez, M., Chaya, C., **Pozo-Bayón, M. A***. (2019), Individual differences and effect of phenolic compounds in the immediate and prolonged in-mouth aroma release and retronasal aroma intensity during wine tasting. *Food Chemistry*, 285, 147-155.
9. Esteban-Fernández, A., Rocha-Alcubilla, N., Muñoz-González, C., Moreno-Arribas, M. V., & **Pozo-Bayón, M. Á***. (2016). Intra-oral adsorption and release of aroma compounds following in-mouth wine exposure. *Food Chemistry*, 205, 280-288.
10. Muñoz-González, C., Feron, G., Guichard, E., Rodríguez-Bencomo, J. J., Martín-Álvarez, P. J., Moreno-Arribas, M. V., & **Pozo-Bayón, M. A***. (2014). Understanding the role of saliva in aroma release from wine by using static and dynamic headspace conditions. *Journal of Agricultural and Food chemistry*, 62(33), 8274-8288.

C.2. Congress

1. ACS National Meeting "The Chemistry of Wine", (San Francisco, August 2023) "Oral processing of wine and temporal aroma perception" Invited lecture. **MA. Pozo Bayón**.
2. Seminario Instituto de Ciencias de la Viña y el Vino (Logroño, October, 2022), "¿Cómo afecta el procesamiento oral a los compuestos responsables del aroma del vino? Consecuencias para la percepción del aroma y la aceptabilidad". Invited lecture: **M-A. Pozo-Bayón**.
3. XVI Weurman Research Symposium (2021). (Dijon, May 2021). "Understanding the effect of saliva composition depending on gender and age on wine aroma perception: oral aroma release, dynamics of sensory perception and consumer preference and liking". M.A. Pozo-Bayón, M. Perez-Jimenez; C. Criado, C. Muñoz-González. Oral Presentation, speaker: **Pozo-Bayon M.A.**
4. 3th International Flavor and Fragrance Conference. (Viña del Mar, Chile, 2019) "Impact of age and gender on aroma release after wine intake and its relationship with saliva composition". Pérez-Jiménez, M., Muñoz-González, C., Pozo-Bayón. M.A. Oral presentation, speaker: **M.A. Pozo-Bayón**.
5. ENOFÓRUM 2019. (Vicenza, Italy, 2019) "From the glass to the mouth: wine-related and human-physiological factors affecting retronasal aroma during wine consumption". Pozo-Bayón M.A. Invited lecture. Speaker: **Pozo-Bayón M.A.**
6. ENOFÓRUM 2018, (Zaragoza, 2018). "Avances en el conocimiento de los factores de tipo químico, bioquímico y fisiológico implicados en el aroma retronasal del vino durante el consumo". Oral Presentation. Speaker: **M.A. Pozo-Bayón** (Premio ENOFORUM)
7. International Conference raw materials to processed food (Antalya, Turkey, 2018). "Changes in the in-mouth release of typical wine aroma compounds produced by oenological polyphenolic extracts during wine intake and their relationship with wine aroma perception" Pozo-Bayón M.A., Pérez Jimémez M.; Chaya C. Oral presentation. Speaker: **MA Pozo-Bayón**.
8. WAC-2017 (Beaune, Francia, 2017) "Effect of ethanol on the oral aromatic persistence of typical wine fruity esters considering individual physiological differences" Pérez-Jiménez, Rocha-Alcubilla, N., Pozo-Bayón. M.A. Oral presentation speaker: **M.A. Pozo-Bayón**.
9. 4th International Conference on Food Oral Processing (Lausanne, Switzerland, 2016). "Interactions among oral mucosa, aroma compounds and non-volatile wine constituents affect intra-oral aroma release and might contribute to wine after-odor" A. Esteban-Fernandez, N.



Rocha-Alcubilla, M. Perez-Jimenez, C. Muñoz-González, M.V. Moreno-Arribas, M.A. Pozo-Bayón. Oral presentation, speaker: **M.A. Pozo-Bayón**.

