

<b>CV date</b>	30/1/2023
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## Part A. PERSONAL INFORMATION

First and Family name		Francisco Albuquerque Sendín		
Social Security, Passport, ID number		70864306H Passport: PAG160456	Age	45
Researcher codes	Open Researcher and Contributor ID (ORCID) **		orcid.org/0000-0002-3892-8440	
	SCOPUS Author ID(*)		23491589400	
	WoS Researcher ID (*)		L-1539-2016	

(\*) Optional (\*\*) Mandatory

### A.1. Current position

Name of University/Institution	University of Cordoba			
Department	Nursing, Pharmacology and Physical therapy			
Address and Country	Facultad de Medicina y Enfermería. Avda. Menéndez Pidal s/n, 14004, Córdoba			
Phone number	(+34) 626880871	E-mail	<a href="mailto:falburquerque@uco.es">falburquerque@uco.es</a>	
Current position	Prof. Titular de Universidad / Associate Professor		From	2010
Key words	Pain, Biomechanics, Diagnostic, Disability			

### A.2. Education

PhD	University	Year
Neurosciences	University of Salamanca	2008

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

- WOS (terms: alburquerque-sendin OR albuquerque-sendin OR sendin FA): Total cites: 1994; Average citation per year (last 5 years): **243 cites**; 75 JCR articles (**30 Q1; 32 preferent-author**); **h Index: 26** (date: 30-01-2023); Percentage of works in international collaboration: 26/30=**86.7%**; Percentage of works cited: 32/35 = **91.4%**.
- Normalized Impact factor (Scopus, date 2/11/2020, with 1 as the reference value for normalization, period: 2015-2018): **1,93**.
- 3 positive assessed research periods CNEAI. Last period: 2015-2020 (100% of possible ones).
- 8 co-supervised Thesis.

## Part B. CV SUMMARY

The author of this CV, Dr. Albuquerque, presents extensive experience in the research, clinical, and teaching fields, which began with the Diploma in Physical Therapy in 1998 (professional career for more than 20 years).

Despite the limited research tradition of Physical Therapy in Spain, Dr. Albuquerque started his research activity in 2000, in the field of Anthropometry and Body Composition. Since the defense of his **Thesis (2008)**, his line of research focused on the study of pain and biomechanics in different clinical entities, such as **low back pain, neck pain**, fibromyalgia, plantar fasciitis, subacromial syndrome, **osteoarthritis**, tension type headache, ankle instability, headache and pediatric neurology. This activity was supported by a **multidisciplinary team** (physiotherapists, nurses, physicians, statisticians, engineers) and an **international network** (USA, Brazil, Portugal, Denmark). The important scientific production as result of the stays made in the Department of Physical Therapy of the Federal University of Sao Carlos (State of Sao Paulo, Brazil) for more than 20 months should be highlighted. Material resources and grants were also obtained from different local, regional and inter-institutional projects.

The research activity developed has produced important **advances in the understanding and determination of the clinical relevance of pain** (myofascial pain, topographical pain maps) in musculoskeletal (low back pain, neck pain, temporo-mandibular disorders, ankle instability, subacromial syndrome) and neurological (headache, cerebral palsy) pathology and its relationship with

**biomechanics and disability.** The improvement in the description of the syndromes has allowed to complete different therapeutic approaches, including motor control, kinematics, myofascial, and analgesic techniques that improve the quality of the patient's life.

The interest of Dr. Albuquerque in the physiopathological characteristics of pain syndromes has increased after his transfer from the University of Salamanca to the University of Córdoba, and his inclusion in the **Group GC05 Systemic and chronic inflammatory autoimmune diseases of the locomotor system and connective tissue (Maimonides Institute of Biomedical Research of Córdoba)**, where an intense collaboration has begun between the Rheumatology Service (Reina Sofía University Hospital of Córdoba), and the Physical Therapy Area (University of Córdoba - Spain).

