

**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	Eustaquio		
Family name	Gil Pelegrín		
Gender (*)	Male	Birth date (dd/mm/yyyy)	10/01/63
Social Security, Passport, ID number	17437112F		
e-mail	gilpelegrín@eead.csic.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-4053-6681		

(\*) Mandatory

**A.1. Current position**

Position	Research Professor		
Initial date	08/06/2023		
Institution	Consejo Superior de Investigaciones Científicas		
Department/Center	Dept. Plant Biology	Estación Experimental de Aula Dei	
Country	Spain	Teleph. number	660079755
Key words			

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

Period	Position/Institution/Country/Interruption cause
1992-2023 367 months	Researcher/CITA de Aragón/Spain/entry into CSIC
1990-1991 12 months	Associate prof./U. Poli. Catalunya/Spain/entry into CITA
1987-1990 48 months	Predoctoral fellow/IPE-CSIC/Spain/ end of grant
July 1986-Dec 1986 6 months	Grant associated to research project/ IPE-CSIC/Spain/end of contract

**A.3. Education**

PhD, Licensed, Graduate	University/Country	Year
Licensed in Sciences/section Biology	Autónoma de Madrid	1986
Phd in sciences	Autómoma de Madrid	1993

(Include all the necessary rows)

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

E. Gil has studied the ecophysiology of forest trees since his predoctoral formation, specially the functional limitations imposed by the Mediterranean climate. The resistance to drought has been the main research line from different scales: biochemical to whole plant scales, with a particular focus on the wáter movement through the soil-plant-atmosphere continuum. In this sense, he was one of the first researchers incorporating the study of plant hydraulic and cavitation (both associated to drought and frost) in Spain, after a period of training at INRAe (Prof. H Cochard). This new approach, which allowed the explanation of some massive die-back of holm oak forests in Aragón, broadened the interpretation of the process called “seca” in Spain, which had been understood as exclusively induced by pathogens. Other ecological factors, such as low and high temperatures in the plant functioning have been also studied, always considering the seasonal stress periods in mediterranean climates. These studies have been applied to the improvement of reforestation programs with species of genus *Quercus* and to the study of conditioning factors in processes of massive forest decline.

E. Gil has been participant as researcher in 36 R&D projects funded through different competitive calls. Among them, 3 are international (INACH, Chile; FONDECYT, Chile; ANR, France) and 15 are projects of the National Research Plan. He has been PI of 14 of these projects, 6 of them of the National Research Plan. Moreover, he has been PI in R&D non-competitive agreements and projects with public entities for the Forest Services of Aragón from 1994, attending processes affecting the health and vigor of different forest types in this territory. Among these non-competitive projects can be highlighted the project “*Factores abióticos de daño en las masas de Pinus sylvestris L. en la provincial de Teruel*” (15/11/2004 – 30/04/2007, 356.000 euros). This fluent collaboration with the forest administration remains until now.

He is co-author of 118 (see ORCID) indexed publications in WOS or SCOPUS. According to JCR-SCIE, nearly 40 % and 80 % are in D1 and Q1 journals respectively, mostly in PLANT SCIENCES and FORESTRY (e.g. *New Phytologist*, *Plant Physiology*, *Journal of Experimental Botany*, *Plant Cell and Environment*, *Current Forestry Reports*, *Tree Physiology*). According to SCOPUS (6602328866), nearly 90% of his papers are in the top 25% journal (CiteScore), they have obtained more than 4000 citations (H=39) and 60% of them are in the top 25% most cited documents worldwide (referred to date 30/11/2023). Although different forest species have been the object of his research (e.g. *Pinus sylvestris*, *Abies pinsapo*) mediterranean oaks (*Quercus ilex*, *Q. faginea* or *Q. coccifera*) have been the main studied species. In fact, ca. 50 of these indexed papers deal with oaks. As a consequence of these contribution to the knowledge of genus *Quercus*, he was invited by the editorial Springer Int. Pub, to edit a book about oak physiology in the *Tree Physiology Series*, with the title “*Oaks Physiological Ecology. Exploring the Functional Diversity of Genus Quercus L.* Springer. DOI: 10.1007/978-3-319-69099-5.” E. Gil actively participate in the coedition of the book but also as co-author in 5 chapters. Among them, it can be highlighted the chapter “*Oaks Under Mediterranean-Type Climates: Functional Response to Summer Aridity.* DOI: 10.1007/978-3-319-69099-5\_5”, a complete review about the multiple response of mediterranean *Quercus* to cope with the stressful periods under mediterranean-type climate.

