

# Producción científica, julio 2020

Boletín de publicaciones de producción científica de la  
Universidad Pablo de Olavide.

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N.º de Boletín: 5/2020

Biblioteca/CRAI

Servicio de Apoyo a la Investigación

Sevilla, agosto de 2020



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## Metodología

El presente Boletín de Producción científica está destinado a la difusión mensual de la producción científica de los investigadores de la Universidad Pablo de Olavide, en Web of Science, Scopus y Dialnet.

La Biblioteca/CRAI de la UPO, como apoyo a la investigación de la comunidad universitaria del Personal Docente e Investigador, elabora este producto para la visibilidad de la Universidad con relación a su producción científica.

Los datos se obtienen de la colección de la Web of Science, de la base de datos referencial Scopus (Elsevier) y de la base de datos Dialnet.

El listado de las referencias bibliográficas junto a sus resúmenes, que suponen el resultado de la producción científica institucional mensual, ha sido elaborado a partir de la búsqueda en las diferentes bases de datos, utilizando para ello estrategias de búsqueda avanzada.

### 1. Web of Science

Estrategia de búsqueda avanzada:

OG=(Universidad Pablo de Olavide)

Índices=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI

Período de tiempo=Año hasta la fecha

### 2. Scopus

Estrategia de búsqueda avanzada:

(( AF-ID ("CSIC-JA-UPO-USE - Centro Andaluz de Biología Molecular y Medicina Regenerativa CABIMER" 60012334) ) OR (( AF-ID ("Universidad Pablo de Olavide" 60030114) OR AF-ID ("CSIC-JA-UPO - Centro Andaluz de Biología del Desarrollo CABD" 60103756) ) ) AND ( LIMIT-TO ( PUBYEAR , 2020 )

### 3. Dialnet

Para obtener la producción científica dese se ha seguido un procedimiento para la importación de ficheros al Gestor de Referencias Bibliográficas (Zotero).

Una vez obtenidos todas las referencias de las publicaciones se ha generado la bibliografía con Zotero.

Fecha de recolección de datos:

Web of Science y Scopus: 26/08/2020

Dialnet: 25/08/2020



## Publicaciones

AL MAHMUD, M.R., ISHII, K., BERNAL-LOZANO, C., DELGADO-SAINZ, I., TOI, M., AKAMATSU, S., FUKUMOTO, M., WATANABE, M., TAKEDA, S., CORTÉS-LEDESMA, F. y SASANUMA, H., 2020. TDP2 suppresses genomic instability induced by androgens in the epithelial cells of prostate glands. *Genes to Cells*, vol. 25, no. 7, pp. 450-465. DOI 10.1111/gtc.12770

Androgens stimulate the proliferation of epithelial cells in the prostate by activating topoisomerase 2 (TOP2) and regulating the transcription of target genes. TOP2 resolves the entanglement of genomic DNA by transiently generating double-strand breaks (DSBs), where TOP2 homodimers covalently bind to 5' DSB ends, called TOP2-DNA cleavage complexes (TOP2ccs). When TOP2 fails to rejoin TOP2ccs generating stalled TOP2ccs, tyrosyl DNA phosphodiesterase-2 (TDP2) removes 5' TOP2 adducts from stalled TOP2ccs prior to the ligation of the DSBs by nonhomologous end joining (NHEJ), the dominant DSB repair pathway in G0/G1 phases. We previously showed that estrogens frequently generate stalled TOP2ccs in G0/G1 phases. Here, we show that physiological concentrations of androgens induce several DSBs in individual human prostate cancer cells during G1 phase, and loss of TDP2 causes a five times higher number of androgen-induced chromosome breaks in mitotic chromosome spreads. Intraperitoneally injected androgens induce several DSBs in individual epithelial cells of the prostate in TDP2-deficient mice, even at 20 hr postinjection. In conclusion, physiological concentrations of androgens have very strong genotoxicity, most likely by generating stalled TOP2ccs. © 2020 The Authors. *Genes to Cells* published by Molecular Biology Society of Japan and John Wiley & Sons Australia, Ltd.

ALARCON GONZALEZ, F.J. y MANUEL TRUJILLO, J., 2020. Measurement of Political Calling Based on the Adaptation and Validation of the Calling Scale. *Revista Espanola De Investigaciones Sociologicas*, no. 171, pp. 3-22. ISSN 0210-5233. DOI 10.5477/cis/reis.171.3.

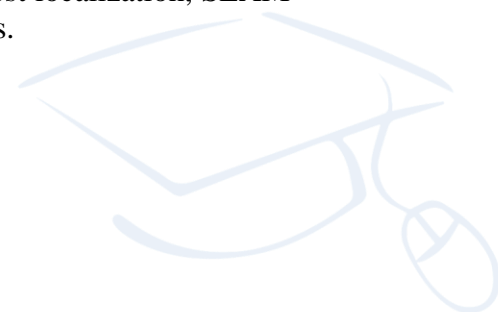
Despite the importance of vocation in the exercise of politics, social sciences have not been equipped with an element that allows them to work empirically with it. This article aims to present the whole process to set up and validate the political vocation scale from the calling scale of Dobrow and Tosti-Kharas (2011). The analysis of psychometric properties is carried out on a sample of members of Spanish youth political sections. Two adaptations were completed - professional politics field and Spanish cultural context -, and later, a validation of psychometric properties. In this way, the internal structure of the scale is analysed: dimensionality, reliability and validity; in this last point a distinction is made between discriminant and nomological validity. The scale has a good configuration with allows its use in future research.

ALARCÓN GONZÁLEZ, F.J. y TRUJILLO, J.M., 2020. Medición de la vocación política a partir de la adaptación y validación de la escala Calling. *REIS: Revista Española de Investigaciones Sociológicas*, no. 171, pp. 3-22. ISSN 0210-5233.

A pesar de la importancia de la vocación en el ejercicio de la política, las ciencias sociales no disponen de un instrumento que permita trabajarempíricamente con dicho concepto. Ante ello, el objetivo principal deeste trabajo es presentar el proceso completado para la adaptación yvalidación de una escala de vocación política a partir de la escala callingde Dobrow y Tosti-Kharas (2011). Este se llevó a cabo en el marco deuna investigación a miembros de organizaciones políticas juveniles,implicando primero una doble adaptación —al ámbito de la política y alcontexto cultural español— y, posteriormente, una validación respectoa las principales propiedades psicométricas mostradas. En este últimoaspecto, el trabajo analiza la estructura interna de la escala respectoa su dimensionalidad, fiabilidad y validez, distinguiendo en esta últimavertiente entre validez discriminante y nomológica. Los resultadosponen de manifiesto una buena capacidad de la herramienta quepermite su uso en futuras investigaciones.

ALEJO, D., CHATAIGNER, F., SERRANO, D., MERINO, L. y CABALLERO, F., [sin fecha]. Into the dirt: Datasets of sewer networks with aerial and ground platforms. *Journal of Field Robotics*, ISSN 1556-4959. DOI 10.1002/rob.21976.

This paper presents an unprecedented set of data in a challenging underground environment: the visitable sewers of Barcelona. To the best of our knowledge, this is the first data set involving ground and aerial robots in such scenario: the sewer inspection autonomous robot (SIAR) ground robot and the autonomous robot for sewer inspection aerial platform. These platforms captured data from a great variety of sensors, including sequences of red green blue-depth (RGB-D) images with their onboard cameras. The set consists of 14 logs of experiments that were obtained in more than 10 different days and in four different locations. The complete length of the experiments in the data set exceeds 5 km. In addition, we provide the users with a partial ground-truth and baselines of the localization of the platforms, which can be used for testing their localization and simultaneous localization and mapping (SLAM) algorithms. We also provide details on the setup and execution of each mission and a partial labeling of the elements found in the sewers. All the data were recorded by using the rosbag tool from robot operating system framework. Our goal is to make the data available to the scientific community as a benchmark to test localization, SLAM and classification algorithms in underground environments.



ÁLVAREZ CÓRDOBA, M. y SÁNCHEZ-ALCÁZAR, J.A., 2020. *Búsqueda de tratamientos para la neurodegeneración con acumulación cerebral de hierro*. S.l.: s.n.

La neurodegeneración con acumulación de hierro en el cerebro (NACH) es un grupo de trastornos neurológicos hereditarios en los que el hierro se acumula en los ganglios basales y produce distonía progresiva, espasticidad, parkinsonismo, anomalías neuropsiquiátricas y atrofia óptica o degeneración retiniana. La forma más frecuente de NACH es la neurodegeneración asociada a pantotenato quinasa (PKAN) asociada con mutaciones en el gen de pantotenato quinasa 2 (PANK2), que es esencial para la síntesis de coenzima A (CoA). No hay cura para las NACH ni hay un tratamiento estándar. En la presente Tesis, describimos que los fibroblastos derivados de pacientes que albergan mutaciones PANK2 pueden reproducir muchas de las alteraciones patológicas celulares que se encuentran en la enfermedad, como la acumulación intracelular de hierro y lipofuscina, el aumento del estrés oxidativo, la disfunción mitocondrial y una morfología senescente característica. El tratamiento con pantotenato, el sustrato enzimático PANK2, fue capaz de corregir todas las alteraciones patológicas en los fibroblastos mutantes respondedores con expresión residual de la enzima PANK2. Sin embargo, el pantotenato no tuvo efecto sobre los fibroblastos mutantes con expresión de la proteína truncada/ incompleta. El efecto positivo del pantotenato en mutaciones particulares también se confirmó en neuronas inducidas obtenidas por reprogramación directa de los fibroblastos mutantes. Nuestros resultados sugieren que el tratamiento con pantotenato puede estabilizar los niveles de expresión de la PANK2 en mutaciones seleccionadas. Estos resultados nos animan a proponer nuestro modelo de detección como una forma rápida y fácil de detectar pacientes con mutaciones PANK2 respondedores a pantotenato. La existencia de pacientes con una expresión residual del enzima PANK2 posibilita el tratamiento con altas dosis de pantotenato.

AMORIM, J.P., GALI-MACEDO, A., MARCELINO, H., BORDEIRA-CARRIÇO, R., NARANJO, S., RIVERO-GIL, S., TEIXEIRA, J., GALHARDO, M., MARQUES, J. y BESSA, J., 2020. A Conserved Notochord Enhancer Controls Pancreas Development in Vertebrates. *Cell Reports*, vol. 32, no. 1. DOI 10.1016/j.celrep.2020.107862

The notochord is an evolutionary novelty in vertebrates that functions as an important signaling center during development. Notochord ablation in chicken has demonstrated that it is crucial for pancreas development; however, the molecular mechanism has not been fully described. Here, we show that in zebrafish, the loss of function of *nog2*, a Bmp antagonist expressed in the notochord, impairs  $\beta$  cell differentiation, compatible with the antagonistic role of Bmp in  $\beta$  cell differentiation. In addition, we show that *nog2* expression in the notochord is induced by at least one notochord enhancer and its loss of function reduces the number of pancreatic progenitors and impairs  $\beta$  cell differentiation. Tracing *Nog2* diffusion, we show that *Nog2* emanates from the notochord to the pancreas progenitor domain. Finally, we find a notochord enhancer in human

and mice Nog genomic landscapes, suggesting that the acquisition of a Nog notochord enhancer occurred early in the vertebrate phylogeny and contributes to the development of complex organs like the pancreas. © 2020 The Authors Amorim et al. find that Nog2 is expressed in the zebrafish notochord by the action of a tissue-specific enhancer, and it diffuses to the pancreatic domain and controls its size. The identification of Nog enhancers in other vertebrate lineages suggests a conserved mechanism for pancreas development in vertebrates. © 2020 The Authors

AQUINO LLINARES, N., CARSTEN HUMLEBAEK, RUIZ JIMÉNEZ, A.M., BELMONTE MARTÍN, I., FERRI FUENTEVILLA, E. y ROMERO PORTILLO, D., 2020. La cohesión territorial a través de la identidad nacional: el bienestar como elemento vertebrador de España. *Colección Actualidad (Centro de Estudios Andaluces)*, no. 83, pp. 1-22. ISSN 1699-8294.

El documento ‘La cohesión territorial a través de la identidad nacional: el bienestar como elemento vertebrador de España’, número 83 de la colección Actualidad, una publicación que recoge parte de los resultados de un proyecto de investigación (PRY028/17) homónimo financiado por el Centro de Estudios Andaluces. La finalidad de este trabajo es analizar cuál es la relación que existe entre la identidad nacional española y la percepción ciudadana sobre la economía y el bienestar. Los investigadores analizan tanto las percepciones subjetivas individuales como los indicadores objetivos de los diferentes contextos autonómicos. El objetivo es comprobar si la identidad nacional española ha retrocedido como consecuencia de la Gran Recesión, la crisis económica iniciada en 2008, además de la relación que dicho deterioro guarda con los indicadores económicos y de bienestar. Para realizar este exhaustivo trabajo, el equipo de investigación ha utilizado los barómetros autonómicos del CIS de 2005, 2010 y 2012 –los únicos datos disponibles– con el propósito de comprobar empíricamente la importancia de factores individuales y contextuales (las diferencias entre las diferentes comunidades) sobre los sentimientos de pertenencia de la ciudadanía a España y a su Comunidad Autónoma.

AUBRY, A. y FALLA FALCÓN, N., 2020. Comparativa normativa de la Enseñanza de los idiomas extranjeros en la Educación Básica según la LOE y LOMCE. *IJERI: International journal of Educational Research and Innovation*, no. 14, pp. 36-58. ISSN 2386-4303. 10.46661/ijeri.4119

The Decree of August 10, 2007 (normative development LOE) establishes that students had to learn only one foreign language with a class schedule which exceeded 4 hours per week in each of the cycles. However, the Decree of March 17, 2015 (normative development LOMCE) collects up to a second foreign language and with a direct teaching load of language lessons higher than twice the previous regulations. In addition, the curricular development map in this last law presents the evaluation criteria of each of the cycle and their relation to the rest of the curricular elements. It does not have as a reference the contents for the whole

curriculum development, as in the LOE. In this respect, although the trend of teaching foreign languages in Andalusia follows very ambitious patterns through the development of their curricula from the LOE to the LOMCE, it prioritizes the development of skills at the expense of the accumulation of content. This teaching intent is a big step towards another dimension in the way of acquiring key competences.

AUGOUSTATOS ZARCO, N., 2020. La responsabilidad del socio ante el pasivo sobrevenido cuando percibe la cuota de liquidación en especie. *Derecho de Sociedades: los derechos del socio*. S.l.: Tirant lo Blanch, pp. 1067-1082. ISBN 978-84-13-36778-1.

AVILA, J.M., GALLARDO, A., IBANEZ, B. y GOMEZ-APARICIO, L., [sin fecha]. Pathogen-Induced Tree Mortality Modifies Key Components of the C and N Cycles with No Changes on Microbial Functional Diversity. *Ecosystems*, ISSN 1432-9840. DOI 10.1007/s10021-020-00528-1.

An increase in tree mortality rates as a consequence of biotic disturbances has been detected worldwide. Biotic disturbances in forests might cause significant impacts at ecosystem-level, with strong effects on soil biological activity and organic matter transformation. However, very few empirical studies have explored to date the consequences of biotic disturbances for soil microbial communities and C and N cycles. Here, we assessed the effects of *Quercus suber* dieback, caused by the exotic root pathogen *Phytophthora cinnamomi*, on the soil microbial community and key components of the C and N cycle. We used a spatially explicit neighborhood approach to analyze the effects of *Q. suber* trees with different health status and non-declining coexistent species on soil variables. The study was replicated in the two main *Q. suber* forest types of the region (closed forests and open woodlands) with contrasting soil texture characteristics. Pathogen-induced tree dieback did not affect microbial functional diversity or biomass, but translated into lower soil microbial respiration. Tree mortality induced changes in several variables of the C and N cycle, but the sign and magnitude of these effects varied depending on the local characteristics of soil texture. Coexistent species differed strongly from *Q. suber* in their effects on the C and N cycle. Overall, our results show that tree dieback due to invasive pathogens translates into complex short- and long-term effects on different components of the C and N cycles, despite no effects on microbial functional diversity and biomass.