10.14th Weurmann Symposium on Flavour Chemistry and Biochemistry, (Cambridge, UK. September 2014). "Oral physiological factors could be important pieces of the puzzle in order to explain aroma perception during wine consumption" Muñoz-González, Moreno-Arribas, M. Ángeles Pozo-Bayón. Oral communication, speaker: **M.A. Pozo-Bayón**

C.3. Research projects

-**PID2019-111734RB-I00 Project**. "Relación entre fenotipos sensoriales y preferencias del Consumidor: desde la percepción hasta los mecanismos químicos y bioquímicos implicados en el procesamiento oral. Principal researcher: **M.A Pozo Bayon**. Funding entity: MICINN. 2020-2023, Funding: €155.000

-**EIT-FOOD Project ID-21330**. "FoodFE, Food for the elderly", H2020 UE. Task Leader: Weiss, J.W. (Jochen) | University Hohenheim; Task leader from CSIC: Dra.Laura Laguna (IATA), **Dra. MA Pozo Bayón** (CIAL). (01/01/2021-31/12 /2021), Funding: 171,625 € (12.000 CSIC)

-**Project AGL2016-78936-R**. "Interindividual differences in oral physiology: impact on the release of the aroma during wine consumption and on the hedonic and emotional response of the consumer (WINE-FISIOAROMA)".MINECO. Principal researcher: **M.A. Pozo-Bayón**. Duration (30/12/2016-30/12/2019). Funding: €135,000

-**Research international collaborative project I-COOP+2017-CSIC (COOPB20346)**. "Evaluation of the hydrolysis capacity of Patagonian oenological strains of lactic bacteria for grape and wine glycosylated precursors and the production of odorant metabolites in wine. National University of Quilmes (Argentina) & CIAL. Principal researcher: **M. A Pozo Bayón**, (01/01/ 2018-31/12/2019). Funding €17000.

-**International Collaboration Project I-link1049-CSIC**"Assessment the role of food polyphenols on aroma persistence considering their interaction with the oral mucosal pellicle". Principal reseracher: M.A. Pozo Bayón, (01/01/2016-31/12/2017). Funding: 21.000 €

-**Intramural project 2010701036**. Title: "Impact of oro-physiological parameters on the release of aroma during wine consumption: relationship with aroma persistence and wine quality. Principal researcher": **M. Angeles Pozo Bayon**. (01/05/2011-30/04/2012) Funding: €25,000

-**RYC-2009-05370 Project**. Title: "Impacto de los macro-componentes de la matriz del vino en la biodisponibilidad del aroma durante el consumo". Principal researcher: **M.A. Pozo Bayon**. MICINN. Duration: (01/01/2009-31/12/2013). Funding: 15.000 €

C.4. Contracts, technological or transfer merits

-**R&D Contract 201764445**. "Evaluación de la aptitud de cepas de levadura autóctonas de la región de Moquegua para la producción de piscos de alta calidad aromática y sensorial 10/01/2022-09/04/2020" Entidad Financiadora: Universidad Nacional de Moquegua (UNAM). Principal scientist: **M. Á. Pozo Bayón**. Funding: 9000 €.

-**R&D Contract 201764444**. Title: "Evaluation of the effect of different techniques for preparing culinary broths on the intensity of the aroma and other sensory attributes. Company: Selección Mediterránea Fine Foods D.L. Project duration: 24/11/2016-24/06/2017 (6 months). Principal scientist: **M. Á. Pozo Bayón**. Funding: 8000 €.

-**R&D contract 20151686**. Title: "Pilot study for the development of an alternative to the use of sulphur in fruit preservation brines" Company: Jose María Lázaro S.A. Project duration: 30/06/2015-31/12/2015. Principal scientist: **M.A. Pozo Bayón**. Funding: 11000 €

-**R&D contract: 110169150022**. Title: Research Contract between CSIC, Jose María Lázaro S.A. and Grandes Vinos y Viñedos S.A. "Pilot study for the development of an alternative to the use of sulphur in wine and fruit preservation" Financial institution: Grandes Vinos y Viñedos, S.A., Jose María Lázaro S.A. Duration (01/04/2013-31/03/2015). Principal sceintist: **M.A. Pozo-Bayon** and M.V. Moreno. Funding: 40,000 €.

- **R&D contract 11010610001**. Title: Optimization and application of a method based on SPME-GC-MS for the analysis of volatile compounds in beer. Principal scientist: **M.A.Pozo-Bayón**. Company: AB-BIOTICS Producciones Industriales de Microbiotas, S.L. Duration (17/06/2010-16/11/2011). Funding: 22,000 €

Patents: Authors: **M.A. Pozo-Bayón**, I. Andújar-Ortiz, J.A. Mendiola, E. Ibáñez, M.V. Moreno-Arribas Title: "Procedure for the elimination of odorant compounds present in inactivated dry yeast preparations marketed as oenological additives through the use of supercritical CO2" Application No: P200930366. Country of priority: Spain. Priority date: 26-06-2009 Entity holder: CSIC.

CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

| | | | |
|--|---------------------|------------|------------|
| First name | CAROLINA | | |
| Family name | MUÑOZ GONZALEZ | | |
| Gender (*) | FEMALE | Birth date | 12/09/1985 |
| Social Security, Passport, ID number | 02663968-Q | | |
| e-mail | c.munoz@csic.es | URL Web | |
| Open Researcher and Contributor ID (ORCID) (*) | 0000-0001-6185-7049 | | |

(*) *Mandatory*

A.1. Current position

| | | | |
|-------------------|---|---|-----------|
| Position | Associate researcher, CAM-Atracción de Talento modalidad 1-doctores con experiencia; (CSIC tenured scientist, awaiting appointment) | | |
| Initial date | 01/09/2020 | | |
| Institution | Spanish National Research Council (CSIC) | | |
| Department/Centre | Department of Biotechnology and Microbiology | Research Institute of Food Science (CIAL) | |
| Country | Spain | Phone number | 910017967 |
| Keywords | Food Quality, Flavor perception, Food acceptability, Food Oral Processing, Saliva, Oral microbiota, Consumers | | |

A.2. Previous positions (research activity interruptions, indicate total months)

| Period | Position/Institution/Country/Interruption cause |
|-------------------------|---|
| 14/12/2022-02/05/2022 | Maternity leave |
| 01/12/2018 – 31/08/2020 | MICINN-Juan de la Cierva- Incorporación. <i>Interrupted in favor of CAM-Atracción de Talento-modalidad 1.</i> Institute of Food Science Research, CIAL (CSIC-UAM), Madrid, Spain |
| 2019 | EU- Marie Skłodowska Curie-Individual fellowship. <i>Declined in favor of CAM-Atracción de Talento-modalidad 1.</i> |
| 01/10/2015–30/09/2018 | EU-Marie Skłodowska Curie-Cofund Agreenskills+. Centre for Taste and Feeding Behaviour (INRA, CNRS, UB) Dijon, France. |
| 01/09/2014 – 28/08/2015 | Mondelez International-Flavor Scientist. Reading Scientific Services Ltd. Reading, United Kingdom. |
| 15/04/2012 – 15/10/2012 | CSIC-JAEPredoc, Visitor Scientist (predoctoral stay). Centre for Taste and Feeding Behavior, CSGA (INRA, CNRS, UB), Dijon, France. |
| 01/09/2010 – 31/08/2014 | CSIC-JAE Predoctoral Researcher. Institute of Food Science Research, CIAL (CSIC-UAM), Madrid, Spain. |
| 2010 | MICINN-FPI. <i>Declined in favor of CSIC-JAEPredoc.</i> |
| 01/05/2009 – 30/08/2010 | Technical Research Assistant. Institute of Industrial Fermentations, IFI (CSIC), Madrid, Spain. |

A.3. Education

| PhD, Licensed, Graduate | University/Country | Year |
|---|--|-----------|
| PhD in Biology and Food Science | Universidad Autónoma de Madrid (UAM)/Spain | 2010-2014 |
| Licensed in Food Science and Technology | Universidad Autónoma de Madrid (UAM)/Spain | 2007-2009 |
| Graduate in Human Nutrition and Dietetics | Universidad Autónoma de Madrid (UAM)/Spain | 2003-2006 |