Besides these indexed publications, E. Gil has co-authored more than 30 non-indexed publications and co-authored more than 50 communications to international and national conferences. He co-organized of the “IV Coloquio de Primavera sobre Ecofisiología Forestal (Añón de Moncayo, 2014) and he is part of the organizing and scientific committees of the “XVI Portuguese-Spanish Symposium on Plant Water Relations” (CITA de Aragón, CSIC, SEBP), to be held in Zaragoza, February 2024).

He has supervised 8 Doctoral Theses (A. Vilagrosa 2002, L. Corcuera 2003; J. Pemán 2006, JJ Peguero 2008, J Esteso 2010, D. Sancho 2012, S. Siso 2019, D. Alonso-Forn 2023), three of them with doctorate award (Univ. Lleida, Univ. Zaragoza), and another one is under progress now (R. Martín-Sánchez). Out of the 9 theses, 8 are directly or mostly related to the ecophysiology of different species of genus *Quercus*, such as “L. Corcuera. Respuesta al clima de distintas especies del género *Quercus* L.: estructura y funcionamiento comparado. U. de Lleida. 01/05/2003” or S Sisó. Factores morfológicos y anatómicos que regulan el intercambio de gases en especies mediterráneas del género *Quercus*. U. de Zaragoza. 30/09/2019”. Moreover, his dedication to educational tasks also includes the supervision of 10 Final Projects (graduate and master) and his cooperation in courses in different academic frameworks.

## Part C. RELEVANT MERITS (sorted by typology)

### C.1. Publications (see instructions)

-Sancho-Knapik D, Mendoza-Herrer O, Alonso-Forn ,D, Ángel Saz MA, Martín-Sánchez R, dos Santos Silva JV, Ogee J, Peguero-Pina JJ, Gil-Pelegrín E, Ferrio JPa. 2022. Vapor pressure deficit constrains transpiration and photosynthesis in holm oak: A comparison of three methods during summer drought. *Agric For Meteorol* 327, 109218. SCIE: D1 (3/69) FORESTRY.

- Sancho-Knapik, D; Escudero, A; Mediavilla, S; Scoffoni, C; Zailaa, J; Cavender-Bares, J; Alvarez-Arenas, TG; Molins, A; Alonso-Forn, D; Ferrio, JP; Peguero-Pina, JJ; **Gil-Pelegrin, E.** 2021. Deciduous and evergreen oaks show contrasting adaptive responses in leaf mass per area across environments. *New Phytologist*. 230 (2): 521-534. DOI: 10.1111/nph.17151. SCIE: D1. (8/239) PLANT SCIENCES