BALANYÁ ROURE, J.C., EXPÓSITO RAMOS, I., DÍAZ AZPIROZ, M. y JIMÉNEZ BONILLA, A., 2020. Estiramiento paralelo a los ejes de los pliegues en la Unidad de las Nieves (Dominio de Alborán, Béticas Occidentales). *Geogaceta*, no. 67, pp. 7-10. ISSN 0213-683X.

El estiramiento paralelo a las directrices estructurales es un mecanismo fundamental en la cinemática de los arcos orogénicos. Se analiza el caso de las Unidades Frontales -parte más externa de las Zonas Internas- de la Cordillera Bética, en la



parte occidental del Arco de Gibraltar. En la Unidad de las Nieves, cuya estructura es un sinclinal recumbente de vergencia NO, los resultados indican que el estiramiento paralelo se desarrolla en toda la unidad, con características diferentes según las condiciones de la deformación. Este es acomodado principalmente por venas en el flanco normal del plie-gue mayor y por boudinage en el flanco inverso. Las características de los pliegues indican que el mecanismo de plegamiento dominan-te en el flanco normal es el deslizamiento y/o flujo flexural, y en el flanco inverso el aplastamiento de pliegues iniciados por buckling. La localización de la deformación en el SE de la unidad sugiere un mecanismo de overthrust shearing generado por el emplazamiento de los complejos Alpujárride y Maláguide. Por otra parte, el estiramiento paralelo vendría motivado por las direcciones divergentes de thrusting en la parte occidental del Arco de Gibraltar.

BALLESTEROS, J.R., 2020. Dos cartas neolatinas inéditas entre los humanistas Lorenzo Ramírez de Prado (1583-1658) e Isaac Casaubon (1559-1614): Edición, traducción y comentario. *Nova tellus: Anuario del Centro de Estudios Clásicos*, vol. 38, no. 1, pp. 167-189. ISSN 0185-3058. 10.19130/iifl.nt.2020.38.1.0008

The text offers the first edition, Spanish translation and commentary of two Neo-Latin letters exchanged between Lorenzo Ramírez de Prado (1583-1658) and Isaac Casaubon (1559-1614). These letters were the first their authors sent each other. His study illustrates the mechanisms by which the Republic of Letters is managed in late Humanism and allows the reconstruction of the relationship between both scholars.

BALLESTEROS-REGAÑA, C. y FERNÁNDEZ MÁRQUEZ, E., 2020. Accesibilidad de las TIC: nuevos caminos hacia la igualdad social y educativa. *Accesibilidad de las TIC para la diversidad funcional cognitiva*. S.l.: Octaedro, pp. 11-14. ISBN 978-84-18083-26-6.

BENASSI, F., IGLESIAS-PASCUAL, R. y SALVATI, L., 2020. Residential segregation and social diversification: Exploring spatial settlement patterns of foreign population in Southern European cities. *Habitat International*, vol. 101. DOI 10.1016/j.habitatint.2020.102200

Studies on residential segregation of foreign population in Southern Europe usually focus on capital cities, omitting the metropolitan dimension and paying less attention to use of comparable analysis' spatial scales. These issues, together with the dominant use of two-group segregation indexes, prevent identification and classification of metropolitan patterns of residential segregation in such contexts. To overcome these key issues, the spatial segregation of foreign population in 16 Functional Urban Areas (FUAs) was investigated in Italy and Spain using global and local multi-group segregation indexes based on a regular geometry (100 m grid) and confronted with socioeconomic indicators profiling the local context. Results of this study reveal the absence of common metropolitan patterns of residential segregation in both countries. In turn, a

greater level of residential segregation is correlated with a lower presence of immigrant population and depressed socioeconomic conditions of each FUA, suggesting the existence of a downward spiral toward social vulnerability in the most disadvantaged cities. These results finally indicate the increasing difficulties faced by foreigners in order to access the real estate market in Southern European cities. © 2020 Elsevier Ltd

BLANCO SÁNCHEZ, M.J., 2020. Convocatoria de junta general y medios electrónicos: especial consideración de la normativa vigente y la tecnología blockchain. *Revista de derecho del mercado de valores*, no. 26, pp. 14- 0. ISSN 1888-4113.

A generalization in the use of new technologies applied to company law has been experienced. Operational benefits provided by the website as a system of communication are beyond any doubt. Nevertheless, the evolution of new technologies raises new questions, as the application of blockchain in company law. The role of electronic means and new technologies in the announcement of general meeting will be discussed.

CACERES SANTACRUZ, N.A., 2020. Images Of Power. The Configuration Of The Individual By Means Of The Monumental Sculpture. *Historia e Cultura*, vol. 9, no. 1, pp. 365-382. ISSN 2238-6270.

CAMBRA-FIERRO, J.J., FLORES-HERNANDEZ, J.A., PEREZ, L. y VALERA-BLANES, G., [sin fecha]. CSR and branding in emerging economies: The effect of incomes and education. *Corporate Social Responsibility And Environmental Management*, ISSN 1535-3958. DOI 10.1002/csr.2000.

Sustainable development is a fundamental objective for guaranteeing the future of the planet. Taking into account the impact of emerging economies on the global economy and the scarcity of papers that have considered the effect of CSR initiatives on consumer behavior on those economies, it seems that further research on this issue is necessary. In particular, we analyze the extent to which CSR affects the connection and links of the consumer to the brand (i.e., self-brand connection, brand engagement). The main contribution of the paper to the field is the analysis of the interaction between CSR and branding in the context of an emerging economy. To that aim, and also in a novel way, we use the Stimuli-Organism-Response (SOR) model for a sample of more than 400 food and beverage consumers in Metropolitan Lima, Peru. Our results show that CSR effectively acts as a stimulus for consumers to identify and link to brands and that, in addition, these links generate buy-back (i.e., loyalty) and recommendation behaviors (i.e., WOM) which, in turn, create a great commercial value for companies. This research also analyses how incomes and educational levels moderate the intensity of such links. For practical implications, global trends in managing CSR and branding may be useful, although some cross-cultural and context-specific adaptations are necessary.

CAMPILLO PRADOS, M., 2020. Vacunas contra el cáncer: Un paso adelante en la batalla. *MoleQla: revista de Ciencias de la Universidad Pablo de Olavide*, no. 38, pp. 7- 0. ISSN 2173-0903.

El cáncer sigue siendo una de las principales causas de mortalidad a nivel mundial. Es por ello, que estudios dedicados a entender el mecanismo de crecimientos de tumores y de cómo el organismo reacciona anteellos es esencial. Una de las herramientas usadas en los últimos años para combatir esta enfermedad son las vacunas contra el cáncer.

CAMPO TEJEDOR, A. del, 2020. Entre el estigma y la comicidad popular: Significaciones del vendedor callejero entre los siglos XVI y XVII. *Vínculos de Historia*, no. 9, pp. 307-327. ISSN 2254-6901.

A historical-cultural study of the subaltern position occupied by street vendors between the sixteenth and seventeenth centuries, this article analyses the ambiguous meanings with which theywere portrayed in different fields, and most particularly in literature, where they were associated withtricksters, charlatans, vagabonds, roguish stall-holders, miserable emigrants and ethnic-religiousminorities. However, despite the stigma, their forms of expression and especially their street criescrystallized as a folkloric-literary genre, conjugating some of the elements of popular comic culturetypical of the world of the town square, fairs and festivals.

CAPPONI, P., 2020. «Le lingue straniere alla radio»: i corsi di lingua Spagnola (1949-1970). *España e Italia: un viaje de ida y vuelta: Studia in honorem Manuel Carrera Díaz*. S.l.: Universidad de Sevilla, pp. 95-112. ISBN 978-84-472-2882-9.

CARPENTER, J., GONZÁLEZ MEDINA, M., HUETE GARCÍA, M.Á. y DE GREGORIO HURTADO, S., 2020. Variegated Europeanization and urban policy: Dynamics of policy transfer in France, Italy, Spain and the UK. *European Urban and Regional Studies*, vol. 27, no. 3, pp. 227-245. DOI 10.1177/0969776419898508

This paper explores the dynamics of urban policy transfer in the European Union (EU), critically examining the process of Europeanization in relation to urban issues. The paper takes a comparative approach, analysing the evolution of urban policy and Europeanization in four member states: France, Italy, Spain and the UK from the 1990s up to the current Cohesion Policy period (2014–2020). Using an analytical framework based on three dimensions of Europeanization (direction, object and impact), we examine the extent to which urban policies are moving towards an integrated approach to sustainable urban development, as supported by the EU. The paper highlights the contradictions between processes of

convergence through Europeanization, and path-dependent systems and trajectories that forge alternative paths. In doing so, it advances wider debates on the impact of Europeanization in a neo-liberal context by arguing that member states more likely to be affected by Europeanization are those most impacted by national austerity measures. A process of 'variegated Europeanization' is proposed to capture the differential practices taking place within the EU with regard to the circulation of the EU's approach to urban policy. © The Author(s) 2020.

CASTELLANO, F.L. y MENUDO PACHON, J.M., [sin fecha]. Robert Owen's quest for the 'new moral world' in a non-industrialized country. *History of European Ideas*, ISSN 0191-6599. DOI 10.1080/01916599.2020.1798629.

This article examines how Robert Owen's ideas, and the example of his New Lanark Mill, were understood and received in Spain in the nineteenth century. It follows recent historiographic trends in the history of early Spanish socialism to show that although Owen's ideas could not have a decisive impact in a largely agricultural economy and society, his ideas did draw more significant attention than has been thought. The article examines how Owen's ideas, like those of Fourier and Saint-Simon, were transmitted in Spain through different channels, in particular in education through the work of Pablo Montesino, and in the 1850s and 60s how they proved important to the creation of workers' co-operatives in Valencia and Madrid. The article also explores how Owen's ideas were important to the influential Spanish author Ramon de Sagra, and shows that the epistolary relationship between the two suggests that de Sagra might have been a more important voice for Owen's ideas in Spain than has been appreciated.

COBO-SIMÓN, I., MÁRQUEZ-RODRÍGUEZ, J., MÉNDEZ-CEA, B., GALLEGO, F.J. y PÉREZ-FERNÁNDEZ, M., 2020. Understanding the morphological and genetic distinctiveness of the Spanish pouter pigeons: the Marchenero Pouter as a case study. *Ibis*, vol. 162, no. 3, pp. 766-777. DOI 10.1111/ibi.12797

Domestic species are excellent examples of the great adaptive potential of animal species under strong selective pressure. Among them, domestic pigeons (*Columba livia* var *domestica*) represent one of the first domesticated bird species. Artificial selection through centuries, together with the multipurpose use of this species, has led to an extraordinary phenotypic diversity among breeds. Here, the morphometric and genetic diversity of Marchenero Pouter, one of the oldest and most representative pouter breeds in Spain, was analysed and compared with other Spanish pouter breeds. Nine morphometric variables were measured in four breeds, for which we detected significant differences in the weight, wing length and tail length in the Marchenero Pouter. Genetic analyses were conducted using 10 microsatellite loci. The statistically significant genetic differences found in Marchenero Pouter in comparison with other Spanish pouter breeds in this study provide sufficient evidence to recognize it as an independent pouter breed. In addition, Marchenero Pouter showed low genetic diversity compared with other pigeon breeds from this and previous studies. Our

results provide valuable information about the current status of Marchenero Pouter, which could be used to preserve this unique breed. © 2019 British Ornithologists' Union

COBOS-SANCHIZ, D., DEL-PINO-ESPEJO, M.-J., SÁNCHEZ-TOVAR, L. y MATUD, M.P., 2020. The importance of work-related events and changes in psychological distress and life satisfaction amongst young workers in Spain: A gender analysis. *International Journal of Environmental Research and Public Health*, vol. 17, no. 13, pp. 1-14. DOI 10.3390/ijerph17134697

A relentless stream of social, technological, and economic changes have impacted the workplace, affecting young people in particular. Such changes can be a major source of stress and can cause a threat to health and well-being. The aim of this paper is to understand the importance of work-related events and changes in the psychological distress and life satisfaction of young workers in Spain. A transversal study was carried out on a sample comprising 509 men and 396 women aged between 26 and 35 years old. The results showed that there were no differences between the men and women in the number of work-related events and changes experienced in the last 12 months, nor in terms of job satisfaction. The results from the multiple regression analysis showed that a greater number of work-related events and changes experienced during the last 12 months were associated with increased psychological distress and reduced life satisfaction amongst men, but this was not the case for women. Although job satisfaction was independent from the men and women's psychological distress when self-esteem and social support was included in the regression equation, greater job satisfaction was associated with greater life satisfaction for both men and women. It concludes that work-related events and job satisfaction are important for the health and well-being of young people, even though a larger number of work-related events and changes is associated with increased psychological distress and reduced life satisfaction for men only. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

COLLADO CAMPAÑA, F., 2020. Villena Oliver, Andrés: Las redes de poder en España: élites e intereses contra la democracia. *RIPS: Revista de investigaciones políticas y sociológicas*, vol. 19, no. 1, pp. 111-114. ISSN 1577-239X.

CORDERO RAMOS, N., 2020. Des pratiques novatrices à partir de l'apprentissage du projet « Trata de personas, genero y migraciones en Costa rica, Marruecos y Andalucía » (« Traite des personnes, genre et migrations au Costa rica, au Maroc et en Andalousie »). *Les migrations, la traite des personnes et les vulnérabilités transfrontalières: Approches du point de vue des droits de l'homme*. S.l.: Dykinson, pp. 84-100. ISBN 978-84-13-24809-7.

CREGO GÓMEZ, M., 2020. Balneario en el Sendeban castellano y las Ciento y Una Noches. Texto árabe y traducción. *Literature, Science & Religion: Textual Transmission and Translation in Medieval and Early Modern Europe*. S.l.:

Reichenberger, pp. 149-163. ISBN 978-3-96728-003-6.

CRUZ ZÚÑIGA, P., 2020. La traite des personnes en Andalousie (Espagne), au Maroc et au Costa Rica. Une approche comparative. *Les migrations, la traite des personnes et les vulnérabilités transfrontalières: Approches du point de vue des droits de l'homme*. S.l.: Dykinson, pp. 51-69. ISBN 978-84-13-24809-7.

CRUZ ZÚÑIGA, P. y CORDERO RAMOS, N., 2020a. Introduction. *Les migrations, la traite des personnes et les vulnérabilités transfrontalières: Approches du point de vue des droits de l'homme*. S.l.: Dykinson, pp. 5-10. ISBN 978-84-13-24809-7.

CRUZ ZÚÑIGA, P. y CORDERO RAMOS, N., 2020b. *Les migrations, la traite des personnes et les vulnérabilités transfrontalières: Approches du point de vue des droits de l'homme*. S.l.: Dykinson. ISBN 978-84-13-24809-7.

CUI, H., SUN, W., DELGADO-BAQUERIZO, M., SONG, W., MA, J.-Y., WANG, K. y LING, X., [sin fecha]. Phosphorus addition regulates the responses of soil multifunctionality to nitrogen over-fertilization in a temperate grassland. *Plant and Soil*, ISSN 0032-079X. DOI 10.1007/s11104-020-04620-2.

Aim Nitrogen (N) and phosphorus (P) are two major limiting factors in terrestrial ecosystems. Excessive N applications alter ecosystem functions by causing nutrient imbalances with P. Yet, little is known about why and how the balance between N and P regulates soil multifunctionality -the simultaneous provision of multiple soil functions-. Methods We explored how P additions regulated the responses of soil multifunctionality to different levels of N fertilization (10, 20, 40 g N m<sup>-2</sup> yr<sup>-1</sup>) using a mesocosm experiment in a temperate grassland in China. Results Nitrogen alone and P addition increased multifunctionality at rate of  $\leq 10$  and 20 g N m<sup>-2</sup> yr<sup>-1</sup>, respectively. However, the magnitude of positive effects decreased with N additions over this level. P additions increased multifunctionality resistance to N at low rate of  $\leq 10$  g m<sup>-2</sup> yr<sup>-1</sup> compared to higher N levels. Soil N:P stoichiometry and plant diversity played dominant roles in regulating soil multifunctionality. Conclusions We found that a balanced combination of N and P additions (20:10) can help maintain the highest multifunctionality in this temperate grassland. The results provide new insights that through P addition, we could better manage soil multifunctionality and increase its resistance to expected fertilization scenarios ( $\leq 10$  g m<sup>-2</sup> yr<sup>-1</sup>).