Quantitative data:

- Researcher, both principal and collaborator, of local (1), regional (3), national (2), and agreements (6) projects, since 2008.
- 105 papers published in national and international journals (75 included in JCR) on issues related to pain, biomechanics, physical therapy and body composition.
- Reviewer of 30 scientific journals from different JCR quartiles

## Part C. RELEVANT MERITS

### C.1. Publications

1. M.N. Haik, **F. Albuquerque-Sendín**, P.R. Camargo. "Reliability, Standard Error and Minimal Detectable Change of 3D Scapular Kinematics in Subjects With and Without Shoulder Impingement". *Journal of Orthopaedic & Sports Physical Therapy*. 44(5): pg. 341-9 (2014). doi: 10.2519/jospt.2014.4705
2. P.R. Camargo, **F. Albuquerque-Sendín**, M.A. Avila, M.N. Haik, A. Vieira, T.F. Salvini. "Effects of stretching and strengthening exercises with and without manual therapy on scapular kinematics, function, and pain in individuals with shoulder impingement: a randomized controlled trial". *Journal of Orthopaedic & Sports Physical Therapy*. 45(12): pg. 984-97 (2015). 8/10 PEDro escala. doi: 10.2519/jospt.2015.5939
3. D.P Rodrigues-de-Souza, D. Palacios-Ceña, L. Moro-Gutiérrez, P.R. Camargo, T.F. Salvini, **F. Albuquerque-Sendín**. "Socio-cultural factors and experience of Chronic Low Back Pain: a Spanish and Brazilian Patients' Perspective. A Qualitative Study". *PLOS one*. 11(7) pg. e0159554 (2016). doi: 10.1371/journal.pone.0159554
4. M.A. Ávila, P. Rezende Camargo, I.L. Ribeiro, **F. Albuquerque-Sendín**, A.R. Zamunér, T. Salvini. "Effects of a 16-week hydrotherapy program on three-dimensional scapular motion and pain of women with fibromyalgia: a single-arm study". *Clinical Biomechanics (Bristol, Avon)*. 49C pg: 145-154 (2017). doi: 10.1016/j.clinbiomech.2017.09.012
5. L.B. Calixtre, T.H. Nakagawa, **F. Albuquerque-Sendín**, B. Grüniger, L.R.S. Rosa, A.B. Oliveira. "Inter- and intra-rater reliability of 3D kinematics during maximum mouth opening of asymptomatic subjects". *Journal of Biomechanics*. 64(7) pg: 245-252 (2017). doi: 10.1016/j.jbiomech.2017.09.038
6. L. Bojikian Calixtre, A.B. de Oliveira, L. Ramalho de Sena Rosa, S. Armijo-Olivo, C. Mirjam Visscher, **F. Albuquerque-Sendín**. "Effectiveness of mobilization of the upper cervical region and craniocervical flexor training on orofacial pain, mandibular function, and headache in women with TMD. A randomized, controlled trial". *Journal of Oral Rehabilitation*. 46(2) pg:109-119 (2019). doi: 10.1111/joor.12733.
7. I. Leão Ribeiro, P. Rezende Camargo, S. Peviana Messa, **F. Albuquerque-Sendín**, C. Arrais, A. Viana Ferrari, J. Batista Carvalho, T. Fátima Salvini. "Three-dimensional scapular kinematics, shoulder outcome measures, and quality of life following treatment for breast cancer – a case control study". *Musculoskeletal Science and Practice: an international journal of musculoskeletal physiotherapy (Manual Therapy)*. 40(4) pg: 72-79 (2019). doi: 10.1016/j.msksp.2019.01.012.
8. C. Carmona-Pérez, J.L. Garrido-Castro, F. Torres Vidal, S. Alcaraz-Clariana, L. García-Luque, **F. Albuquerque-Sendín\***, D.P. Rodrigues-de-Souza. "Concurrent validity and reliability of an inertial measurement unit for the assessment of craniocervical range of motion in subjects with cerebral palsy". *Diagnostics*. 10(2) pg:80 (2020). doi: 10.3390/diagnostics10020080
9. C. Carmona-Pérez, A. Pérez-Ruiz, J.L. Garrido-Castro, F. Torres Vidal, S. Alcaraz-Clariana, L. García-Luque, D.P. Rodrigues-de-Souza\*, **F. Albuquerque-Sendín**. "Design, validity and reliability of a new test, based on an inertial measurement unit system, for measuring cervical posture and motor

control in individuals with cerebral palsy”. *Diagnostics*. 10(9): E661 (2020). doi: 10.3390/diagnostics10090661

**10.** Alcaraz-Clariana S, García-Luque L, Garrido-Castro JL, Fernández-de-Las-Peñas C, Carmona-Pérez C, Rodrigues-de-Souza DP, **Alburquerque-Sendín F**. Paravertebral Muscle Mechanical Properties and Spinal Range of Motion in Patients with Acute Neck or Low Back Pain: A Case-Control Study. *Diagnostics*. 2021;11(2):352. doi: 10.3390/diagnostics11020352.