- Fernández, V; **Gil-Pelegrín, E**; Eichert, T. 2021. Foliar water and solute absorption: an update. *Plant Journal* 105(4): 870-883. DOI: 10.1111/tpj.15090. SCIE: D1. (17/239) PLANT SCIENCES (2020).
- Alonso-Forn, D; Peguero-Pina, JJ; Ferrio, JP; Mencuccini, M; Mendoza-Herrer, O; Sancho-Knapik, D; **Gil-Pelegrín, E**. 2021. Contrasting functional strategies following severe drought in two Mediterranean oaks with different leaf habit: *Quercus faginea* and *Quercus ilex* subsp. *rotundifolia*. *Tree Physiology* 41(3): 371-387. DOI: 10.1093/treephys/tpaa135. SCIE: D1. (5/69) FORESTRY.
- Alonso-Forn, D; Sancho-Knapik, D; Ferrio, JP;...; **Gil-Pelegrín, E** (13/13). 2020. Revisiting the Functional Basis of Sclerophylly Within the Leaf Economics Spectrum of Oaks: Different Roads to Rome. *Current Forestry Reports* 6(4): 260-281. DOI: 10.1007/s40725-020-00122-7. SCIE: D1 (1/67) FORESTRY
- Resco de Dios, VR; Arteaga, C; Peguero-Pina, JJ;...; **Gil-Pelegrín, E**. (13/13). 2020. Hydraulic and photosynthetic limitations prevail over root non-structural carbohydrate reserves as drivers of resprouting in two Mediterranean oaks. *Plant Cell and Environment*. 43(8): 1944-1957. DOI: 10.1111/pce.13781. SCIE: D1 (11/235) PLANT SCIENCES
- Peguero-Pina, J.J.; S. Siso; J. Flexas; J;...; **E. Gil-Pelegrín** (9/9). 2017. Cell-level anatomical characteristics explain high mesophyll conductance and photosynthetic capacity in sclerophyllous Mediterranean oaks. *New Phytologist*. 214 (2): 585 - 596. DOI: 10.1111/nph.14406. SCIE: **D1** (7/223). PLANT SCIENCES
- Peguero-Pina, J.J.; S. Siso; J. Flexas; J. Galmes; U. Niinemets; D. Sancho-Knapik; **E. Gil-Pelegrín**. 2017. Coordinated modifications in mesophyll conductance, photosynthetic potentials and leaf nitrogen contribute to explain the large variation in foliage net assimilation rates across *Quercus ilex* provenances. *Tree Physiology*. 37(8): 1084-1094. DOI: 10.1093/treephys/tpx057. SCIE: **D1** (2/64). FORESTRY
- Fernández, V; Sancho-Knapik, D.; Guzmán, P;...; **Gil-Pelegrín, E** (11/11). 2014. Wettability, Polarity, and Water Absorption of Holm Oak Leaves: Effect of Leaf Side and Age. *Plant Physiology*. 166 (1): 168–180. DOI: 10.1104/pp.114.242040. SCIE: **D1** (6/196). PLANT SCIENCES.
- Peguero-Pina, JJ; Sancho-Knapik, D; Barron, E; Camarero, JJ; Vilagrosa, A; **Gil-Pelegrín, E**. 2014. Morphological and physiological divergences within *Quercus ilex* support the existence of different ecotypes depending on climatic dryness. *Annals of Botany*. 114 (2): 301-313. DOI: 10.1093/aob/mcu108. WOS. SCOPUS. **Q1** (30/193) PLANT SCIENCES.
- Vilagrosa, A; Bellot, J; Vallejo, VR; E. Gil-Pelegrín, E. 2003. Cavitation, stomatal conductance, and leaf dieback in seedlings of two co-occurring Mediterranean shrubs during an intense drought. *Journal of Experimental Botany*. 54 (390): 2015-2024. DOI: 10.1093/jxb/erg221. SCIE: **D1** (12/136). PLANT SCIENCES.

**C.2. Congress**, indicating the modality of their participation (invited conference, oral presentation, poster)

- Flexas, J.; Carriquí, M.; Clemente, M.J.; Coopman, R.; Gago, J.; Galmés, J.; **Gil-Pelegrín, E.**; Gulías, J.; Nadal, M.; Peguero-Pina, J.J.; Rojas, R.; Sancho-Knapik, D.; Ribas-Carbó, M. Searching for the perfect mesophyll: a trade-off between productivity and stress resistance? In: Functional Ecology Conference. Analyses et Expérimentations pour les Ecosystèmes France. 28/03/2017. Montpellier. Francia. Oral communication.
- Guzmán, P.; Fernández, V.; Sancho-Knapik, D; Peguero-Pina, J.J.; Khayet, M.; Gil, L.; **Gil-Pelegrín, E**. Wettability and other surface properties of *Quercus ilex* leaves as affected by leaf side and developmental stage. In: 19th FESPB/EPSO Congress. FESPB/EPSO. 23/06/2014. Dublin. Ireland. Poster.
- Corcuera, L.; Peguero-Pina, J.J.; Gil-Pelegrín, E. TÍTULO DEL TRABAJO: Winter temperature rising in cold Mediterranean areas. A new chance for the evergreen oak species? *Adaptation of Forests and Forest Management to Changing Climate with Emphasis on Forest Health: A Review of Science, Policies, and Practices*. F.A.O., I.U.F.R.O. 25/08/2008. Ümea, Suecia. Poster.
- Peguero-Pina, JJ; Morales, F; Flexas, J; Gil-Pelegrín, E; Moya, I. Remotely-sensed physiological reflectance index (PRI): a water stress indicator at canopy level for intense

drought in Mediterranean evergreen species. 3<sup>rd</sup> International Workshop on Remote Sensing of Vegetation Fluorescence. European Space Agency. 08/02/2007. Florencia. Italia.