CUI, Z.-F., CHEN, C., BINOSI, D., DE SOTO, F., ROBERTS, C.D., RODRIGUEZ-QUINTERO, J., SCHMIDT, S.M. y SEGOVIA, J., 2020. Nucleon elastic form factors at accessible large spacelike momenta. *Physical Review D*, vol. 102, no. 1. ISSN 1550-7998. DOI 10.1103/PhysRevD.102.014043.

A Poincare-covariant quark + diquark Faddeev equation, augmented by a statistical implementation of the Schlessinger point method for the interpolation and extrapolation of smooth functions, is used to compute nucleon elastic form factors on  $0 \leq Q^2 \leq 18m(N)^2$  ( $m(N)$  is the nucleon mass) and elucidate their role as probes of emergent hadronic mass in the Standard Model. The calculations expose features of the form factors that can be tested in new

generation experiments at existing facilities, e.g., a zero in  $G(E)(p)/G(M)(p)$ , a maximum in  $G(E)(n)/G(M)(n)$ , and a zero in the proton's d-quark Dirac form factor,  $F-1(d)$ . Additionally, examination of the associated light-front-transverse number and anomalous magnetization densities reveals inter alia: a marked excess of valence u quarks in the neighborhood of the proton's center of transverse momentum, and that the valence d quark is markedly more active magnetically than either of the valence u quarks. The calculations and analysis also reveal other aspects of nucleon structure that could be tested with a high-luminosity accelerator capable of delivering higher beam energies than are currently available.

DAZA, F.A.G., CUETOS, A. y PATTI, A., 2020. Dynamic Monte Carlo simulations of inhomogeneous colloidal suspensions. *Physical Review E*, vol. 102, no. 1. ISSN 1539-3755. DOI 10.1103/PhysRevE.102.013302.

The dynamic Monte Carlo (DMC) method is an established molecular simulation technique for the analysis of the dynamics in colloidal suspensions. An excellent alternative to Brownian dynamics or molecular dynamics simulation, DMC is applicable to systems of spherical and/or anisotropic particles and to equilibrium or out-of-equilibrium processes. In this work, we present a theoretical and methodological framework to extend DMC to the study of heterogeneous systems, where the presence of an interface between coexisting phases introduces an additional element of complexity in determining the dynamic properties. In particular, we simulate a Lennard-Jones fluid at the liquid-vapor equilibrium and determine the diffusion coefficients in the bulk of each phase and across the interface. To test the validity of our DMC results, we also perform Brownian Dynamics simulations and unveil an excellent quantitative agreement between the two simulation techniques.

DEL CAMPO, A.D., SEGURA-ORENGA, G., CEACERO, C.J., GONZÁLEZ-SANCHIS, M., MOLINA, A.J., REYNA, S. y HERMOSO, J., 2020. Reforesting drylands under novel climates with extreme drought filters: The importance of trait-based species selection. *Forest Ecology and Management*, vol. 467. DOI 10.1016/j.foreco.2020.118156

Having regard to the substantial world-scale forest restoration needs, the efforts must be done efficiently, which necessarily forces to consider the adaptation of new forests to the extremes arising from climate change. In this context, species selection strategies should enhance long-term functional resilience in the face of novel environmental scenarios. The use of plant functional traits for selecting species under climate change might be advantageous over more traditional taxon-based criteria as an adaptive forestry management strategy. In this work, we studied which functional traits (across species) have played a relevant role on field performance and fitness in a multi-species reforestation trial in a Mediterranean dryland affected by an extreme drought event. Different traits both from the individual plant and from the species were studied in seven

species both at the short and the mid-term (10 years). The relative importance (RI) or contribution of the different traits to plantation performance was assessed through boosted regression tree models. The results showed that, under favorable climatic conditions, mean survival was above 70% and individual plant functional traits held up to 60% of importance on such value. The impact of species functional traits was low in this case (less than 18%) pointing out that all the species were performing within their niche at this point. However, after the driest year on record, the role of the latter on survival rose up to 53% of RI and survival sharply decreased to 33%, with some species showing negligible survival rate (<10%). The dynamic response of stomata and xylem resistance to cavitation, together with rooting depth, were the main traits (species traits) identified in successful performance facing the extreme environmental factors. Thus, trait-oriented approach to select species represent a key tool in the implementation of new and successful forest restoration strategies to design resistant and resilient ecosystems adapted to the climate change challenges. © 2020 Elsevier B.V.

DEL MORAL-ESPÍN, L. y CATH LARKINS, 2020. Construyendo sobre arcoíris: apoyando la participación de niños, niñas y adolescentes en la configuración de respuestas al COVID-19. *Sociedad e Infancias*, no. 4, pp. 275-277. ISSN 2531-0720. 10.5209/soci.69651

Children's participation in decision making is not a luxury, it is a protective measure<sup>2</sup> (Warrington y Larkins, 2019). Children and adolescents have shown many times that they make valuable contributions in responding to disasters and risk reduction in situations such as earthquakes, floods or fires, they can and do make invaluable contributions to disaster response and risk reduction. In the face of the challenges posed by the covid-19 pandemic, this collaboration presents the findings of the first phase (13-20 April 2020) of an online survey. The informants, 95 professionals from 16 different sectors, were contacted through participation and children's rights networks in 20 European countries, including Spain. A focused online discussion was also held with experts from 16 European countries to verify the data collected and gather additional information. From the links provided in the answers to the forms, other sources generated directly by children and adolescents were accessed. The data collected presents evidence on the practices and experiences of children and adolescents as well as on the impact and shape of responses to the Covid\_19 pandemic and the participation of children and adolescents in them in 20 European countries.

DELGADO BAENA, J. y TOMÉ DA MATA, E., 2020. Developpement, migration et traite des etres humains. *Les migrations, la traite des personnes et les vulnérabilités transfrontalières: Approches du point de vue des droits de l'homme*. S.l.: Dykinson, pp. 24-35. ISBN 978-84-13-24809-7.

DELGADO-CHAVES, F.M., GÓMEZ-VELA, F., DIVINA, F., GARCÍA-TORRES, M. y RODRIGUEZ-BAENA, D.S., 2020. Computational analysis of the global effects of LY6E in the immune response to coronavirus infection using gene networks. *Genes*, vol. 11, no. 7, pp. 1-33. DOI 10.3390/genes11070831



Gene networks have arisen as a promising tool in the comprehensive modeling and analysis of complex diseases. Particularly in viral infections, the understanding of the host-pathogen mechanisms, and the immune response to these, is considered a major goal for the rational design of appropriate therapies. For this reason, the use of gene networks may well encourage therapy-associated research in the context of the coronavirus pandemic, orchestrating experimental scrutiny and reducing costs. In this work, gene co-expression networks were reconstructed from RNA-Seq expression data with the aim of analyzing the time-resolved effects of gene Ly6E in the immune response against the coronavirus responsible for murine hepatitis (MHV). Through the integration of differential expression analyses and reconstructed networks exploration, significant differences in the immune response to virus were observed in Ly6E $\Delta$ HSC compared to wild type animals. Results show that Ly6E ablation at hematopoietic stem cells (HSCs) leads to a progressive impaired immune response in both liver and spleen. Specifically, depletion of the normal leukocyte mediated immunity and chemokine signaling is observed in the liver of Ly6E $\Delta$ HSC mice. On the other hand, the immune response in the spleen, which seemed to be mediated by an intense chromatin activity in the normal situation, is replaced by ECM remodeling in Ly6E $\Delta$ HSC mice. These findings, which require further experimental characterization, could be extrapolated to other coronaviruses and motivate the efforts towards novel antiviral approaches. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

DEMETRIO CRESPO, E. y MUÑOZ CONDE, F., 2020. *El derecho penal del estado de derecho entre el espíritu de nuestro tiempo y la constitución*. S.l.: Reus. ISBN 978-84-290-2315-2.

Con esta monografía se culmina el proyecto de reunir varios trabajos publicados entre los años 2004 y 2018 que, desde el punto de vista metodológico, responden a un denominador común que se puede identificar, a la manera clásica, como la relación transversal entre Derecho penal y Constitución. La oportunidad de hacerlo en este momento resulta de la situación, cuando menos crítica, en la que se halla el Derecho penal, que se agrava paulatinamente bajo el influjo de variados populismos punitivos y representa, en cierto modo, el reflejo de la crisis del propio sistema democrático de convivencia. De modo paralelo a la transformación de la realidad se intuye un cambio de paradigma, lo que no significa que dispongamos de un modelo alternativo, porque, en palabras de Beck en su libro póstumo *La metamorfosis del mundo*, «vivimos en un mundo que no está sólo cambiando, sino que se está metamorfoseando». Frente a este preocupante Zeitgeist, en el que las «viejas certezas» se desvanecen, debe seguir contraponiéndose la fuerza de los principios y garantías que informan el ius puniendi en el Estado constitucional de Derecho

DÍAZ AZPIROZ, M., JIMÉNEZ BONILLA, A., ASECIO ALMANSA, R. y SENÍN ANDRADES, J.R., 2020. Shape preferred orientation of dolostone bodies of a Triassic broken formation at the western External Betics. *Geogaceta*, no. 67, pp. 11-14. ISSN 0213-683X.

Detailed structural analyses of block-in-matrix formations are key to understand the tectonic processes involved in the external zones of many convergent orogens. One of these formations, with a highly controversial origin and evolution, marks the boundary between the fold-and-thrust belt and the foreland basin of the Betics. We analyzed dolostone bodies from this block-in-matrix formation in the western External Betics (Badolatosa, Sevilla), affected by the Algodonales-Badolatosa shear zone, to obtain a partial SPO ( $\theta$  angle between long axes and the shear zone boundary). Our results define a main 500-1200 m-wide band strongly controlled by deformation at the WNW-NNW boundary of this shear zone. Minor, heterogeneously distributed bands with a moderate SPO are tentatively interpreted as Riedel shears related to dextral transpression.

DOMÍNGUEZ-FERNÁNDEZ, G., PRIETO-JIMÉNEZ, E., BACKHOUSE, P. y ISMODES, E., 2020. Cybersociety and university sustainability: The challenge of holistic restructuring in universities in Chile, Spain, and Peru. *Applied Sciences (Switzerland)*, vol. 12, no. 14, pp. 1-19. DOI 10.3390/su12145722

The global challenge of the 2030 Agenda and the Sustainable Development Goals present a framework of opportunities, in which universities must respond to the demands of a sustainable social organisation by addressing the issues of quality education, the participation and inclusion of different sectors, and the need to promote university social responsibility. In response to this situation, we examine three experiences that highlight the reorganisation demanded at each of the three organisational levels: (1) Macro: the need for cooperation between different universities in Chile's «macrocampus»; (2) Meso: the organisation and running of faculties in light of the challenges to renew curriculums with the experience implemented by the Social Sciences Faculty of Pablo de Olavide University in Spain; and, (3) Micro: the integration of students and commitment to the needs of the social surroundings, with the E-QUIPU experience implemented at Pontifical Catholic University of Peru (PUCP) in Peru. The report we present is based on a case study, and the findings and conclusions lead us to propose a new holistic-organisational paradigm to facilitate the sustainability of universities. The results of the restructuring allowed us to conduct a meta-evaluation of the sustainability of organisations within a problematic situation (COVID-19), which tested the results of the restructuring objective of Cybersociety. © 2020 by the authors.

FERIA TORIBIO, J., 2020. El patrimonio territorial en la Cuenca del Guadiamar. *Doñana y su entorno como zona patrimonial*. S.l.: Enredars, pp. 187-214. ISBN 978-84-09-21441-9.

Este artículo plantea una propuesta de reconocimiento de los recursos patrimoniales de un sistema territorial íntimamente vinculado al espacio natural de Doñana, la cuenca del Guadiamar. La aproximación parte de la noción de patrimonio territorial y como éste se puede constituir en un instrumento para la conservación y el desarrollo sostenible. Siendo como es el de patrimonio territorial una noción compleja y no unívoca, el artículo presenta las bases conceptuales y el esquema metodológico que se ha adoptado para su

entendimiento, para posteriormente mostrar como el reconocimiento exhaustivo de la cuenca permite identificar un numeroso conjunto de recursos patrimoniales potenciales. Las conclusiones obtenidas muestran la virtualidad de este acercamiento al patrimonio territorial en sus diversas variantes y la gran riqueza y potencialidad de recursos del ámbito, pero también las dificultades de un entendimiento y tratamiento integrado y sistémico para su preservación y puesta en valor

FERNÁNDEZ-MARTÍNEZ, A., PÉREZ-ORDÁS, R., NUVIALA, R., AZNAR, M., PORCEL-GÁLVEZ, A.M. y NUVIALA, A., 2020. Communication as a strategy to promote sports and health activities designed for adolescents. *International Journal of Environmental Research and Public Health*, vol. 17, no. 13, pp. 1-13. DOI 10.3390/ijerph17134861

Physical activity reduces the risk of developing noncommunicable diseases and improves quality of life, providing health benefits for present and future generations. This is especially relevant for adolescents. Educational institutions are promoters of healthy habits through the organisation of different activities such as extracurricular sports programmes. These activities increase the rates of sports practice among adolescents. The literature shows that the perceived quality of sports and health services is an antecedent of users' behavioural intentions. The aim of this paper is to find out whether communication from educational/sports organisations influences adolescents' intentions to continue engaging in physical activity. A total of 1080 students participated, with a mean age of  $13.76 \pm 1.39$  years, 34.1% of whom were girls. Tests were conducted to verify the validity and reliability of the model that relates communication with value, satisfaction, and future intentions. Tests were conducted to verify the validity (average variance extracted was between 0.754 and 0.583) and reliability (composite reliability was between 0.925 and 0.813) of the model that relates communication with value, satisfaction, and future intentions. Confirmatory analyses and factor invariance tests were performed. The results revealed that communication is an antecedent of value, satisfaction, and future intentions. In conclusion, communication is a good strategy to consolidate sporting habits in both male and female adolescents. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

FLORES ANARTE, L., 2020. Facebook y el derecho a la imagen: Reflexiones en torno a la STC 27/2020, de 24 de febrero. *Estudios de Deusto: revista de la Universidad de Deusto*, vol. 68, no. 1, pp. 335-376. ISSN 0423-4847. 10.18543/ed-68(1)-2020pp335-376

In the judgement 27/2020, the Constitutional Court of Spain ruled on the unlawfulness of illustrating a journalistic chronicle of a violent event with an imagen of the victim that had been taken from Facebook without his consent. The court decision considers that the publication of a photograph on a social network is not equivalent to authorization for third parties to use it freely and that publishing

the victim's image is neither newsworthy itself nor accessory to the information contained in the report and, therefore, appreciates the violation of the fundamental right to one's own image. Received: 07.04.2020 Accepted: 12.06.2020 Published online: 03.07.2020

FLORES-HERNÁNDEZ, A., OLAVARRÍA-JARABA, A., VALERA-BLANES, G. y VÁZQUEZ-CARRASCO, R., 2020. Sustainability and branding in retail: A model of chain of effects. *Applied Sciences (Switzerland)*, vol. 12, no. 14, pp. 1-15. DOI 10.3390/su12145800

The main objective of this study is to analyse the impact of sustainable practices on companies' corporate reputation and brand image in the retail sector as perceived by consumers. In addition, we evaluate how those practices affect consumers' perceived satisfaction levels and their predisposition to engage in positive Word of Mouth (WOM). For the purpose of this study, the context of an emerging economy, Peru, is taken as reference. To do this, we propose a structural equation model based on a representative sample of 403 consumers. The data analysis-using the PLS software package-confirms that corporate social responsibility (CSR) positively influences both corporate reputation and brand image. These two factors jointly have an impact on consumers' perceived satisfaction levels, which in turn help to explain the flow of positive WOM. This work is a pioneering study of the relationship between the aforementioned factors in the context of emerging economies. The final part of the article discusses the main theoretical implications and recommendations for business practice. © 2020 by the authors.

