

Part A. PERSONAL INFORMATION		CV date		sept/2021
First and Family name	María Teresa Ramos García			
Social Security, Passport, ID number		Age		
Researcher numbers	Researcher ID	H-8552-2015		
	Orcid code	0000-0001-9225-9316		

A.1. Current position

Name of University/Institution	Universidad Complutense de Madrid			
Department	Chemistry in Pharmaceutical Sciences / School of Pharmacy			
Address and Country	Plaza de Ramón y Cajal s/n, 28040-Madrid, Spain			
Phone number	913941840	E-mail	mtramos@ucm.es	
Current position	Profesor Titular de Universidad	From	10th/2/1993	
Espec. cód. UNESCO	2390.01; 2306.10; 2306			
Palabras clave	Synthesis and design of new drugs; synthesis and reactivity of heterocycles; new neuroprotective agents; diversity oriented synthesis			

A.2. Education

PhD	University	Year
Licenciada en Farmacia	Universidad Complutense de Madrid (UCM)	1982
Doctora en Farmacia	Universidad Complutense de Madrid (UCM)	1989

A.3. JCR articles, h Index, thesis supervised...

Four (4) six-year research periods. Date of last six-year period: july/2020.

Number of PhD Theses in the last 10 years: 3 (co-directed) + 2 in progress (co-directed)

Sum of the times cited: 483

Total number of publications: 39 h Index:13 Source: Web of Science. Thomson Reuters
Since 1996: 14 Q1, 4 of them are D1

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Degree in Pharmacy (UCM, 1982), Thesis (1984) and Doctoral Thesis (1989) supervised by Dr. Dña. C Avendaño. Post-doctoral stay of 1 year in 1989-90 in the group of Prof. G. A. Olah (USC, Los Angeles, CA). Since 1993 I am Profesor Titular de Universidad in the Dept. of Organic and Pharmaceutical Chemistry (UCM). I participate in the Interuniversity Doctorate program of Medicinal Chemistry that currently has a Mention towards Excellence. I have participated in numerous research projects with public funding for the development of different lines of research related to the design and synthesis of heterocycles with potential activity, proposing at the same time a novel chemical methodology.

An important line has been in the field of antitumor drugs, developing strategies for the synthesis of analogues of natural products such as heterocyclic quinones, or acetylardeemin, an MDR modulator, through heteroDiels-Alder reactions, acyliminium cations, or microwave-assisted reactions. We have verified that the known oxidant CAN (ceric ammonium nitrate), in catalytic quantities, acts as Lewis acid in the Friedlander reaction to give quinolines, and we have applied it successfully to the synthesis of luotonin A, an antitumor alkaloid inhibitor of the topoisomerase I.

Another line of research has been the use of multicomponent reactions for the synthesis of heterocycles, which began with the reaction of Povarov to obtain tetrahydroquinolines: The variations of this reaction have led to very interesting intermediates for their subsequent transformation into diverse structures. The enantioselective synthesis of these compounds is

currently being studied. In addition, we have proposed multicomponent reactions catalyzed by Lewis acids to obtain variously substituted pyridine derivatives, with pharmacologically very interesting structures. As an application of the concept of multitarget drugs, hybrid structures have been designed and synthesized as potential agents against Alzheimer's disease.

We have established a collaboration with the Instituto Teófilo Hernando (UAMadrid) to work on the issue of neurodegeneration, its relationship with the regulation of intraneuronal calcium and neuroprotection. The data obtained from the compounds tested have reinforced this collaboration to work together over the coming years.