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

My main area of expertise is in the fields of **food flavor chemistry and sensory perception**. Specifically, my research is focused on understanding how food oral processing affects flavor perception and acceptability with the final goal of improving food quality taking into account the sensory needs of the general/specific populations. My PhD with International mention (cum laude, 2010-2014) focused on the chemical, biochemical and physiological factors involved in retronasal aroma during wine consumption and opened a new research line at the **Instituto de Investigación en Ciencias de la Alimentación (CIAL, CSIC)**. During my PhD, I also spent 6 months (2012) at the **Centre des Sciences du Goût et de l'Alimentation (Dijon, France)** where I gained further training in food oral processing using the more advanced techniques for the in vivo aroma monitoring on real time i.e. PTR-ToF-MS. After my predoctoral stage, I joined **Mondelez International (2014-2015)**, one of the world's largest food companies, as R&D scientist (Reading, UK). There, I led research projects to study aroma release from different food products using innovative dynamic methodologies and taking into account food matrix reformulation strategies, with the final aim of improving their liking in the most cost-effective and healthy manner possible. In 2015, I was awarded with a prestigious Marie Skłodowska Curie-Cofund (Agreskills+) fellowship. Therefore, I moved to the **Centre for Taste and Feeding Behaviour (INRA, France, 2015-2018)**, where I developed a new research line based on understanding the role of saliva on aroma release and perception in elderly individuals, taking into account interindividual differences. I also led a second project based on food reformulation strategies targeted to elderly needs, that was awarded as the Best Research Project of a young scientist by the Société Française de Nutrition in 2017 (20.000 euros). In total, I have passed **54 months** of my scientific career in topmost international research centres. By the end of 2018, I re-joined the **CIAL** as a Juan de la Cierva Incorporación postdoctoral researcher, where I have initiated a new research line focused on the impact of the oral transformations undergone by sensory active food chemicals on flavor perception. In 2019, this new research line was selected for funding by the competitive programs EU-Marie Skłodowska Curie-Individual fellowship and Atracción de Talento-doctores con experiencia (Comunidad de Madrid). Currently, I work at the FLAVORSEN group at CIAL as an associate researcher where I am **leading a pioneering research project (AROMABIOTA, 2019-T1/BIO13748)** that addresses for the first time the implication of salivary microbiota on flavor metabolism and the effects on perception and food acceptability among individuals suffering obesity. In November 2022, I approved the **CSIC tenured scientist opposition contest** and I am pending appointment.

Regarding my **scientific contributions**, up to date I have 41 peer-reviewed publications: 37 scientific articles included in SCI journals (+1 submitted) and 4 book chapters requested by the respective editors (number of citations **794/1019**, h-index of 17/19 according to Scopus/Google Scholar). My research has been **communicated** in more than 40 conferences (65% as oral comm.) from 12 countries. Moreover, I have been invited to several international scientific meetings including a workshop from the most important international conference about flavor science (Weurman symposium). I am a **regular reviewer** of SCI journals of my area of expertise and I have **co-edited a book and two Special issues**. I am committed to **scientific dissemination**, thus, I am also involved in tasks related to the Dissemination of Science and Equality, such as “Semana de la Ciencia” de Madrid, “Día Internacional de la Mujer y la Niña en la Ciencia” and “Noche Europea de los Investigadores” among others. I have also co-authored 8 dissemination articles.

I am a very **dynamic scientist** attracting financial and human resources in different national calls for proposals. I have participated in 11 international and 11 national research projects with public and private entities (> 4 M€), being **principal investigator of 6 of them (0.5M€ in last 5 years)**. In the last 5 years, I have been involved in different **European scientific actions** such as the EITFOOD project (FoodFe) or in the Taste Sensitivity working group of the European Sensory Society.

I have an extensive experience in **training and supervising students** of different levels. At the moment, I have supervised **2 PhD theses** (ongoing, one of them associated to the current 2019-T1/BIO13748 project I led), **1 predoctoral visiting student**, **1 JAE-Intro student**, **7 MSc theses**, **2 BSc thesis**, and the laboratory work of many national and international alumni. I have participated in other scientific activities, such as, being **member of the evaluation board** for the UAM-Master Thesis (2021).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (*corresponding author; IF: impact factor; Cite numbers SCOPUS)