FLORES-HERNÁNDEZ, J.A., CAMBRA-FIERRO, J.J. y VÁZQUEZ-CARRASCO, R., 2020. Sustainability, brand image, reputation and financial value: Manager perceptions in an emerging economy context. *Sustainable Development*, vol. 28, no. 4, pp. 935-945. DOI 10.1002/sd.2047

Sustainability has become a fundamental concern in today's world—one which firms can no longer remain oblivious to. Through CSR, companies can shore up financial sustainability by acting in responsible, socially and environmentally sustainable ways. Yet the vast majority of literature addressing this phenomenon to date has focused almost exclusively on developed economies. The objective of the present study, therefore, is to contribute to filling this gap by analyzing the potential impact of CSR on sustainable financial value in the context of an emerging economy, Peru. To this end, we used the PLS technique to carry out quantitative analysis of data from a sample of over 200 managers at Peruvian companies. Our model is based on the premises of Social Capital Theory and Theory of Resources. Specifically, we analyze the extent to which CSR impacts corporate reputation, brand image and financial value in the context of an emerging economy. Our data indicate that—unlike more developed economies—in emerging economy contexts, direct relationships linking CSR and company financial value are lacking, though may occur by way of the path CSR > reputation > brand image > financial value. We also find that size

moderates this path, while the sector of activity does not moderate the causal model. Hence, we suggest that both the cross-cultural component and differing degrees of economic development and market maturity affect the perceived impact of CSR on financial value. The present study is pioneering in that it analyzes the impact of sustainability on financial value from the perspective of managers in an emerging economy context. Key theoretical and practical implications of our findings are provided in the final section of the paper. © 2020 John Wiley & Sons, Ltd and ERP Environment

FLORES-LEÓN, A., REDENZ, G., PT, VALENCIA, O.D., GUZMÁN-VENEGAS, R., ARANEDA, O.F. y BERRAL DE LA ROSA, F., 2020. Coordination of the rotational movement of the pelvis and the hip in men without low back pain, with control impairment of the lumbopelvic region in the sagittal plane. *Physiotherapy Theory and Practice*, vol. 36, no. 7, pp. 810-817. DOI 10.1080/09593985.2018.1510451

**Purpose** To assess the presence of control impairment (CI) of the lumbopelvic region in the axial plane in men without low back pain (LBP) with CI in the sagittal plane. **Methods:** Twenty-four males, between 18 and 23 of age, BMI = normal, who did not report episodes of LBP in the 12 months prior to the study, were studied. Assessment of the sagittal control of the lumbopelvic region was performed during stand to sit. Nine participants demonstrated CI in sagittal plane and 15 did not. An active hip lateral rotation (HLR) test was performed, in which lumbopelvic rotation during HLR was assessed using a three-dimensional motion analysis system. **Results:** Patients with CI in sagittal plane had a greater percentage of their total lumbopelvic pelvic rotation at 60% of HLR range compared to those without CI ( $p < 0.05$ ;  $d = 0.93$ ). No significant differences in the total lumbopelvic and HLR range of motion were found between the groups. **Conclusion:** Men without LBP who experience CI of the lumbopelvic region in the sagittal plane also show CI in the axial plane. The control deficiencies were not related to the total range of lumbopelvic or HLR range of motion. © 2018, © 2018 Taylor & Francis.

GÁLVEZ-MUÑOZ, L., 2020. ¿Es la feminización de la economía una garantía para la igualdad? *Temas para el debate*, no. 307, pp. 38-40. ISSN 1134-6574.

La economía feminista no utiliza género como un sustituto de sexo para diferenciar a hombres y mujeres, sino como categoría principal del análisis para situar en el centro las necesidades sociales y cuestionar los planteamientos que continúan poniendo el foco en el desempeño del mercado, el crecimiento o la producción. La propuesta de la economía feminista trata de hacer visible todos los procesos y recursos que son esenciales para la reproducción de la vida, y crea nuevos conceptos económicos para poner la vida de las personas en el centro. De esta manera, consigue trascender la visión reduccionista, sesgada y jerárquica que hasta ahora impera en nuestra sociedad.

GARCÍA, Á.G., TUINIER, R., DE WITH, G. y CUETOS, A., 2020. Erratum: Directional-dependent pockets drive columnar-columnar coexistence (*Soft Matter* (2020) DOI: 10.1039/d0sm00802h). *Soft Matter*, vol. 16, no. 29, pp. 6933. DOI 10.1039/d0sm90143a

The authors regret the incorrect affiliation for two of the authors, Remco Tuinier and Gijsbertus de With. The corrected list of affiliations is as shown here. The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers. © The Royal Society of Chemistry.

GARCÍA GONZÁLEZ, J.M. y GRANDE MARTÍN, R., 2020. El reto de la longevidad en Andalucía: causas, evolución y consecuencias. *Colección Actualidad (Centro de Estudios Andaluces)*, no. 85, pp. 1-30. ISSN 1699-8294.

GÓMEZ-LANDERO, L.A. y FRÍAS-MENACHO, J.M., 2020. Analysis of Morphofunctional Variables Associated with Performance in Crossfit®Competitors. *Journal of Human Kinetics*, vol. 73, no. 1, pp. 83-91. DOI 10.2478/hukin-2019-0134

CrossFit® is a competitive sport and fitness modality characterized by multiple physical capabilities and multi-joint movements. This study aimed to analyse and classify variables related to CrossFit® competitors' specific performance. Fifteen male CrossFit® competitors were selected ( $n = 15$ ;  $30.57 \pm 5.5$  years;  $1.76 \pm 0.06$  m;  $78.55 \pm 9.12$  kg). Mean values were obtained for body mass index ( $25.3 \pm 2.14$  kg/m<sup>2</sup>), 4 skinfolds, 1 repetition maximum in the squat ( $137.60 \pm 19.65$  kg) and the bench press ( $101.67 \pm 10.64$  kg), maximum pull-ups ( $18.87 \pm 5.05$ ), sit-ups in 60 s ( $46.60 \pm 4.22$ ), peak power in the countermovement jump ( $3908.04 \pm 423.68$  W), VO<sub>2</sub>max with a shuttle run test ( $47.70 \pm 4.79$  ml kg<sup>-1</sup>·min<sup>-1</sup>), and time in the Workout of the Day (WOD) «Fran» ( $337.13 \pm 119.19$  s) and «Donkey Kong» ( $417.47 \pm 98.44$  s) components. Principal component analysis was conducted to classify variables and to select those most related to each new component («strength and muscle mass», «adiposity» and «aerobic capacity»). The correlation matrix was analysed, indicating significant correlations between «Donkey Kong» and VO<sub>2</sub>max ( $r = -.675$ ;  $p < .01$ ), suprailiac skinfold ( $r = .713$ ;  $p < .01$ ) and sit-ups ( $r = -.563$ ;  $p < .05$ ); and between «Fran» and squat ( $r = -.528$ ;  $p < .05$ ). Three important components characterizing CrossFit® competitors were identified: «strength and muscle mass», low «adiposity» and «aerobic capacity». Significant relationships between morphofunctional variables and Crossfit® performance were found in Crossfit® competitors. © 2020 Luis Arturo Gómez-Landero, Juan Miguel Frías-Menacho, published by Sciendo 2020.

GONZÁLEZ FLORES, Y.E., SANTERO, E. y REYES-RAMÍREZ, F., 2020. *Characterisation of the response of Sphingopyxis granuli strain TFA to anaerobiosis*. S.l.: s.n.

*Sphingopyxis granuli* strain TFA is an  $\zeta$ -Proteobacteria isolated from the Rhine river that is able to degrade the organic solvent tetralin. Until now, the *Sphingopyxis*

genus had always been described as strict aerobic, but we have demonstrated in this work that TFA is able to respire nitrate to nitrite in anaerobic conditions, thus becoming the first facultative anaerobic *Sphingopyxis* strain reported. Two putative Fnr anaerobic regulatory proteins have been found in TFA, FnrN and FixK, which have shown to be necessary for anaerobic growth, being FnrN more relevant than FixK. Transcriptomic analyses of this bacterium by dRNA-seq and RT qPCR have shown differentially regulated genes in anaerobiosis as compared to aerobiosis, which belong to different functional categories. Similar analyses using a double mutant  $\zeta$ fnrN $\zeta$ fixK led to identification of genes directly regulated by the Fnr regulators...

GONZÁLEZ HERNÁNDEZ, J.M., GARCÍA RAMOS, A., CASTAÑO ZAMBUDIO, A., CAPELO RAMIREZ, F., MÁRQUEZ SÁNCHEZ, G.J. y BOULLOSA ÁLVAREZ, D.A., 2020. Mechanical, Metabolic, and Perceptual Acute Responses to Different Set Configurations in Full Squat., *Journal of strength and conditioning research: the research journal of the NSCA*, vol. 3, no. 6, pp. 1581-1590. ISSN 1064-8011.

This study aimed to compare mechanical, metabolic, and perceptual responses between 2 traditional (TR) and 4 cluster (CL) set configurations. In a counterbalanced randomized order, 11 men were tested with the following protocols in separate sessions (sets  $\times$  repetitions [interrepetition rest]): TR1: 3  $\times$  10 [0 seconds]; TR2: 6  $\times$  5 [0 seconds]; CL1: 3  $\times$  10 [10 seconds]; CL2: 3  $\times$  10 [15 seconds]; CL3: 3  $\times$  10 [30 seconds]; CL4: 1  $\times$  30 [15 seconds]. The exercise (full squat), number of repetitions (30), interset rest (5 minutes), and resistance applied (10 repetition maximum) was the same for all set configurations. Mechanical fatigue was quantified by measuring the mean propulsive velocity during each repetition and the change in countermovement jump height observed after each set and after the whole training session. Metabolic and perceptual fatigue were assessed via the blood lactate concentration and the OMNI perceived exertion scale measured after each training set, respectively. The mechanical, metabolic, and perceptual measures of fatigue were always significantly higher for the TR1 set configuration. The 2 set configurations that most minimized the mechanical measures of fatigue were CL2 and CL3. Perceived fatigue did not differ between the TR2, CL1, CL2, and CL3 set configurations. The lowest lactate concentration was observed in the CL3 set configuration. Therefore, both the CL2 and CL3 set configurations can be recommended because they maximize mechanical performance. However, the CL2 set configuration presents 2 main advantages with respect to CL3 (a): it reduces training session duration, and (b) it promotes higher metabolic stress, which, to some extent, may be beneficial for inducing muscle strength and hypertrophy gains.

GONZÁLEZ SANDOVAL, L. y CUÑO, J., 2020. *Tierras, desterrados y desheredados en el proceso de construcción del estado guatemalteco: el caso de Suchitepéquez, 1825-1970*. S.l.: s.n.

Esta investigación propone un recorrido de largo plazo por la historia agraria de Suchitepéquez, Guatemala. Su propósito es entender los cambios en la propiedad de la tierra promovidos por la monarquía española, primero, y el Estado nacional a partir del siglo XIX, y los efectos que estos tuvieron sobre la población rural en ese espacio geográfico específico. La visión de largo plazo (siglos XVI a XX) permite entender cómo se fue transformando Suchitepéquez durante cuatro siglos mediante acciones y omisiones del poder central y de otros actores, especialmente a partir de 1850. Tres son los puntos de inflexión que transformaron las relaciones socioeconómicas en Suchitepéquez: la introducción del cultivo del café en la boca costa a mediados del siglo XIX, la reforma agraria de 1952 y la colonización agraria iniciada en 1955. La particularidad de este trabajo, y su mayor aporte, estriba en dar a conocer cómo se llevaron a cabo estos tres procesos en el ámbito regional. Para explicar estos procesos en el ámbito regional, la investigación se apoya en la formación de la finca Trapiche Grande y sus mutaciones a lo largo de un siglo (1848-1956). La finca constituye el hilo conductor que permite un acercamiento a la propiedad de la tierra, la población rural y las intervenciones del Estado en materia agraria.

GONZALEZ-SANCHEZ, M., BARTOLOME, F., ANTEQUERA, D., PUERTAS-MARTIN, V., GONZALEZ, P., GOMEZ-GRANDE, A., LLAMAS-VELASCO, S., HERRERO-SAN MARTIN, A., PEREZ-MARTINEZ, D., VILLAREJO-GALENDE, A., ATIENZA, M., PALOMAR-BONET, M., LUIS CANTERO, J., PERRY, G., ORIVE, G., IBANEZ, B., BUENO, H., FUSTER, V. y CARRO, E., 2020. Decreased salivary lactoferrin levels are specific to Alzheimer's disease. *EBioMedicine*, vol. 57. ISSN 2352-3964. DOI 10.1016/j.ebiom.2020.102834.

Background: Evidences of infectious pathogens in Alzheimer's disease (AD) brains may suggest a deteriorated innate immune system in AD pathophysiology. We previously demonstrated reduced salivary lactoferrin (Lf) levels, one of the major antimicrobial proteins, in AD patients. Methods: To assess the clinical utility of salivary Lf for AD diagnosis, we examine the relationship between salivary Lf and cerebral amyloid-beta (A beta) load using amyloid-Positron-Emission Tomography (PET) neuroimaging, in two different cross-sectional cohorts including patients with different neurodegenerative disorders. Findings: The diagnostic performance of salivary Lf in the cohort 1 had an area under the curve [AUC] of 0.95 (0.911-0.992) for the differentiation of the prodromal AD/AD group positive for amyloid-PET (PET+) versus healthy group, and 0.97 (0.924-1) versus the frontotemporal dementia (FTD) group. In the cohort 2, salivary Lf had also an excellent diagnostic performance in the health control group versus prodromal AD comparison: AUC 0.93 (0.876-0.989). Salivary Lf detected prodromal AD and AD dementia distinguishing them from FTD with over 87% sensitivity and 91% specificity. Interpretation: Salivary Lf seems to have a very good diagnostic performance to detect AD. Our findings support the possible utility of salivary Lf as a new non-invasive and cost-effective AD biomarker.

GRAO-CRUCES, A., RACERO-GARCÍA, A., SÁNCHEZ-OLIVA, D., BLANCO-LUENGO, D., NUVIALA, A. y GARCÍA-CALVO, T., 2020. Associations



between weight status and situational motivation toward fitness testing in physical education: The mediator role of physical fitness. *International Journal of Environmental Research and Public Health*, vol. 17, no. 13, pp. 1-12. DOI 10.3390/ijerph17134821

**Background:** This article examines the differences in situational motivation toward fitness testing in physical education classes between non-overweight and overweight students, as well as the mediator effect of objective and perceived physical fitness on the relationship between weight status and motivation toward fitness testing. **Methods:** A total of 534 adolescents (298 boys, 55.80%) participated in the study. Perceived physical fitness and situational motivation toward fitness testing were measured through questionnaires, whereas weight status and physical fitness were objectively measured. **Results:** Overweight students had lower intrinsic motivation ( $p < 0.001$ ), and higher external regulation ( $p < 0.01$ ) and amotivation ( $p < 0.05$ ) during fitness testing in a physical education class than their non-overweight peers. The influence of being overweight on motivation regulations toward fitness testing was mediated by objective physical fitness level for intrinsic motivation ( $B = -0.140$ ), external regulation ( $B = 0.104$ ) and amotivation ( $B = 0.146$ ). Perceived physical fitness was also used as a second mediator between weight status and intrinsic motivation ( $B = -0.117$ ). **Conclusions:** Strategies to improve objective and perceived physical fitness in overweight students are necessary to increase self-determined motivation during fitness testing in physical education lesson. © 2020 by the authors.