The results of these research works have been described in more than 30 publications in international journals indexed in the JCR, mainly in the categories of Medicinal Chemistry and Organic Chemistry, and more than 40 communications to national or international congresses. I have also been co-author of 6 book chapters.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1. Tenti, G; Cores, A; **Ramos, MT**; Menéndez, JC. **2021**. (E)-3-((2-Fluorophenyl)(hydroxy)methylene)imidazo[1,2-a]pyridin-2(3H)-one, *Molbank*, 2021, 0. <https://doi.org/10.3390/0>.
2. Clerigué, J; **Ramos, MT**; Menéndez, JC. **2021**. (2S*,4S*)-4-[(E)-(2,2-Dimethylhydrazono)methyl]-6-methoxy-4-methyl-2-[(E)-styryl]-1,2,3,4-tetrahydroquinoline, *Molbank*, 2021, M1220. <https://doi.org/10.3390/M1220>.
3. Clerigué, J; **Ramos, MT**; Menéndez, JC. **2021**. Mechanochemical Aza-Vinylogous Povarov Reactions for the Synthesis of Highly Functionalized 1,2,3,4-Tetrahydroquinolines and 1,2,3,4-Tetrahydro-1,5-Naphthyridines, *Molecules*, 26, 1330. <https://doi.org/10.3390/molecules26051330>.
4. Swarupananda, M; Leonardi, M; Cores, A; Tenti, G; **Ramos, MT**; Villacampa, V; Menéndez, JC. **2020**. Synthesis of 1,4-Diazepanes and Benzo[b][1,4]diazepines by a Domino Process Involving the In Situ Generation of an Aza-Nazarov Reagent, *J. Org. Chem.* 85, 18, 11924–11933. <https://dx.doi.org/10.1021/acs.joc.0c01774>.
5. Michalska, P; Mayo, P; Fernández-Mendivil, C; Tenti, G; Duarte, P; Buendía, I; **Ramos, MT**; López, MG; Menéndez, JC; León, R. **2020**. Antioxidant, Anti-inflammatory and Neuroprotective Profiles of Novel 1,4-Dihydropyridine Derivatives for the Treatment of Alzheimer's Disease, *Antioxidants*, 9, 650; doi:10.3390/antiox9080650.
6. Michalska, P; Tenti, G; Satriani, M; Cores, A; **Ramos, MT**; García, AG; Menéndez, JC; León, R. **2019**. Aza-CGP37157-lipoic hybrids designed as novel Nrf2-inducers and antioxidants exert neuroprotection against oxidative stress and show neuroinflammation inhibitory properties, *Drug Development Research*, 1-12.
7. Clerigué, J; Bianchini, G; Ribelles, P; Tejero, T.; Merino, P; **Ramos, MT**; Menéndez, JC. **2019**. Rearrangement Reactions in Aza-Vinylogous Povarov Products: Metal-Free Synthesis of C3-Functionalized Quinolines and Studies on their Synthetic Application, *European Journal of Organic Chemistry*, 6452-6464.
8. Buendía, I; Tenti, G; Michalska, P; Méndez-López, I; Luengo, E; Satriani, M; Padín-Nogueira, F; López, MG; **Ramos, MT**; García, AG; Menendez, JC; León, R. **2017**. ITH14001, a CGP37157-nimodipine hybrid designed to regulate calcium homeostasis and oxidative stress exerts neuroprotection in cerebral ischemia, *ACS Chemical Neuroscience*, 8, 67-81. [D1](#)
9. Gameiro, I; Michalska, P; Tenti, G; Cores, A; Buendía, I; Rojo, AI; Georgakopoulos, ND; Hernández-Guijo, JM; **Ramos, MT**; Wells, G; López, MG; Cuadrado, A; Menéndez, JC; León, R. **2017**. Discovery of the first dual GSK3 β inhibitor / Nrf2 inducer. A new multitarget therapeutic strategy for Alzheimer's disease, *Scientific Reports*, 7, article number 45701. [D1](#)

10. Tenti, G; **Ramos, MT**; Menendez, JC. **2017**. "Synthesis of Pyridines by Multicomponent Reactions", in Multicomponent Reactions: Synthesis of Bioactive Heterocycles, Ameta, KL; Dandia, A (eds.), chapter 1, pag 1-32. CRC Press/Taylor and Francis. ISBN 9781498734127
11. Bianchini, G; Ribelles, P; Becerra, D; **Ramos, MT**; Menendez, JC. **2016**. Efficient synthesis of 2-acylquinolines based on an aza-vinylogous Povarov reaction, *Organic Chemistry Frontiers*, 3, 412-422. [Q1](#)