1. Calvo López-Davalos, P., Requena, T., Pozo-Bayón M.A., **Muñoz-González, C*** (under revision). Decreased retronasal olfaction and taste perception in obesity is related to saliva and oral microbiota composition.
2. ***Muñoz-González, C.**, Brulé, M., Martin, C., Feron, G., Canon, F. (2022). Molecular mechanisms of aroma persistence: from noncovalent interactions between aroma compounds and oral mucosa to metabolization of aroma compounds by saliva and oral cells. *Food Chemistry*. **IF**: 7.514. 12 cites. DOI: <https://doi.org/10.1016/j.foodchem.2021.131467>
3. ***Muñoz-González, C.**, Brulé, M., Martin, C., Feron, G., & Canon, F. (2021). Influence of prebiotic fructans on retronasal aroma from elderly individuals. *Molecules*, 26(10), 2906. **IF**: 4.411. 1 cite. DOI: <https://doi.org/10.3390/molecules26102906>
4. Criado, C., **Muñoz-González, C.**, & Pozo-Bayón, M. Á. (2021). Differences in salivary flow and composition between age groups are correlated to dynamic retronasal aroma perception during wine consumption. *Food Quality and Preference*, 87, 104046. **IF**: 5.565. 10 cites. DOI: <https://doi.org/10.1016/j.foodqual.2020.104046>
5. ***Muñoz-González, C.**, Criado, C., Pérez-Jiménez, M., & Pozo-Bayón, M. Á. (2021). Evaluation of the effect of a grape seed tannin extract on wine ester release and perception using in vitro and in vivo instrumental and sensory approaches. *Foods*, 10(1), 93. **IF**: 4.350. 10 cites. DOI: <https://doi.org/10.3390/foods10010093>
6. ***Muñoz-González, C.**, Feron, G., & Canon, F. (2021). Physiological and oral parameters contribute prediction of retronasal aroma release in an elderly cohort. *Food Chemistry*, 342, 128355. **IF**: 7.514. 18 cites. DOI: <https://doi.org/10.1016/j.foodchem.2020.128355>
7. ***Muñoz-González, C.**, Brulé, M., Feron, G., & Canon, F. (2019). Does interindividual variability of saliva affect the release and metabolization of aroma compounds ex vivo? The particular case of elderly suffering or not from hyposalivation. *Journal of texture studies*, 50(1), 36-44. **IF**: 1.902. 27 cites. DOI: <https://doi.org/10.1111/jtxs.12382>
8. ***Muñoz-González, C.**, Feron, G., Canon, F. (2018). Main effects of human saliva on flavour perception and the potential contribution to food consumption. *Proceedings of the Nutrition Society*, 77(4):423-431. **IF**: 5.017. 36 cites. DOI: <https://doi.org/10.1017/S0029665118000113>
9. ***Muñoz-González, C.**, Feron, G., Brulé, M., Canon, F. (2018). Understanding the release and metabolism of aroma compounds using micro-volume saliva samples by ex vivo approaches. *Food Chemistry*, 240 (1), 275-285. **IF**: 5.399. 37 cites. DOI: <https://doi.org/10.1016/j.foodchem.2017.07.060>
10. **Muñoz-González, C.**, Cueva, C., Pozo-Bayón, M. A., Moreno-Arribas, M. V. (2015). Ability of human oral microbiota to produce wine odorant aglycones from odorless grape glycosidic aroma precursors. *Food Chemistry*, 187, 112–119. **IF**: 4.052. 41 cites. DOI: <https://doi.org/10.1016/j.foodchem.2015.04.068>

C.2. Congresses

1. **Muñoz-González, C.**, Feron, G., Canon, F. Molecular mechanisms behind the phenomenon of food aroma persistence, American Chemical Society Food-Flavour Dynamics Symposium, 5-30 April 2021 (online). Invited conference.
2. **Muñoz-González, C.** Oral metabolism of flavor compounds in the mouth. Weurman Symposium 2021. INRAe, (online), May 4-6, 2021 (WORKSHOP 1 “Chemistry and biochemistry of flavor compounds in the mouth”). Invited conference.
3. **Muñoz-González, C.**, Brulé, M., Martin, C., Feron, G., Canon. Effets de la variabilité interindividuelle de la salive humaine (flux et composition) sur la libération et la perception aromatique chez le sujet âgé, Journées Francophones de Nutrition, 27-30 November 2018, Nice (France). Invited conference.
4. **Muñoz-González, C.**, Brulé, M., Martin, C., Feron, G., Canon. Does human saliva drive flavor perception? Winter conference 2017: diet, nutrition and the changing face of cancer survivorship, 4-6th December 2017 London (UK). Invited conference.

C.3. Research projects

1. Research Project FoodFe-29330: “Recover your joy of eating: Appealing and tasty food product concepts for the elderly (CSIC-IATA+CIAL)”. PI CSIC: L. Laguna. Financing entity: EITFOOD program. Start-end date: 2021 (11.750€).