GRIMALDI-PUYANA, M., GÁLVEZ-RUIZ, P., VALCARCE-TORRENTE, M. y BERNAL-GARCÍA, A., 2020. The profile of leisure time sports people and their reason for doing sport in spanish sports facilities. *European Journal of Government and Economics*, vol. 9, no. 2, pp. 210-219. DOI 10.17979/ejge.2020.9.2.5846

In Spanish sports habits, there exists a clear increase of the institutionalised sports practice and a distinct trend of leisure and recreational sport. This motivates the current work as it is necessary to go deeply into the knowledge of this practice. The aims proposed are twofold. On the one hand, to perform an analysis of the profile and the characteristics of the behaviour of the users of sports centres and leisure and recreational sportspeople. And, on the other hand, to study the motives of leisure/recreational sports practice. A descriptive quantitative methodology has been followed in this research. The description of the profile of users emerges from the data analysed as well as that they practise sport for exotelic reasons. The results obtained can serve managers to orientate their strategies destined to satisfy the needs of these users. © 2020, University of Coruna, Faculty of Economics and Business. All rights reserved.

GUERRERO LEBRÓN, M.J., 2020. La visión del TJUE sobre el “accidente aéreo” como presupuesto de la responsabilidad por daños personales ¿Para cuándo su supresión? *Revista Aranzadi de derecho patrimonial*, no. 52, pp. 2- 0. ISSN

1139-7179.

El art. 17 CM no contiene una definición de accidente, a pesar de que es una presunción para hacer nacer la responsabilidad del transportista. Hemos revisado la tipología que planteamos hace quince años para actualizarla con nuevos pronunciamientos judiciales y, particularmente, haciendo mención a la sentencia de 19 diciembre de 2019 del Tribunal de Justicia Europeo. Nuestra propuesta es suprimir el requisito de accidente, que es una anomalía en el ámbito de la responsabilidad civil. Tal modificación normativa podría entenderse respaldada por el pronunciamiento del TJUE. En nuestra opinión, no rompería el equilibrio de intereses que el Convenio trata de preservar, pues no implicaría cambios significativos en su aplicación.

HERNANSANZ-AGUSTIN, P., CHOYA-FOCES, C., CARREGAL-ROMERO, S., RAMOS, E., OLIVA, T., VILLA-PINA, T., MORENO, L., IZQUIERDO-ALVAREZ, A., CABRERA-GARCIA, J.D., CORTES, A., LECHUGA-VIECO, A.V., JADIYA, P., NAVARRO, E., PARADA, E., PALOMINO-ANTOLIN, A., TELLO, D., ACIN-PEREZ, R., RODRIGUEZ-AGUILERA, J.C., NAVAS, P., COGOLLUDO, A., LOPEZ-MONTERO, I., MARTINEZ-DEL-POZO, A., EGEEA, J., LOPEZ, M.G., ELROD, J.W., RUIZ-CABELLO, J., BOGDANOVA, A., ENRIQUEZ, J.A. y MARTINEZ-RUIZ, A., [sin fecha]. Na(+)controls hypoxic signalling by the mitochondrial respiratory chain. *Nature*, ISSN 0028-0836. DOI 10.1038/s41586-020-2551-y.

All metazoans depend on the consumption of O<sub>2</sub> by the mitochondrial oxidative phosphorylation system (OXPHOS) to produce energy. In addition, the OXPHOS uses O<sub>2</sub> to produce reactive oxygen species that can drive cell adaptations(1-4), a phenomenon that occurs in hypoxia(4-8) and whose precise mechanism remains unknown. Ca<sup>2+</sup> is the best known ion that acts as a second messenger(9), yet the role ascribed to Na<sup>+</sup> is to serve as a mere mediator of membrane potential(10). Here we show that Na<sup>+</sup> acts as a second messenger that regulates OXPHOS function and the production of reactive oxygen species by modulating the fluidity of the inner mitochondrial membrane. A conformational shift in mitochondrial complex I during acute hypoxia(11) drives acidification of the matrix and the release of free Ca<sup>2+</sup> from calcium phosphate (CaP) precipitates. The concomitant activation of the mitochondrial Na<sup>+</sup>/Ca<sup>2+</sup> exchanger promotes the import of Na<sup>+</sup> into the matrix. Na<sup>+</sup> interacts with phospholipids, reducing inner mitochondrial membrane fluidity and the mobility of free ubiquinone between complex II and complex III, but not inside supercomplexes. As a consequence, superoxide is produced at complex III. The inhibition of Na<sup>+</sup> import through the Na<sup>+</sup>/Ca<sup>2+</sup> exchanger is sufficient to block this pathway, preventing adaptation to hypoxia. These results reveal that Na<sup>+</sup> controls OXPHOS function and redox signalling through an unexpected interaction with phospholipids, with profound consequences for cellular metabolism. Na<sup>+</sup> controls the function of the mitochondrial oxidative phosphorylation system and hypoxic redox signalling through an unexpected interaction with phospholipids.

HERVÁS-GÓMEZ, C. y FERNÁNDEZ MÁRQUEZ, E., 2020. Apps para trabajar la lectoescritura, la capacidad de asociación y la percepción visoespacial. *Accesibilidad de las TIC para la diversidad funcional cognitiva*. S.l.: Octaedro, pp. 65-76. ISBN 978-84-18083-26-6.

HIDALGO, V., DEL MORAL ARROYO, G., LORENCE LARA, B., MAYA, J. y JIMÉNEZ, L., 2020. Scene-Based Psychodramatic Family Therapy With Troubled Adolescents and Parents: A Pilot Study. *Family process*, vol. 59, no. 1, pp. 111-126. ISSN 0014-7370.

HODAIFA, G., MALVIS, A., MAAITAH, M. y SÁNCHEZ, S., 2020. Combination of physicochemical operations and algal culture as a new bioprocess for olive mill wastewater treatment. *Biomass and Bioenergy*, vol. 138. DOI 10.1016/j.biombioe.2020.105603

This work presents a new bioprocess design which allows a substantial reduction of organic and inhibitory compounds and a better quality of the final treated water. The process involves a physicochemical (primary) and a biological (microalgae) treatment, which were tested separately with lab equipment, for olive oil mill wastewater (OMW). Primary treatment of OMW involved flocculation-sedimentation by Floccudex CS-51 and microfiltration using a 0.2  $\mu\text{m}$  membrane. Secondary treatment consisted of *Scenedesmus obliquus* culture in different OMW dilutions in ultrapure water as culture media: 5, 10, 25, 50, 75 and 100%. Experiments were performed on a laboratory scale in stirred batch tank reactors. The common operating conditions were: pH = 7, temperature = 25 °C, agitation rate = 3.33 Hz, aeration rate = 0.5  $\text{min}^{-1}$  and illumination intensity = 359  $\mu\text{E m}^{-2} \text{s}^{-1}$ . High global removal levels were achieved after primary treatment for chemical oxygen demand (92.6%), total phenolic compounds (98.9%), total organic carbon (75.9%), total nitrogen (63.5%) and inorganic carbon (55.3%). Similar results were obtained for the main OMW constituents after secondary treatment with final harvested biomass rich in energetic compounds, where the highest values of carbohydrates (72.5%) in culture with 5% OMW and lipids (44.9%) in 100% OMW culture were determined. © 2020 Elsevier Ltd

HOSSAIN, M.K., SARKER, H.P., SOTELO, P., DANG, U., RODRIGUEZ-GUTIERREZ, I., BLAWAT, J., VALI, A., XIE, W., OSKAM, G., HUDA, M.N., MACALUSO, R.T. y RAJESHWAR, K., 2020. Phase-Pure Copper Vanadate ( $\alpha\text{-CuV}_2\text{O}_6$ ): Solution Combustion Synthesis and Characterization. *Chemistry of Materials*, vol. 32, no. 14, pp. 6247-6255. ISSN 0897-4756. DOI 10.1021/acs.chemmater.0c02227.

This study addresses a perennial problem in the synthesis of copper vanadates, namely, that of phase purity. A time-efficient solution combustion synthesis (SCS) was employed for obtaining  $\alpha\text{-CuV}_2\text{O}_6$  in a polycrystalline powder form in a matter of minutes. Admixture of the final product with  $\alpha\text{-CuV}_2\text{O}_6$  or  $\text{V}_2\text{O}_5$  was avoided by a combination of careful pH control of the SCS precursor mixture and by a postsynthesis NaOH wash. The phase purity of the resultant product was demonstrated by Rietveld refinement of the X-ray diffraction data, energy-dispersive X-ray analyses, and laser Raman spectroscopy.

Photoelectrochemical (PEC) measurements showed the material to be an n-type semiconductor. Possible applicability of alpha-CuV2O6 in PEC devices designed for solar water splitting hinges on a comprehensive study of its structural, optical, magnetic, and optoelectronic attributes; this was done by a combination of theory and experiment. Intensity-modulated photocurrent spectroscopy on thin film samples permitted an assessment of the balance between charge transfer and surface recombination, underlining that the charge separation efficiency determined the photocurrent magnitude. Finally, experiments on the PEC stability of this material on prolonged (similar to 4 h) irradiation revealed self-healing behavior induced by incipient photocorrosion product layer formation on the oxide semiconductor surface.

HUBER, V., KRUMMENAUER, L., PEÑA-ORTIZ, C., LANGE, S., GASPARRINI, A., VICEDO-CABRERA, A.M., GARCIA-HERRERA, R. y FRIELER, K., 2020. Temperature-related excess mortality in German cities at 2 °C and higher degrees of global warming. *Environmental Research*, vol. 186. DOI 10.1016/j.envres.2020.109447

Background: Investigating future changes in temperature-related mortality as a function of global mean temperature (GMT) rise allows for the evaluation of policy-relevant climate change targets. So far, only few studies have taken this approach, and, in particular, no such assessments exist for Germany, the most populated country of Europe. Methods: We assess temperature-related mortality in 12 major German cities based on daily time-series of all-cause mortality and daily mean temperatures in the period 1993–2015, using distributed-lag non-linear models in a two-stage design. Resulting risk functions are applied to estimate excess mortality in terms of GMT rise relative to pre-industrial levels, assuming no change in demographics or population vulnerability. Results: In the observational period, cold contributes stronger to temperature-related mortality than heat, with overall attributable fractions of 5.49% (95%CI: 3.82–7.19) and 0.81% (95%CI: 0.72–0.89), respectively. Future projections indicate that this pattern could be reversed under progressing global warming, with heat-related mortality starting to exceed cold-related mortality at 3 °C or higher GMT rise. Across cities, projected net increases in total temperature-related mortality were 0.45% (95%CI: –0.02–1.06) at 3 °C, 1.53% (95%CI: 0.96–2.06) at 4 °C, and 2.88% (95%CI: 1.60–4.10) at 5 °C, compared to today’s warming level of 1 °C. By contrast, no significant difference was found between projected total temperature-related mortality at 2 °C versus 1 °C of GMT rise. Conclusions: Our results can inform current adaptation policies aimed at buffering the health risks from increased heat exposure under climate change. They also allow for the evaluation of global mitigation efforts in terms of local health benefits in some of Germany’s most populated cities. © 2020 The Authors

HUNT GÓMEZ, C.I., 2020. La inclusión de lo tabú y lo ofensivo de la educación reglada en Lengua Inglesa. *Contenidos docentes de Vanguardia*. S.I.: Gedisa, pp. 285-300. ISBN 978-84-17690-08-3.

INFANTE RUIZ, F.J., 2020. Indignidad sucesoria y desheredación: una visión actual. *Cuestiones actuales en materia de mediación, familia y sucesiones*. S.I.:

Editorial Bosch, pp. 22. ISBN 978-84-9090-439-8.

JAENES SÁNCHEZ, J.C. y CRUZ FELIU, J., 2020. Obituario : Mis recuerdos de José Carlos Caracuel. *Revista de psicología del deporte*, vol. 29, no. 2, pp. 9-15. ISSN 1132-239X.

JIMÉNEZ LOZANO, S., 2020. Autofagia: Un arma de doble filo. *MoleQla: revista de Ciencias de la Universidad Pablo de Olavide*, no. 38, pp. 3- 0. ISSN 2173-0903.

La autofagia es un proceso catabólico implicado en el reciclaje de moléculas y el mantenimiento de la homeostasis celular que presenta una estrecha pero intrincada relación con el sistema inmune y su correcto funcionamiento, emergiendo como un arma de doble filo en el desarrollo tumora

JIMÉNEZ-JIMÉNEZ, N., MOLIS, E. y SOLANO-GARCÍA, Á., 2020. The effect of initial inequality on meritocracy: A voting experiment on tax redistribution. *Journal of Economic Behavior and Organization*, vol. 175, pp. 380-394. DOI 10.1016/j.jebo.2018.09.019

According to Alesina and Angeletos (2005), societies are less redistributive but more efficient when the median voter believes that effort and talent are much more important than luck in determining income. We test these results through a lab experiment in which participants vote over the tax rate and their pre-tax income is determined according to their performance in a real-effort task with leisure time. Subjects receive either a high or a low wage and this condition is either obtained through their talent in a tournament or randomly assigned. We compare subjects' decisions in these two different scenarios, taking into consideration different levels of wage inequality. In our framework, this initial income inequality turns out to be crucial to support the theoretical hypothesis of Alesina and Angeletos (2005). Overall, we find that, only if the wage inequality is high, subjects choose a lower level of income redistribution and provide a higher effort level in the scenario in which high-wage subjects are selected based on their talent through a tournament (than when it is randomly assigned). Thus, we confirm almost all theoretical results in Alesina and Angeletos (2005) when the wage inequality is high enough. The big exception is for efficiency (measured as the sum of total payoffs), since theoretical results are not significant for both wage inequality scenarios. © 2018 Elsevier B.V.

JULIO CAMARERO, J., SANCHEZ-SALGUERO, R., RIBAS, M., TOUCHAN, R., ANDREU-HAYLES, L., DORADO-LINAN, I., MEKO, D.M. y GUTIERREZ, E., 2020. Biogeographic, Atmospheric, and Climatic Factors Influencing Tree Growth in Mediterranean Aleppo Pine Forests. *FORESTS*, vol. 11, no. 7. DOI 10.3390/f11070736.

There is a lack of knowledge on how tree species respond to climatic constraints like

water shortages and related atmospheric patterns across broad spatial and temporal scales. These assessments are needed to project which populations will better tolerate or respond to global warming across the tree species distribution range. Warmer and drier conditions have been forecasted for the Mediterranean Basin, where Aleppo pine (*Pinus halepensis* Mill.) is the most widely distributed conifer in dry sites. This species shows plastic growth responses to climate, being particularly sensitive to drought. We evaluated how 32 Aleppo pine forests responded to climate during the second half of the 20th century by using dendrochronology. Climatic constraints of radial growth were inferred by fitting the Vaganov-Shashkin (VS-Lite) growth model to ring-width data from our Aleppo pine forest network. Our findings reported that Aleppo pine growth decreased and showed the highest common coherence among trees in dry, continental sites located in southeastern and eastern inland Spain and Algeria. In contrast, growth increased in wetter sites located in northeastern Spain. Overall, across the Aleppo pine network tree growth was enhanced by prior wet winters and cool and wet springs, whilst warm summers were associated with less growth. The relationships between site ring-width chronologies were higher in nearby forests. This explains why Aleppo pine growth was distinctly linked to indices of atmospheric circulation patterns depending on the geographical location of the forests. The western forests were more influenced by moisture and temperature conditions driven by the Western Mediterranean Oscillation (WeMO) and the Northern Atlantic Oscillation (NAO), the southern forests by the East Atlantic (EA) and the August NAO, while the Balearic, Tunisian and northeastern sites by the Arctic Oscillation (AO) and the Scandinavian pattern (SCA). The climatic constraints for Aleppo pine tree growth and its biogeographical variability were well captured by the VS-Lite model. The model performed better in dry and continental sites, showing strong growth coherence between trees and climatic limitations of growth. Further research using similar broad-scale approaches to climate-growth relationships in drought-prone regions deserves more attention.