**11.** D.P. Rodrigues-de-Souza, S. Alcaraz-Clariana, L. García-Luque, C. Carmona-Pérez, J.L. Garrido-Castro, I. Cruz-Medel, P.R Camargo, **F. Alburquerque-Sendín**. “Absolute and Relative Reliability of the Assessment of the Muscle Mechanical Properties of Pelvic Floor Muscles in Women with and without Urinary Incontinence”. *Diagnostics*, 11(12), pg: 2315 (2021). doi: 10.3390/diagnostics11122315.

**12.** S. Alcaraz-Clariana, L. García-Luque, J.L. Garrido-Castro, C. Carmona-Pérez, D.P. Rodrigues-de-Souza, C. Fernández-de-las-Peñas, **F. Alburquerque-Sendín**. “Influence of spinal movements associated with physical evaluation on muscle mechanical properties of the lumbar paraspinal in subjects with acute low back pain”. *Diagnostics*, 12(2), pg: 302 (2022). doi: 10.3390/diagnostics12020302.

**13.** D.P. Rodrigues-de-Souza, A.C.S. Beleza, L. García-Luque, S. Alcaraz-Clariana, C. Carmona-Pérez, A. De Miguel-Rubio, M.T. Garzón-Alfaro, I. Cruz-Medel, J.L. Garrido-Castro, **F. Alburquerque-Sendín**. “Asymmetries of the Muscle Mechanical Properties of the Pelvic Floor in Nulliparous and Multiparous Women, and Men: A Cross-Sectional Study”. *Symmetry*. 2022, 14(10), 2124; <https://doi.org/10.3390/sym14102124>.

## C.2. Research projects and grants (last 10 years)

**1.** “Efeitos da manipulação torácica na cinemática escapular, dor e ativação muscular em sujeitos assintomáticos e portadores de síndrome do impacto – um estudo controlado randomizado”, FAPESP call for projects (Reference: 2012/22209-6). Position: Researcher. Coordinator: Paula Rezende Camargo. Time: 01/11/2013 to 30/06/2016.

**2.** “Influencia de la sensibilidad dolorosa en el éxito quirúrgico en patología degenerativa discal: establecimiento de modelos predictivos”, Gerencia Regional de Salud de Castilla y León, research projects period 2015-2016 (tipo A, reference GRS 1190/A/15). Grant: 2.600€. Time: 1 year. Position: Researcher.

**3.** “Capacidad predictiva de la sensibilidad al dolor en el resultado de la artroplastia total de rodilla secundaria a osteoartritis avanzada”, Proyectos de investigación en biomedicina a desarrollar en los centros de la Gerencia regional de salud de Castilla y León, period 2015-2016 (reference BIO/SA64/15). Grant: 2.560€. Time: 1 year. Position: Principal researcher.

**4.** “Study of the sensorial, perceived pain, quality of life and biomechanical adaptations associated to physical therapy intervention in the fibromyalgic syndrome”, call for projects UNIVERSIDAD DE SALAMANCA-FAPESP CALL FOR PROPOSALS (2015), (reference USal 8247/463AB08, reference FAPESP 2015/50303-5). Grant: 19.500€. Time: 2 years. Position: Principal researcher (Spanish partner) and Da. Tania de Fátima Salvini (Brazilian partner).

**5.** “ATM: avaliação cinemática e tratamento da disfunção por terapia manual e estabilização segmentar da coluna cervical”, FAPESP (Brazil) call for projects (Reference: 2014/05276-7). Position: Researcher. Coordinator: Ana Beatriz de Oliveira. Time: 01/10/2015 a 31/08/2017.

**6.** “Evaluación Clinimétrica de Los Sensores Inerciales de Movimiento en la Columna Cervical de Pacientes Con Parálisis Cerebral: Validez, Fiabilidad y Patrones de Comportamiento”, SUBVENCIONES PARA LA FINANCIACION DE LA I+D+i BIOMÉDICA Y EN CIENCIAS DE LA SALUD EN ANDALUCÍA: PROYECTOS DE INVESTIGACIÓN EN SALUD (Orden de 19 de mayo de 2016-BOJA nº 98 de 25 de mayo 2016), year 2017 (reference PI-0324-2017). Grant: 15.954,990 €. Time: 3 years. Position: Principal researcher.