2. Research project 2019-T1/BIO13748 “Evaluación del papel de la microbiota oral en el aroma retronasal y las preferencias alimentarias en obesidad como una estrategia para promover una alimentación más saludable”. PI: **C. Muñoz-González**. Financing entity: CAM, Atracción de Talento-modalidad doctores con experiencia. Start-end date: 2020-2024 (170.546€) + 220.000€ for salary cofounded by CAM/CSIC.
3. Research project IJCI-2017-33270 “Diferencias interindividuales en la fisiología oral y su impacto sobre la liberación y percepción del aroma durante el consumo de vino”. PI: **C. Muñoz-González**. Financing entity: MICINN, Juan de la Cierva Incorporación. Start-end date: 2018-2020 (6.000€) + 58.000€ for salary.
4. Research project PID2019-111734RB-I00 “Relación entre fenotipos sensoriales y preferencias del Consumidor: desde la percepción hasta los mecanismos químicos y bioquímicos implicados en el procesamiento oral del vino”. Financing entity: MINECO. PI: M. A. Pozo-Bayón. Start-End date: 2020-2023 (155.000 €).
5. Research project AGL2016-78936-R “Diferencias interindividuales en la fisiología oral: impacto sobre la liberación del Aroma durante el consumo de vino y en la respuesta hedónica y emocional del consumidor (WINE-FISIOAROMA)”. Institute of Food Science Research, CIAL (CSIC-UAM). Financing entity: MINECO PI: M.A. Pozo-Bayon. Start-End date: 2016 – 2020 (163.550 €).
6. Research project ANR-14-CE20-0003 “Toward offering healthy food products better adapted to elderly people (ALIMASSENS)”. Financing entity: ANR. PI: G. Feron. Start-end date: 2014-2018 (1.622.574€).
7. Research project ANR-14-CE20-0001 “Mucosal salivary Film & Flavour Interactions (MUFFIN)”. Financing entity: ANR. PI: F. Canon. Start-end date: 2014-2018 (398.662€).
8. Research project I-link “Assessment the role of food polyphenols on aroma persistence considering their interaction with the oral mucosal pellicle” Centre for Taste and Feeding Behaviour (INRA, CNRS, UB). Financing entity: CSIC. PI: M.A. Pozo-Bayon. Start-end date: 2015-2017 (21.000 €)
9. Research project SFN Food4Elderly “Effets de la variabilité interindividuelle de la salive humaine (flux et composition) sur la libération d’arômes et la perception de la flaveur chez le sujet âgé afin de mettre en place des stratégies d’élaboration des produits alimentaires pour un vieillissement en bonne santé”. Financing entity: French Nutrition Society. PI: **C. Muñoz-González**. Start-end date: 2018 (20.000€).
10. Research project MSCA-Cofund Agreenkills+ n°609398 “Understanding the role of salivary mucosal proteins on aroma perception in elderly population and, in particular, in elderly population suffering xerostomia”. Financing entity: European Commission, H2020, French National Institute for Agricultural Research. PI: **C. Muñoz-González**. Start-end date: 2015-2018 (127.348 €).

C.4. Contracts, technological or transfer merits

1. “Caracterización de la composición de saliva en individuos con diferente estatus dental” Financing entity: UAX-Fundación La Caixa. PI: **C. Muñoz-González**. Start-End date: 2022-2023.
2. “Caracterización del microbioma de variedades de uvas autóctonas de la región de Moquegua (Perú) y relación con el perfil volátil de los piscos” Financing entity: Universidad Nacional de Moquegua PI: Dr. M. A. Pozo-Bayón. Start-End date: 2022.
3. “Determinación del impacto de las condiciones de cocción en las características Tecnofuncionales del grano de arroz” Financing entity: Selección Mediterránea Fine Foods D.L. PI: Dr. M. A. Pozo-Bayón. Start-End date: 2021.
4. “Flavour challenge: fat replacers in chocolate” Financing entity: Mondelez Int. PI: **C. Muñoz-González**. Start-End date: 2014-2015.
5. “The flavour journey: monitoring aroma release in coffee to better understand consumer preferences” Financing entity: Mondelez International. PI: **C. Muñoz-González**. Start-End date: 2014-2015.
6. “Aroma encapsulation in JAR coffee samples” Financing entity: Mondelez International. PI: A. Czepa. Start-End date: 2014-2015.
7. “Long lasting flavour: application of smart formulations to chewing gum” Financing entity: Mondelez International. PI: A. Czepa. Start-End date: 2014-2015.
8. “Optimización y aplicación de un método basado en SPME-GC-MS para el análisis de compuestos volátiles en cerveza” Financing entity: AB-BIOTICS producciones industriales de microbios S.L. PI: Dr. M. A. Pozo-Bayón. Start-End date: 2010-2012.