KAROLJ, V., VISERAS, A., MERINO, L. y SHUTIN, D., 2020. An integrated strategy for autonomous exploration of spatial processes in unknown environments. *Sensors (Switzerland)*, vol. 20, no. 13, pp. 1-27. DOI 10.3390/s20133663

Exploration of spatial processes, such as radioactivity or temperature is a fundamental task in many robotic applications. In the literature, robotic exploration is mainly carried out for applications where the environment is a priori known. However, for most real life applications this assumption often does not hold, specifically for disaster scenarios. In this paper, we propose a novel integrated strategy that allows a robot to explore a spatial process of interest in an unknown environment. To this end, we build upon two major blocks. First, we propose the use of GP to model the spatial process of interest, and process entropy to drive the exploration. Second, we employ registration algorithms for robot mapping and localization, and frontier-based exploration to explore the environment. However, map and process exploration can be conflicting goals. Our integrated strategy fuses the two aforementioned blocks through a trade-off between process and map exploration. We carry out extensive evaluations of our algorithm in simulated environments with respect to different baselines and

environment setups using simulated GP data as a process at hand. Additionally, we perform experimental verification with a mobile holonomic robot exploring a simulated process in an unknown labyrinth environment. Demonstrated results show that our integrated strategy outperforms both frontier-based and GP entropy-driven exploration strategies. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

LATORRE ROMAN, P.A., MUNOZ JIMENEZ, M., SALAS SANCHEZ, J., CONSUEGRA GONZALEZ, P., MORENO DEL CASTILLO, R., HERRADOR SANCHEZ, J.A., LOPEZ IVANCO, M. del A., LINARES JIMENEZ, C., NAVAS MORALES, J.F. y PARRAGA MONTILLA, J.A., 2020. Complex Gait Is Related to Cognitive Functioning in Older People: A Cross-Sectional Study Providing an Innovative Test. *GERONTOLOGY*, vol. 66, no. 4, pp. 401-408. ISSN 0304-324X. DOI 10.1159/000508245.

Background: Many studies have demonstrated an inverse relationship between gait performance and cognitive impairment. The main purposes of this study were: (1) to design and validate a complex gait test (CGT) in older people, (2) to analyze the effects of age and sex on CGT, and (3) to analyze the association between CGT performance and physical functioning and cognitive measures. Methods: A total of 279 older people (60-97 years) were analyzed in 2019. Fitness tests, gait performance, and several cognitive measures such as the Trail-Walking Test and Montreal Cognitive Assessment were used. Results: The CGT reported adequate reliability and validity parameters. In the test-retest analysis, the intra-class correlation coefficient was 0.868 ( $p < 0.001$ ). There was a significant correlation between the CGT and Trail-Walking Test ( $r = 0.592$ ;  $p < 0.001$ ). The linear regression analysis showed that the CGT was associated with the Montreal Cognitive Assessment ( $R^2 = 0.357$ ;  $p = 0.001$ ). The binary logistic regression analysis revealed that a high CGT score was a risk factor for mild cognitive impairment (odds ratio 1.201, 95% CI 1.081-1.334;  $p = 0.001$ ). The ROC curve of the mild cognitive impairment was predicted by the CGT performance (area under the curve = 0.768, 95% CI 0.647-0.889;  $p < 0.001$ ), reaching the cut-off point at 20.25 s. Conclusions: The CGT showed good reliability and validity and may serve as a potential biomarker in mild cognitive impairment prediction in older adults aged 60-97 years.

LEHMANN, C.P., JIMENEZ-MARTIN, A., BRANZEI, D. y TERCERO, J.A., [sin fecha]. Prevention of unwanted recombination at damaged replication forks. *Current Genetics*, ISSN 0172-8083. DOI 10.1007/s00294-020-01095-7.

Homologous recombination is essential for the maintenance of genome integrity but must be strictly controlled to avoid dangerous outcomes that produce the opposite effect, genomic instability. During unperturbed chromosome replication, recombination is globally inhibited at ongoing DNA replication forks, which helps to prevent deleterious genomic rearrangements. This inhibition is carried out by Srs2, a helicase that binds to SUMOylated PCNA

and has an anti-recombinogenic function at replication forks. However, at damaged stalled forks, Srs2 is counteracted and DNA lesion bypass can be achieved by recombination-mediated template switching. In budding yeast, template switching is dependent on Rad5. In the absence of this protein, replication forks stall in the presence of DNA lesions and cells die. Recently, we showed that in cells lacking Rad5 that are exposed to DNA damage or replicative stress, elimination of the conserved Mgs1/WRNIP1 ATPase allows an alternative mode of DNA damage bypass that is driven by recombination and facilitates completion of chromosome replication and cell viability. We have proposed that Mgs1 is important to prevent a potentially harmful salvage pathway of recombination at damaged stalled forks. In this review, we summarize our current understanding of how unwanted recombination is prevented at damaged stalled replication forks.

LÓPEZ MÁRQUEZ, A.M., 2020. Personajes bíblicos en el «Triumphus Cupidinis III» de Petrarca y su traducción en Hernando de Hozes. *España e Italia: un viaje de ida y vuelta: Studia in honorem Manuel Carrera Díaz*. S.l.: Universidad de Sevilla, pp. 209-224. ISBN 978-84-472-2882-9.

LÓPEZ MENESES, E. y FERNÁNDEZ CERERO, J., 2020. Tecnologías de la Información y la Comunicación y diversidad funcional. Conocimiento y formación del profesorado en Navarra. *IJERI: International journal of Educational Research and Innovation*, no. 14, pp. 59-75. ISSN 2386-4303. 10.46661/ijeri.4407

In recent years, considerable progress has been made in analyzing ICTs as significant instruments that favor the inclusion of people with different types of cognitive, sensory, or motor diversity. Although there are quality practices linked to the use of ICT, and an increasing interest in the educational use of these technological tools, there is still a great concern as how to solve the different difficulties in digital competence that teachers present, and even more in contexts of diversity. Therefore, teachers are configured as a key element to achieve full inclusion of ICT in the classroom. In this framework, it is intended to make a diagnosis in relation to the training and knowledge of active Primary Education teachers, in relation to ICT applied to people with functional diversity. Under the methodological aspect, a qualitative research design has been carried out, developed from the Grounded Theory approach. The information has been obtained from the analysis of 52 interviews with professionals in the education sector of the Spanish state of Navarra (members of management teams, ICT coordinators, directors and technological advisors of training centers). Among the conclusions we place a stress on the low training of teachers, the low development of training activities, and also note that the main barriers that hinder such completion of ICT training activities and functional diversity in the Community of Navarra are determined primarily by economic factors and the lack of time.

LÓPEZ-BEAS, J., GUADIX, J.A., CLARES, B., SORIANO-RUIZ, J.L., ZUGAZA,



J.L. y GÁLVEZ-MARTÍN, P., 2020. An overview of international regulatory frameworks for mesenchymal stromal cell-based medicinal products: From laboratory to patient. *Medicinal Research Reviews*, vol. 40, no. 4, pp. 1315-1334. DOI 10.1002/med.21659

Human mesenchymal stromal cells (hMSCs) are emerging as one of the most important cell types in advanced therapies and regenerative medicine due to their great therapeutic potential. The development of hMSC-based products focuses on the use of hMSCs as biological active substances, and they are considered medicinal products by the primary health agencies worldwide. Due to their regulatory status, the development of hMSC-based products is regulated by specific criteria that range from the design phase, nonclinical studies, clinical studies, to the final registration and approval. Patients should only be administered hMSC-based products within the framework of a clinical trial or after the product has obtained marketing authorization; in both cases, authorization by health authorities is usually required. Considering the above, this paper describes the current general regulatory requirements for hMSC-based products, by jurisdiction, to be implemented throughout their entire development process. These measures may provide support for researchers from both public and private entities and academia to optimize the development of these products and their subsequent marketing, thereby improving access to them by patients. © 2020 Wiley Periodicals, Inc.

LOPEZ-SANCHEZ, A.D., SANCHEZ-ORO, J. y VIGO, D., 2020. Preface to the special issue on optimization in vehicle routing and logistics. *Networks*, vol. 76, no. 2, SI, pp. 125-127. ISSN 0028-3045. DOI 10.1002/net.21971.

LUENGO LÓPEZ, J., 2020. Tensiones eróticas en la «demencia» del cuerpo femenino: la histeria en la literatura científica y periodística española desde el referente francés (1890-1936). *Activistas, creadoras y transgresoras: disidencias y representaciones*. S.l.: Dykinson, pp. 27-56. ISBN 978-84-13-24690-1.

MAGAZ-GONZÁLEZ, A.M., SAHELICES-PINTO, C., MENDAÑA-CUERVO, C. y GARCÍA-TASCÓN, M., 2020. Overall Quality of Sporting Events and Emotions as Predictors of Future Intentions of Duathlon Participants. *Frontiers in Psychology*, vol. 11. DOI 10.3389/fpsyg.2020.01432

The present study is intended to analyze the effect of global quality, perceived value, general satisfaction, and emotions on future behavior patterns among participants in the European Duathlon Championship. In this sense, a questionnaire was administered (n = 210), composed of four sections: essential demographic and profiling variables, perceived quality, overall quality, and emotions. Consequently, a relational model was designed to be examined by means of structural equation modeling (SEM) and fuzzy set qualitative comparative analysis (fsQCA). Results reveal that global quality and general satisfaction are key dimensions for determining future behaviors of participants, but not so the perceived value. Moreover, up to three combinations of these dimensions together with emotions -pleasure and arousal- emerged as enough

for depicting future intentions to a great extent. In this line, a remarkably sufficient combination consists of global quality, general satisfaction, pleasure, and arousal. These findings will guide organizers to design strategies that provide exciting experiences, as well as quality and satisfaction to the participants of sports events. © Copyright © 2020 Magaz-González, Sahelices-Pinto, Mendaña-Cuervo and García-Tascón.

MARÍN-AGUILAR, F., CASTEJÓN-VEGA, B., ALCOCER-GÓMEZ, E., LENDINES-CORDERO, D., COOPER, M.A., DE LA CRUZ, P., ANDÚJAR-PULIDO, E., PÉREZ-ALEGRE, M., MUNTANÉ, J., PÉREZ-PULIDO, A.J., RYFFEL, B., ROBERTSON, A.A.B., RUIZ-CABELLO, J., BULLÓN, P. y CORDERO, M.D., 2020. NLRP3 Inflammasome Inhibition by MCC950 in Aged Mice Improves Health via Enhanced Autophagy and PPAR $\alpha$  Activity. *The journals of gerontology. Series A, Biological sciences and medical sciences*, vol. 75, no. 8, pp. 1457-1464. DOI 10.1093/gerona/glz239

The NLRP3 inflammasome has emerged as an important regulator of metabolic disorders and age-related diseases in NLRP3-deficient mice. In this article, we determine whether, in old mice C57BL6J, the NLRP3 inflammasome inhibitor MCC950 is able to attenuate age-related metabolic syndrome to providing health benefits. We report that MCC950 attenuates metabolic and hepatic dysfunction in aged mice. In addition, MCC950 inhibited the Pi3K/AKT/mTOR pathway, enhanced autophagy, and activated peroxisome proliferator-activated receptor- $\alpha$  in vivo and in vitro. The data suggest that MCC950 mediates the protective effects by the mammalian target of rapamycin inhibition, thus activating autophagy and peroxisome proliferator-activated receptor- $\alpha$ . In conclusion, pharmacological inhibition of NLRP3 in aged mice has a significant impact on health. Thus, NLRP3 may be a therapeutic target of human age-related metabolic syndrome. © The Author(s) 2019. Published by Oxford University Press on behalf of The Gerontological Society of America. All rights reserved. For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com).

MÁRQUEZ-CORRO, J.I., JIMÉNEZ-MEJÍAS, P., HELME, N.A., LUCEÑO, M. y MARTÍN-BRAVO, S., 2020. The systematic position of the enigmatic rare South African endemic *Carex acocksii*: Its relevance on the biogeography and evolution of *Carex* sect. *Schoenoxiphium* (Cyperaceae). *South African Journal of Botany*, vol. 131, pp. 475-483. DOI 10.1016/j.sajb.2020.03.027

*Carex acocksii* is a sedge species known only from two populations in the Karoo of the Northern Cape in South Africa. It was described from a single locality (Hantam Mts., Calvinia) more than twenty years ago, and tentatively ascribed to section *Petraea* because of its unispicate inflorescence and utricles with membranaceous-papyraceous walls. However, its systematic relationships have remained largely unexplored. We perform molecular, morphological and biogeographic studies in order to elucidate the systematic relationships and origin of this poorly known species. A phylogenetic reconstruction based on two nuclear (ITS, ETS) and two plastid (matK, rps16) markers strongly supports that

*C. acocksii* belongs to *Carex* sect. *Schoenoxiphium* (former genus *Schoenoxiphium*), a lineage with its center of diversity in South Africa. However, *C. acocksii* displays a remarkable molecular (i.e. long phylogenetic branch), morphological (i.e. unispicate inflorescence and poorly veined, weak utricle walls), geographical (isolated populations placed more than 100 kms from any other native *Carex* species) and ecological (the only *Carex* species known exclusively from the Great Karoo) differentiation with respect to the remainder of sect. *Schoenoxiphium*. The section has been inferred to have originated 15 Mya in the Drakensberg, and to have speciated after dispersal to other areas at least three times (*C. chermesonii* was not included in this study), one of these cases being *C. acocksii*. These features highlight the evolutionary singularity and conservation importance of this species, especially in the context of South African flora. We reassessed the conservation status of *C. acocksii* at a global scale under IUCN categories and criteria, resulting in the proposal of the Critically Endangered category for the species. © 2020 SAAB

MARTÍN RODRÍGUEZ, J.M., 2020. Análisis de las Sentencias del Tribunal Supremo 96/2020 de 29 de enero y 155/2020 de 6 de febrero. ¿A quién corresponde la carga de la prueba de la realidad de los desplazamientos y gastos de manutención y estancia a efectos de la exención de las dietas en el IRPF?. *Nueva fiscalidad*, no. 1, pp. 307-320. ISSN 1696-0173.

MARTÍN RODRÍGUEZ, J.M., 2020. La extrafiscalidad en la jurisprudencia del Tribunal Constitucional español. *Setenta años de Constitución Italiana y cuarenta años de Constitución Española*. S.l.: Centro de Estudios Políticos y Constitucionales (España), pp. 221-232. ISBN 978-84-340-2602-5.

MARTÍNEZ EGEA, B., 2020. Educación física post COVID-19 ¿Evolución o deriva? *Sociología del deporte*, vol. 1, no. 1, pp. 45-48. ISSN 2695-883X. 10.46661/socioldeporte.5010

El presente artículo forma parte de la sección de debate "Deporte y COVID-19" del Volumen 1, Número 1, de Sociología del Deporte (SD). Se plantean las dificultades y posibilidades de la asignatura de Educación Física tras el confinamiento por la pandemia de la COVID-19 y su consecuente adaptación a la educación a distancia.

MAYORDOMO-CAVA, J., IBORRA-LÁZARO, G., DJEBARI, S., TEMPRANO-CARAZO, S., SÁNCHEZ-RODRÍGUEZ, I., JEREMIC, D., GRUART, A., DELGADO-GARCÍA, J.M., JIMÉNEZ-DÍAZ, L. y NAVARRO-LÓPEZ, J.D., 2020. Impairments of synaptic plasticity induction threshold and network oscillatory activity in the hippocampus underlie memory deficits in a non-transgenic mouse model of amyloidosis. *Biology*, vol. 9, no. 7, pp. 1-18. DOI 10.3390/biology9070175

In early Alzheimer disease (AD) models synaptic failures and upstreaming aberrant patterns of network synchronous activity result in hippocampal-dependent memory deficits. In such initial stage, soluble forms of Amyloid- $\beta$  ( $A\beta$ ) peptides have been shown to play a causal role. Among different  $A\beta$  species,  $A\beta_{25-35}$

has been identified as the biologically active fragment, as induces major neuropathological signs related to early AD stages. Consequently, it has been extensively used to acutely explore the pathophysiological events related with neuronal dysfunction induced by soluble A $\beta$  forms. However, the synaptic mechanisms underlying its toxic effects on hippocampal-dependent memory remain unresolved. Here, in an in vivo model of amyloidosis generated by intracerebroventricular injections of A $\beta$ 25–35 we studied the synaptic dysfunction mechanisms underlying hippocampal cognitive deficits. At the synaptic level, long-term potentiation (LTP) of synaptic excitation and inhibition was induced in CA1 region by high frequency simulation (HFS) applied to Schaffer collaterals. A $\beta$ 25–35 was found to alter metaplastic mechanisms of plasticity, facilitating long-term depression (LTD) of both types of LTP. In addition, aberrant synchronization of hippocampal network activity was found while at the behavioral level, deficits in hippocampal-dependent habituation and recognition memories emerged. Together, our results provide a substrate for synaptic disruption mechanism underlying hippocampal cognitive deficits present in A $\beta$ 25–35 amyloidosis model. © 2020 by the authors. Licensee MDPI, Basel, Switzerland. T.