**7.** “Desarrollo y Validación del uso de sensores inerciales aplicado a la metrología de pacientes con Espondiloartritis Axial”, Instituto Carlos III de Subvenciones de Proyectos de Investigación en Salud (modalidad Proyectos de Desarrollo Tecnológico en Salud (reference DTS18/00046). Grant: 31.350,00€. Time: 2 years. Position: Researcher.

**8.** “Efeitos de um programa de fortalecimento dos músculos do tornozelo e pé nos aspectos clínicos e biomecânicos da marcha em indivíduos com osteoartrite do joelho: ensaio clínico randomizado e cego”, FAPESP (Brazil) call for projects (Reference 2019/21814-2). Coordinator: Tania de Fatima Salvini. Grant: 41.478,84 R\$. Time: 2 years (01/03/2020 to 28/02/2022). Position: Researcher.

### **C.3. Patents**

BLANCO C; SANCHEZ ALONSO E M. Patent N°: ES2322417-A1; ES2322417-B1. Thrustimeter. Dynamometry system for manual health techniques. Approved: 2010.

### **C.4. Reviewer activity**

1. Scientific advisor of the Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP), from Brazil, since January 2014 (more than 20 projects assessed).
2. Reviewer of the Brazilian Journal of Physiotherapy since March 2004 (Associated Editor since September 2014) until today. Honorable Mention as the Associate Editor who made more revisions in 2016. Honorable Mention as the Associate Editor who made the fastest revisions in 2017.
3. Guest Editor of Diagnostics (JCR(2019): 3.110-Q1, Subject: Medicine, General & Internal).
4. Reviewer for 30 scientific journal (JCR): American Journal of Physical Medicine & Rehabilitation, Clinical Journal of Pain, Journal of Aging and Physical Activity, Archives of Gerontology and Geriatrics, Archives of Physical Medicine and Rehabilitation, BMC Musculoskeletal Disorders, BioMed Research International, Evidence-Based Complementary and Alternative Medicine, Journal of Manipulative and Physiological Therapeutics, Arthritis Care & Research, Journal of Alternative and Complementary Medicine, Physiotherapy Theory and Practice, Pain Medicine, Manual Therapy, Patient Preference and Adherence, Plos ONE, Interactive Journal of Medical Research, Journal of Visualized Experiments (JoVE), Physiological Measurement, Journal of Pain Research, Geriatrics & Gerontology International, Acupuncture in Medicine, Clinical Rehabilitation, Physician and Sportsmedicine, Scientific Reports, Diagnostics, Sensors, BMJ open, PeerJ, Symmetry.
5. Reviewer for the McMaster Online Rating of Evidence (MORE). McMaster University (Canada).

### **C.6. Scientific awards**

1. Doctorate Award (2008). University of Salamanca (Spain) (Premio Extraordinario de Doctorado).
2. 6th award (best communication). 9th Congress of Reabilitação Profissional e Gestão dos afastamentos. Centro Brasileiro de Segurança e Saúde Industrial (Campinas -Brazil-). 2016.
3. Highly cited paper (top 5) in JMPT (Source: SCOPUS 2013). Authors: N.M. Oliveira-Campelo, C.A. Melo, F. Albuquerque-Sendín, J.P. Machado Article doi: 10.1016/j.jmpt.2013.04.008.
4. Honorable mention to the communication: “Hipoalgesia após manipulação torácica em indivíduos com diferentes níveis de dor no ombro” Authors: M.N. Haik, F. Albuquerque-Sendín, P.R. Camargo. Organism: VI International Congress of Osteopathy, Campinas - SP (Brazil). 2017.
5. 3rd prize for Best communication: “Perfil biopsicossocial em indivíduos com dor aguda e crônica no ombro – análise preliminar”. Authors: M. Haik, D.P. Rodrigues de Souza, F. Albuquerque, P.R. Camargo. Organism: VIII International Congress of Osteopathy. Campinas - SP (Brazil). 2019.

### **C.7. Supervised academic works**

1. 12 Master's thesis. Tropical diseases, and Anthropology, Health y Community development Masters (Univ. Salamanca-Spain); Physical Therapy Master (UFSCar- Brazil).
2. 41 Bachelor's thesis. Physical Therapy Grade (Univ. Salamanca/Univ. Cordoba), Spain.

### **C.8. Institutional responsibilities**

Responsible of the Physical Therapy Grade Course. Univ. Córdoba (Spain). Since September-2016.