C.2. Research projects and grants

1. RTI2018-097662-B-I00. Compuestos multidiana innovadores para el diagnóstico y tratamiento de enfermedades neurodegenerativas. Ministerio de Ciencia, Innovación y Universidades. Investigador principal: José Carlos Menéndez. Cuantía: 182.000 €. Duración: 1-Enero-2019 a 31-Diciembre-2021. Participación: investigador.
2. B2017/BMD-3813- ELA-MADRID-CM. Diseño y desarrollo de fármacos innovadores para el tratamiento de la esclerosis lateral amiotrófica. Comunidad de Madrid. Consejería de Educación, Juventud y Deporte. Investigador principal: Ana Martínez Gil (José Carlos Menéndez en la UCM, F Farmacia). Cuantía: 767.395 €. Duración: 1-1-2018 a 31-12-2021. Participación: investigador
3. CTQ2015-68380-R. Nuevas moléculas multidiana y teranósticas para el diagnóstico y terapia de enfermedades neurodegenerativas. Ministerio de Ciencia e Innovación. Investigador principal: José Carlos Menéndez Ramos. Cuantía: 154.880€. Duración: 2016-2018. Participación: investigador
4. CTQ2012-33272-BQU. Nuevas reacciones dominó y multicomponente enantioselectivas para la síntesis de heterociclos potencialmente bioactivos. Ministerio de Ciencia e Innovación. Investigador principal: José Carlos Menéndez Ramos. Cuantía: 139.230€. Duración: 2013-2015. Participación: investigador

C.3. Contracts

C.4. Patents

C.5. Post-graduate research supervision

a) 3 PhD supervised (with JC Menéndez)

1. Student: Giulia Bianchini

Development and applications of the aza-vinylogous Povarov reaction of α -ketoimines. Facultad de Farmacia. UCM. Date: 24th february 2017. Sobresaliente cum Laude. Mención Europea. PhD Award Antonio Doadrio López. Program: Doctorado "Química Médica" con Mención de Calidad. Becario Investigación en contrato art. 83 (11 meses) y Contrato con cargo a proyectos de investigación (PAI).

2. Student: Giammarco Tenti

New multicomponent reactions for the synthesis of pyridine derivatives as potential anti-neurodegenerative agents. Facultad de Farmacia. UCM. Date: 15th June 2015 Sobresaliente cum Laude. Mención Europea. PhD Award Antonio Doadrio López. Program: Doctorado "Química Médica" con Mención de Calidad. Becario UCM

3. Student: Pascual Ribelles

Aplicación de nuevos procesos multicomponente a la síntesis de derivados de quinolina. Facultad de Farmacia. UCM. Date: 7th september 2013. Sobresaliente cum Laude. Mención Europea. PhD Award: Premio Extraordinario de Doctorado.

Program: Doctorado "Química Médica" con Mención de Calidad.

Beca programa FINNOVA II de la CAM y Beca asociada a contrato art 83 (Lab. ROVI).

b) 2 PhD in course (with JC Menéndez)

Student: José Clerigué Louzado

Diseño, síntesis y evaluación de análogos de citisina y melatonina como aproximación multidiana al tratamiento de enfermedades neurodegenerativas.

Program: Doctorado "Química Médica" con Mención de Calidad. Becario UCM (convocatoria 2016)

Student: Emmanuel Orocio Rodríguez

Agentes multidiana para el tratamiento de enfermedades neurodegenerativas.

Program: Doctorado "Química Médica" con Mención de Calidad.

C.6. Institutional responsibilities

- Member of the Academic Board of the Doctorate Program Farmacia since march 2015.