MEHRSAFAR, A.H., GAZERANI, P., MOGHADAM ZADEH, A. y JAENES SÁNCHEZ, J.C., 2020. Addressing potential impact of COVID-19 pandemic on physical and mental health of elite athletes. *Brain, Behavior, and Immunity*, vol. 87, pp. 147-148. DOI 10.1016/j.bbi.2020.05.011

It is a letter Editor about the different consequences of the COVI-19: personal, social, competitive, emotional y behavioral consequences, and more. It is part of a new project about the impact of COVID 19 on athletes. The project began in Spain, and we are collecting data at Iran, México, Chile, and Poland

MENUDO, J.M. y RIEUCAU, N., 2020. The Rural Economics of Rene de Girardin: Landscapes at the Service of L'Ideologie Nobiliaire. *Journal of the History of Ideas*, vol. 81, no. 3, pp. 429-449. ISSN 0022-5037. DOI 10.1353/jhi.2020.0018.

René-Louis de Girardin is remembered for having invited Rousseau to his Ermenonville estate. Girardin believed it necessary to further the debate on gardens on the basis of a principle of continuity that rejects any idea of enclosure. This made it possible to establish an agricultural model that increased production and finally allowed the monopoly in grain sales to be broken. At the service of l'idéologie nobiliaire, his analysis shows the existence of a form of economic thinking in the second half of the eighteenth century that, giving primacy to agriculture, nevertheless cannot fall within the paths of physiocrats and agronomists.

MOLINA DÍAZ, F., 2020. Toponimia minera en Doñana: un caso de patrimonio lingüístico. *Doñana y su entorno como zona patrimonial*. S.l.: Enredars, pp. 297-322. ISBN 978-84-09-21441-9.

En este trabajo se aborda el estudio de los topónimos impuestos a las concesiones

mineras de Almonte, la mayoría de ellas localizadas en el entorno de Doñana, entre 1855 y 1972. Las características especiales de este tipo de toponimia la convierten en una fuente importante para el conocimiento de la psicología de los concesionarios y de la mentalidad del periodo. Se analizan los tipos de topónimos a partir de los nombres hallados en la documentación minera del Archivo Histórico Provincial de Huelva, atendiendo especialmente al motivo de imposición de los nombres

MOLINA PARÍS, J., DOMÍNGUEZ ORTEGA, F.J., GÓMEZ SÁENZ, J.T., SÁEZ MARTÍNEZ, F.J., ÁLVAREZ GUTIÉRREZ, F.J. y UNIDOS POR EL ASMA, G., 2020. El manejo del asma como enfermedad inflamatoria crónica y problema sanitario global: documento de posicionamiento de las sociedades científicas. *Semergen: revista española de medicina de familia*, no. 5, pp. 347-354. ISSN 1138-3593. 10.1016/j.semerg.2020.01.001

El asma es la enfermedad respiratoria más prevalente en el mundo; puede afectar a personas de todas las edades y es potencialmente mortal. En la actualidad, contamos con tratamientos de mantenimiento que son efectivos en la mayoría de los pacientes con asma y, sin embargo, una proporción importante no tiene bien controlada su enfermedad a pesar de los medios disponibles. En este documento, con el respaldo de las sociedades de los médicos que tratan el asma en España, se quiere llamar la atención de la sociedad y los profesionales sobre este problema en nuestro país. Se pone el foco sobre los aspectos clínicos, diagnósticos y terapéuticos del asma y se plantean algunas acciones de mejora en el ámbito de los pacientes y en el profesional sanitario que, en vista de los resultados actuales derivados de la falta de control del asma, podrían ser beneficiosas tanto en los resultados clínicos para los pacientes como en los de salud pública.

MONTES-FERNANDEZ, M.Á., PEREZ-VILLEGAS, E.M., GARCIA-GONZALO, F.R., PEDRAZZA, L., ROSA, J.L., ALVAREZ DE TOLEDO, G. y ARMENGOL, J.A., 2020. The HERC1 ubiquitin ligase regulates presynaptic membrane dynamics of central synapses. *Scientific Reports*, vol. 10, no. 1. ISSN 2045-2322. DOI 10.1038/s41598-020-68970-8.

HERC1 is a ubiquitin ligase protein, which, when mutated, induces several malformations and intellectual disability in humans. The animal model of HERC1 mutation is the mouse tambaleante characterized by: (1) overproduction of the protein; (2) cerebellar Purkinje cells death by autophagy; (3) dysregulation of autophagy in spinal cord motor neurons, and CA3 and neocortical pyramidal neurons; (4) impairment of associative learning, linked to altered spinogenesis and absence of LTP in the lateral amygdala; and, (5) motor

impairment due to delayed action potential transmission, decrease synaptic transmission efficiency and altered myelination in the peripheral nervous system. To investigate the putative role of HERC1 in the presynaptic dynamics we have performed a series of experiments in cultured tambaleante hippocampal neurons by using transmission electron microscopy, FM1-43 destaining and immunocytochemistry. Our results show: (1) a decrease in the number of synaptic vesicles; (2) reduced active zones; (3) less clathrin immunoreactivity and less presynaptic endings over the hippocampal main dendritic trees; which contrast with (4) a greater number of endosomes and autophagosomes in the presynaptic endings of the tambaleante neurons relative to control ones. Altogether these results show an important role of HERC1 in the regulation of presynaptic membrane dynamics.

MORENO FERNÁNDEZ, O. y RUIZ ALBA, P., 2020. ¿Se reflejan las políticas de igualdad en los libros de texto?: Un estudio en los libros de texto de Ciencias Sociales de Educación Secundaria. *IJERI: International journal of Educational Research and Innovation*, no. 14, pp. 147-166. ISSN 2386-4303. 10.46661/ijeri.4176

This research has used as a technique the analysis of the content, both of the language and of the images of the textbooks that have formed part of the sample, taking as a reference the criteria of the instructions of 14 June 2018 on textbooks. The focus has been on the number of images of men and women, as well as the use of language in the three publishers studied. The sample consisted of 3 textbooks used in the Social Sciences subject (Geography and History) of the 2nd year of Compulsory Secondary Education of the publishing houses Vicens Vives, Oxford and Santillana. Use of inclusive language, 158 images analysed for category 2. Diversity, and 286 images analyzed for category 3. Social roles. The results indicate that equality policies in Andalusia aim to achieve goals that are still far from being achieved, at least in the field of education and more specifically in the values that are transmitted, so it is necessary to continue working so that equality is reflected in the textbooks present in the school classrooms.

MORILLO-VELARDE PÉREZ, J.I., 2020. La Unión Europea: limitación de la soberanía, al menos, dos beneficios colaterales. *Revista de Estudios Jurídicos y Criminológicos*, no. 1, pp. 43-61. ISSN 2660-7964.

It is highlighted that the legal system of the European Union, due to its characteristics and principles of relationship with the laws of the member states, has powerfully helped to channel, if not completely resolve, two pending issues in Spanish public law: the patrimonial responsibility of the legislative power and the run away of administrative law.

MORÓN MARCHENA, J.A., COBOS SANCHIZ, D., CECILIA MARTÍN, M. y RUBIO GONZÁLEZ., L., 2020. Burnout docente: un análisis bibliométrico sobre la producción científica indexada en Scopus. *IJERI: International journal of Educational Research and Innovation*, no. 14, pp. 197-210. ISSN 2386-4303. 10.46661/ijeri.4949

**Introduction:** The technical and organisational changes in the work environment lead to the appearance of emerging psychosocial risks. The teaching profession constitutes a risk profession when it comes to psychosocial risks, in particular Burnout. **Objectives:** To learn about the diachronic productivity of the last twenty years on Burnout and Burnout in Teaching. To verify if Price's Law is fulfilled. To determine which countries produce the most scientific documents on the subject. To indicate what the main thematic areas are and the dominant journals into which the publications are classified. To establish the connections between the different descriptors with regard to the keywords analysed. **Methods:** A descriptive bibliometric analysis has been carried out. The sample consisted of documents indexed in the Scopus database. The units of analysis were the keywords that were extracted automatically. Bibliometric maps were created using a methodology based on co-word analysis, clustering techniques and visualisation techniques. **Conclusions:** It has been verified that the topic under analysis is a current multidisciplinary research front and that scientific production is highly concentrated. It has been verified that bibliometric maps are an adequate instrument to understand the thematic structure of this research topic.

MOSCOSO, F.G., ALMEIDA, J., SOUSARAEI, A., LOPES-COSTA, T., SILVA, A.M.G., CABANILLAS-GONZALEZ, J., CUNHA-SILVA, L. y PEDROSA, J.M., 2020. Luminescent MOF crystals embedded in PMMA/PDMS transparent films as effective NO<sub>2</sub> gas sensors. *Molecular Systems Design and Engineering*, vol. 5, no. 6, pp. 1048-1056. DOI 10.1039/c9me00164f

A fluorescent NO<sub>2</sub> gas sensor using the metal-organic framework (MOF) Tb(BTC) (BTC = benzene-1,3,5-tricarboxylate) as an active material is reported here. The lanthanide MOF crystals have been immobilized in transparent films of two different inert and non-emissive polymers i.e. polymethylmethacrylate (PMMA) and polydimethylsiloxane (PDMS) by spin coating Tb(BTC) suspended in the corresponding polymer organic solution onto solid substrates. The presence of the MOF particles in the resulting fluorescent films has been further confirmed by SEM and optical microscopy images. The sensing films exhibit fast and sensitive responses (fluorescence quenching) when exposed to a low concentration of NO<sub>2</sub>. The dependence of the sensor response on the analyte concentration fitted a two-site Stern-Volmer quenching model from which good calibration curves were obtained. These properties, along with recovery of the sensor emission after gentle heating (50 °C), make these materials realistic candidates for the development of luminescent sensing films based on MOFs. © 2020 The Royal Society of Chemistry.

MOSCOSO-SÁNCHEZ, D., 2020a. El contexto del deporte en España durante la crisis sanitaria de la COVID-19. *Sociología del deporte*, vol. 1, no. 1, pp. 15-19. ISSN 2695-883X. 10.46661/socioldeporte.5000

El presente artículo forma parte de la sección de debate "Deporte y COVID-19" del Volumen 1, Número 1, de Sociología del Deporte (SD)

MOSCOSO-SÁNCHEZ, D., 2020b. El papel del turismo deportivo de naturaleza en el desarrollo rural. *Rotur: revista de ocio y turismo*, vol. 14, no. 2, pp. 70-87. ISSN 1888-6884. 10.17979/rotur.2020.14.2.6535

Nature sports tourism has undergone a huge surge in growth in recent decades. Metaphorically, it might be said that the latest revolution to transform life in rural areas has been the 'colonisation of leisure' in its small towns and natural spaces. In the most notable cases, small, out of the way villages and retreats have become overrun by tourists and seen their economies transformed by speculation. This process of social and economic change has been promoted by EU programmes for rural development, such as the ongoing LEADER and FEADER initiatives, which have been running continuously since 1991. These policies have reinvented rural spaces by imbuing them with new material meanings (tranquillity, adventure, quality of life, etc.) and capitalising on that re-imagining through new economic activities, such as nature sports tourism. As this is an artificial process affecting pre-existing spaces, meanings and economic models (e.g. agriculture, forestry, hunting, etc.), it can also lead to conflicts of interests, as witnessed in the political, economic and social relations between locals and newcomers in rural areas. This article examines this process with the aim of providing proposals for how to manage and organise nature sports tourism through social dialogue and cooperation.

MOSCOSO-SÁNCHEZ, D., VILANOVA SOLER, A., SÁNCHEZ GARCÍA, R. y PIEDRA, J., 2020. Pensar el deporte en tiempos de la COVID-19. El papel fundamental de la sociología. *Sociología del deporte*, vol. 1, no. 1, pp. 9-11. ISSN 2695-883X.

MOYA-RAMON, M., NAKAMURA, F.Y., TEIXEIRA, A.S., GRANACHER, U., SANTOS-ROSA, F.J., SANZ-RIVAS, D. y FERNANDEZ-FERNANDEZ, J., 2020. Effects of Resisted vs. Conventional Sprint Training on Physical Fitness in Young Elite Tennis Players. *Journal of Human Kinetics*, vol. 73, no. 1, pp. 181-192. DOI 10.2478/hukin-2019-0142

This study aimed to compare the effects of 6-week resisted sprint (RST) versus conventional (unresisted) sprint training (CG) on sprint time, change of direction (COD) speed, repeated sprint ability (RSA) and jump performance (countermovement jump (CMJ) and standing long jump (SLJ)) in male young tennis players. Twenty players (age:  $16.5 \pm 0.3$  years; body mass:  $72.2 \pm 5.5$  kg; body height:  $180.6 \pm 4.6$  cm) were randomly assigned to one of the two groups: RST (n = 10) and CG (n = 10). The training program was similar for both groups



consisting of acceleration and deceleration exercises at short distances (3-4 m), and speed and agility drills. The RST group used weighted vests or elastic cords during the exercises. After 6 weeks of intervention, both training regimes resulted in small-to-moderate improvements in acceleration and sprint ability (5, 10, 20 m), SLJ and CMJ performances, COD pivoting on both, the non-dominant (moderate effect) and the dominant (small effect) foot, and the percentage of decrement (small effects) during a RSA test. Between-group comparisons showed that the SLJ ( $\Delta= 2.0\%$ ) and 5 m sprint time ( $\Delta= 1.1\%$ ) improved more in the RST group compared with the CG group. This study showed that 6 weeks of RST or unresisted training are time-efficient training regimes for physical improvements in young male tennis players. © 2020 Manuel Moya-Ramon, Fabio Yuzo Nakamura, Anderson Santiago Teixeira, Urs Granacher, Francisco Javier Santos-Rosa, David Sanz-Rivas, Jaime Fernandez-Fernandez, published by Sciendo 2020.

MUNOZ-LOPEZ, A. y NARANJO-ORELLANA, J., 2020. Individual versus team heart rate variability responsiveness analyses in a national soccer team during training camps. *Scientific Reports*, vol. 10, no. 1. ISSN 2045-2322. DOI 10.1038/s41598-020-68698-5.

Heart rate variability (HRV) analyses can be performed using group or individual changes. Individual changes could be of potential interest during training camps for national soccer teams. The purpose of this study was to compare whether analysis of individual daily HRV could detect changes in cardiac autonomic responses during training camps for national soccer teams. During two different training camps, 34 professional soccer players were monitored daily over 9 days, using heart rate monitors. Players were divided into First Eleven (those who participated in the main squad) or Reserves. Daily HRV was individually analyzed using a day-to-day method or a baseline (days prior to first match) method, using the smallest worthwhile change and the typical error in the estimate to establish a trivial (random change) zone. Group changes were also analyzed using an ANOVA one-way repeated measures test. Players' responsiveness was classified as High-, Low- or Non-response depending on individual changes. Both analyses showed substantial daily individual changes after playing a soccer match, regardless of the group. However, group changes showed that only First Eleven players had significant changes after playing a soccer match. In conclusion, individual daily HRV analyses are useful in detecting individual changes in professional soccer players.