- Vilagrosa, A.; Bellot, J.; **Gil-Pelegrín, E.** TÍTULO DEL TRABAJO: Xylem embolism and drought resistance strategy in seedlings of two mediterranean shrubs: *Quercus coccifera* and *Pistacia lentiscus*. 2nd International Workshop on Functional-Structural Tree Models. 01/10/1998. Clermond-Ferrand. Francia. Oral communication.

-Vilagrosa, A.; **Gil-Pelegrín, E.**; Cortina, J.; Vallejo, V.R. Ecophysiological and morphological traits of *Quercus coccifera* as a tool to improve seedling establishment in reforestation. VII International Congress of Ecology. INTECOL. 01/07/1998. Florencia. Italia. Oral communication.

- Vilagrosa, A.; Bellot, J.; Gil-Pelegrín, E. Water relations and hydraulic architecture of two Mediterranean shrubs: *Quercus coccifera* and *Pistacia lentiscus*. 4th International Workshop on Field Techniques for Environmental Physiology. 01/04/1998. Almería (Spain). Oral communication

- Gil Pelegrín, E.; Castro, P.; Cornelissen, H.; Maestro, M.; Montserrat-Martí, G.; Villar, P. species. XX International IUFRO Congress. UFRO. 01/08/1995. Tampere (Finland). Invited conference.

**C.3. Research projects**, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

-Project name: PED2021-129499A-I00. MANAGE4FUTUR: Toward effective management practices to enhance carbon sequestration and climate change of spanish Quercus forests. IP: Ana López Ballesteros. Funding Entity: Agencia Estatal de Investigación, Ministerio de Ciencia e Innovación/UE. 01/12/2022-30/11/2024. 212.750 €. Active participation in the configuration, theoretical background and design of the objectives and methodology. Active participation in data obtaining and result tracking.

-Project Name: PID2019-106701RR-I00. CO2PPICE: La gestión forestal como herramienta revitalizadora del monte bajo de quercíneas: reactivación de sumideros de carbono y otros servicios ecosistémicos. IP: Juan Pedro Ferrio Díaz. Funding Entity: Agencia Estatal de Investigación, Min. Ciencia e Innovación. 01/06/2020-2023 (extended). 229.900 €. Active participation in the configuration and design of the objectives and methodology. Active participation in data obtaining and result tracking.

-Project Name: RTA2015-00054-C02-01. Aplicación de nuevas tecnologías al desarrollo de sensores para el seguimiento no destructivo del estado hídrico de la encina (*Quercus ilex* L.) en plantaciones truferas. IP: JJ. Peguero Pina. Funding Entity: INIA. Start Date: 01/03/2017. 3 years. 126.000 €. Active participation in the configuration and design of the objectives and methodology. Active participation in data taking and the result tracking.

- Project Name: SUM2008-00004-C03-03. Mejora de la precisión de los modelos de asimilación de carbono a escala foliar: limitaciones anatómicas y metabólicas a la fotosíntesis neta. IP: E. Gil Pelegrín. Funding Entity: INIA. Start Date: 01/01/2009. 130.000 €. Full responsible of the design and theoretical basis. Full responsible of the working plan development.

- Project Name: SC96-086. La "seca" de montes bajos de encina (*Quercus ilex* subsp. *ballota* (Desf) Samp) en Aragón. Causas, síntomas y tratamientos selvícolas de control. PI: E. Gil-Pelegrín. Funding Entity: Programa Sectorial I+D Agrario y Alimentario del MAPA. INIA. Start Date: 01/01/1996. 4 years. Full responsible of the project since its design and development.

**C.4. Contracts, technological or transfer merits**, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

Application P201030895: Dispositivo de medida del contenido en agua de elementos laminares. Inventors: Gil Pelegrín E; Peguero Pina JJ; Gismero Menoyo J; Asensio Lopez A; Sancho-Knapik D. Entity holder of rights: C.I.T.A. de Aragón. Country of inscription: Spain, Aragon. Date of register - conferral: 09/06/2010 - 23/10/2013