NARANJO-ORELLANA, J. y SANTALLA, A., 2020. Long-term combined training in idiopathic pulmonary fibrosis: A case study. *International Journal of Environmental Research and Public Health*, vol. 17, no. 14, pp. 1-13. DOI 10.3390/ijerph17145091

A supervised combined training program was applied to a sedentary 56-year-old man with idiopathic pulmonary fibrosis (IPF) along three years, until lung transplantation. It included: (a) aerobic continuous (CT) and interval training (IT), (b) high load resistance training (RT) and (c) inspiratory muscle training (IMT). IT and IMT were applied for two years, while CT and RT could be maintained until transplantation using supplemental oxygen. Maximal inspiratory pressure (MIP) kept above 180 cm H<sub>2</sub>O and forced vital capacity (FVC) remained stable until lung transplantation. Peak oxygen uptake VO<sub>2</sub> increased during 1.5 years before its decline, staying above the poor prognosis level two years. Finally, the patient maintained his walking capacity and independence for 2 years, before the decline due to the disease. After receiving a two-lung transplant, the patient remained intubated for 12 h, left the intensive care unit after 3.5 days and was discharged after 18 days (average values: 48 h, 7–10 days and 25–35 days, respectively). These results show that systematic and supervised combined training can be safely applied in an IPF patient to maintain functionality and quality of life. In addition, we show that RT can be maintained for as long as necessary without complications. © 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article.

NAVARRO-YÁÑEZ, C.J. y RODRÍGUEZ-GARCÍA, M.J., 2020. Urban policies as multi-level policy mixes. The comparative urban portfolio analysis to study the strategies of integral urban development initiatives. *Cities*, vol. 102. DOI 10.1016/j.cities.2020.102716

Urban policy is an increasingly important policy domain in international and national agendas, intended to cope with the complexity of urban problems. The use of integral interventions across various policy sectors involving different types of actors from the public and private spheres is a common orientation in urban policy. This implies that urban policies should be understood as multilevel policy mixes, and appropriate research strategies should be developed to analyse them from a comparative perspective. This article introduces main analytical elements to analyse urban policies as multi-level policy mixes and proposes an original methodological approach (the comparative urban portfolio analysis). To illustrate and show the face validity of the proposal, policy measures included in 78 local plans under three urban policies in Spain representing policy approaches identified in international literature are analysed. Main results show the importance of two basic orientations (contextual and redistributive) to understand the intervention strategy of local plans and urban policies as policy mixes. Differences within policies show the multi-level character of urban policies, and differences between them resemble the orientation of policy frames they represent, showing the face validity of the proposal to analyse urban policies as multi-level policy mixes from a comparative perspective. © 2020 Elsevier Ltd

NUÑEZ-FADDA, S.M., CASTRO-CASTAÑEDA, R., VARGAS-JIMÉNEZ, E.,

MUSITU-OCHOA, G. y CALLEJAS-JERÓNIMO, J.E., 2020. Bullying victimization among mexican adolescents: Psychosocial differences from an ecological approach. *International Journal of Environmental Research and Public Health*, vol. 17, no. 13, pp. 1-16. DOI 10.3390/ijerph17134831

This transversal study over a random representative sample of 1687 Mexican students attending public and private secondary schools (54% girls, 12–17 years old, M = 13.65. DT = 1.14) aimed to analyze psychosocial differences between victims and non-victims of bullying from the bioecological model. It included individual variables (ontosystem), familiar, community, and scholar factors (microsystem), and gender (macrosystem) to perform a multivariate discriminant analysis and a logistic regression analysis. The discriminant analysis found that psychological distress, offensive communication with mother and father, and a positive attitude toward social norms transgression characterized the high victimization cluster. For the non-victims, the discriminant variables were community implication, positive attitude toward institutional authority, and open communication with the mother. These variables allowed for correctly predicting membership in 76% of the cases. Logistic regression analysis found that psychological distress, offensive communication with the father, and being a boy increased the probability of high victimization, while a positive attitude toward authority, open communication with the mother, and being a girl decrease this probability. These results highlight the importance of open and offensive communication between adolescents and their parents on psychological distress, attitude toward authority, community implication, and bullying victimization. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

OJEDA-RIVERA, J.F. y VILLA, J., 2020. Prólogo. Doñana y el patrimonio de su hibridez. *Doñana y su entorno como zona patrimonial*. S.l.: Enredars, pp. 8-10. ISBN 978-84-09-21441-9.

OLIVA BLÁZQUEZ, F., PÉREZ VELÁZQUEZ, J.P. y CADENAS OSUNA, D., 2020. Revistas Españolas. *Anuario de derecho civil*, vol. 73, no. 1, pp. 301-340. ISSN 0210-301X.

OLIVIERI, M., CHO, T., ÁLVAREZ-QUILÓN, A., LI, K., SCHELLENBERG, M.J., ZIMMERMANN, M., HUSTEDT, N., ROSSI, S.E., ADAM, S., MELO, H., HEIJINK, A.M., SASTRE-MORENO, G., MOATTI, N., SZILARD, R.K., MCEWAN, A., LING, A.K., SERRANO-BENITEZ, A., UBHI, T., FENG, S., PAWLING, J., DELGADO-SAINZ, I., FERGUSON, M.W., DENNIS, J.W., BROWN, G.W., CORTÉS-LEDESMA, F., WILLIAMS, R.S., MARTIN, A., XU, D. y DUROCHER, D., 2020. A Genetic Map of the Response to DNA Damage in Human Cells. *Cell*, vol. 182, no. 2, pp. 481- 496.e21. DOI 10.1016/j.cell.2020.05.040

The response to DNA damage is critical for cellular homeostasis, tumor suppression, immunity, and gametogenesis. In order to provide an unbiased and global view of the DNA damage response in human cells, we undertook 31 CRISPR-Cas9 screens against 27 genotoxic agents in the retinal pigment epithelium-1 (RPE1) cell line. These screens identified 890 genes whose loss causes either sensitivity or resistance to DNA-damaging agents. Mining this dataset, we discovered that ERCC6L2 (which is mutated in a bone-marrow failure syndrome) codes for a canonical non-homologous end-joining pathway factor, that the RNA polymerase II component ELOF1 modulates the response to transcription-blocking agents, and that the cytotoxicity of the G-quadruplex ligand pyridostatin involves trapping topoisomerase II on DNA. This map of the DNA damage response provides a rich resource to study this fundamental cellular system and has implications for the development and use of genotoxic agents in cancer therapy. © 2020 Elsevier Inc. A set of CRISPR screens in cells treated with different genotoxic agents illuminates the cellular response to DNA damage, identifying new factors in several repair pathways and pinpointing a novel drug mechanism-of-action. © 2020 Elsevier Inc.

ORTEGA, P., GARCIA-PICHARDO, D., SAN MARTIN-ALONSO, M., RONDON, A.G., GOMEZ-GONZALEZ, B. y AGUILERA, A., 2020. Histone H3E73Q and H4E53A mutations cause recombinogenic DNA damage. *Microbial Cell*, vol. 7, no. 7, pp. 190-198. ISSN 2311-2638. DOI 10.15698/mic2020.07.723.

The stability and function of eukaryotic genomes is closely linked to histones and to chromatin structure. The state of the chromatin not only affects the probability of DNA to undergo damage but also DNA repair. DNA damage can result in genetic alterations and subsequent development of cancer and other genetic diseases. Here, we identified two mutations in conserved residues of histone H3 and histone H4 (H3E73Q and H4E53A) that increase recombinogenic DNA damage. Our results suggest that the accumulation of DNA damage in these histone mutants is largely independent on transcription and might arise as a consequence of problems occurring during DNA replication. This study uncovers the relevance of H3E73 and H4E53 residues in the protection of genome integrity.

OVIEDO-CARO, M.A., MAYOLAS-PI, C., LÓPEZ-LAVAL, I., REVERTER-MASIA, J., MUNGUÍA-IZQUIERDO, D., BUENO-ANTEQUERA, J., GUILLÉN-CORREAS, R., LAPETRA-COSTA, S. y LEGAZ-ARRESE, A., 2020. Amateur endurance cycling practice and adult's physical and psychosocial health: a cross-sectional study of the influence of training volume. *Research in Sports Medicine*, vol. 28, no. 3, pp. 383-396. DOI 10.1080/15438627.2020.1731689

This study aimed to analyse the association between amateur cycling training volume

and physical and psychosocial health. A cross-sectional study was developed, via self-reported survey, among 1669 cyclists and 1039 controls, where analysis of variance and hierarchical multiple linear regression test were developed. Independent of gender, high volumes of amateur endurance cycling practice benefited cyclists' body mass index and male cyclists' physical conditioning, while psychosocial health did not differ among the training volume groups. Hierarchical multiple linear regression analysis highlighted the contribution of training volume to lower cyclists' body mass index and better male cyclists' physical conditioning. All cyclist groups presented better physical and psychosocial health than controls. High volumes of amateur endurance cycling training were associated with better physical health without jeopardizing psychosocial health. The practice of amateur endurance cycling, both in low and high volumes, was associated with better physical and psychosocial health compared with inactivity. © 2020, © 2020 Informa UK Limited, trading as Taylor & Francis Group.

PÁEZ-GALLEGO, J., GALLARDO-LÓPEZ, J.A., LÓPEZ-NOGUERO, F. y RODRIGO-MORICHE, M.P., 2020. Analysis of the Relationship Between Psychological Well-Being and Decision Making in Adolescent Students. *Frontiers in Psychology*, vol. 11. DOI 10.3389/fpsyg.2020.01195

Adolescents are frequently faced with situations in which they have to make decisions by choosing from a range of possible alternatives. In such circumstances, individual, social, and environmental conditions have an impact on the choice of the final decision in light of the various options presented. The main objective of this study is to analyze the relationship between the psychological well-being of adolescent students and their decision-making style. The research method used corresponds to an ex post facto, quantitative, transversal, correlational, and descriptive design, with an initial sample of 1,262 students from the Autonomous Community of Madrid, Spain, aged 13–19. A subsequent resampling of 385 participants was extracted from the initial sample by proportional allocation to strata (according to the levels of the variables gender, academic year, and educational institution classification) to guarantee the representativeness of the population data. Data collection uses the first Spanish adaptation of Ryff's Psychological well-being Scale and the Flinders Adolescent Decision Making Questionnaire, adapted by Friedman and Mann. The data shows that greater use of adaptive decision-making strategies correlates significantly with greater psychological well-being. In contrast, the correlation is high and negative at the intersection of the maladaptive decision-making variables and psychological well-being. © Copyright © 2020 Páez-Gallego, Gallardo-López, López-Noguero and Rodrigo-Moriche.

PALACIOS FLORENCIO, B., NAVAS BAYONA, W.I. y YANDRY LOOR ZAMBRANO, H., 2020. Aplicación del modelo de las 7S de McKinsey en una empresa de transporte de Ecuador. *Polo del Conocimiento: Revista científico -*

*profesional*, vol. 5, no. 5, pp. 296-311. ISSN 2550-682X. 10.23857/pc.v5i5.1418

El modelo de las 7S de McKinsey integra siete factores de la estructura organizacional, entre los que destacan estilo, personal, sistemas, estructura, estrategia, habilidades y valores compartidos, aspectos que se utilizan para valorar si el trabajo diario se alinea a la estrategia empleada y posibilita el fortalecimiento de una organización de manera integral. El objetivo del presente documento es aplicar el modelo McKinsey para evaluar la implementación de la estrategia empresarial en la cooperativa de transporte interprovincial Reina del Camino de Ecuador, desde la perspectiva de los empleados; la empresa investigada cuenta con 27 oficinas en Ecuador, siendo esta una de las razones por las que el personal se encuentra desvinculado, percibiéndose como tal, debilidad en las líneas de comunicación, afectando el trabajo en equipo y por consiguiente el buen funcionamiento de la empresa. El estudio se basó en un enfoque cuantitativo, aplicándose una encuesta al personal que labora en las oficinas de la provincia de Manabí, cuyos resultados positivos demostraron que las estrategias empleadas son instrumentos eficaces para lograr los objetivos empresariales, aunque en lo que concierne a sistemas y valores compartidos, se obtuvo respuestas bastantes fragmentadas, con mayor porcentaje de respuestas negativas, mientras que en otros factores se denotó resultados bastantes fragmentados.

PARDO, B., MORIEL-CARRETERO, M., VICAT, T., AGUILERA, A. y PASERO, P., 2020. Homologous recombination and Mus81 promote replication completion in response to replication fork blockage. *EMBO Reports*, vol. 21, no. 7. DOI 10.15252/embr.201949367

Impediments to DNA replication threaten genome stability. The homologous recombination (HR) pathway has been involved in the restart of blocked replication forks. Here, we used a method to increase yeast cell permeability in order to study at the molecular level the fate of replication forks blocked by DNA topoisomerase I poisoning by camptothecin (CPT). Our results indicate that Rad52 and Rad51 HR factors are required to complete DNA replication in response to CPT. Recombination events occurring during S phase do not generally lead to the restart of DNA synthesis but rather protect blocked forks until they merge with convergent forks. This fusion generates structures requiring their resolution by the Mus81 endonuclease in G2/M. At the global genome level, the multiplicity of replication origins in eukaryotic genomes and the fork protection mechanism provided by HR appear therefore to be essential to complete DNA replication in response to fork blockage. © 2020 The Authors

PASTOR JIMÉNEZ, L.V., 2020. La FEIN como oferta vinculante en la Ley 5/2019, de 15 de marzo. *Estudios sobre la Ley Reguladora de los Contratos de Crédito Inmobiliario*. S.l.: Reus, pp. 53-79. ISBN 978-84-290-2297-1.

PÉREZ CARRILLO, E.F. y BLANCO SÁNCHEZ, M.J., 2020. Crónica documental

(enero-junio 2020). *Revista de derecho del mercado de valores*, no. 26, pp. 17-0. ISSN 1888-4113.

PÉREZ ENCINAS, M., MOLINA PARÍS, J., PELLEGRINI BELINCHÓN, J., PLAZA MORAL, V., PRAENA CRESPO, M. y BLANCO APARICIO, M., 2020. Discrepancias en la clasificación de los glucocorticoides inhalados entre GEMA y GINA. *Archivos de bronconeumología: Organo oficial de la Sociedad Española de Neumología y Cirugía Torácica SEPAR y la Asociación Latinoamericana de Tórax ( ALAT )*, vol. 56, no. 7, pp. 472-473. ISSN 0300-2896.

PÉREZ SERRANO, J., HIDALGO ALVAREZ, R. y MORENTE MUÑOZ, C., 2020. Impulsos iniciales de la modernización autoritaria en Granada: el Ayuntamiento de los Asociados y el marqués de Casablanca (1923-1924). *Revista del Centro de Estudios Históricos de Granada y su Reino*, no. 32, pp. 155-171. ISSN 0213-7461.

The coup d'état that led to the dictatorship of Primo de Rivera had the support of the social and economic institutions of Granada and the entire local press, which considered it a project of renewal against the oligarchic system and local despotism. The constitutional City Council was dissolved, constituting another with the associated members who had been previously chosen by lot among the direct taxpayers of the city. The new City Council elected as mayor-president José Tripaldi Herrera who did not accept the position. Then, the military Directory co-opted to Antonio Díez de Rivera and Muro, XI Marquis of Casablanca and retired general of Artillery. The initial regenerationist impulse of this City Council, formed mostly by neighbors without any political ambition, was noted until the enactment of the Municipal Statute in March 1924. For the Marquis of Casablanca, the priority was to pay the accumulated debt and thus recover the credit before society and banks, honestly managing the budget.

PÉREZ VEGA, Á., 2020. Breves reflexiones sobre la posibilidad de realizar por subasta judicial un crédito hipotecario. *Revista Aranzadi de derecho patrimonial*, no. 52, pp. 7-0. ISSN 1139-7179.

In this paper we will address the analysis of the different legal arguments and procedural bases which support the thesis that the mortgage credit, understood as a complex notion that unites a personal right –such as a credit –and a property right –such as a mortgage– and that has been seized in an enforcement proceeding, and recorded in the “Property Registry”, can be sold at a court auction. Also, we shall analyse the importance of the recent declaration of unconstitutionality and nullity of the article 454 bis 1 first paragraph of the LEC (Civil Procedure Act) for infringing the right to a complete and effective judicial protection referred to in article 24.1. of the CE (Spanish Constitution), declared by the Tribunal Constitucional (Constitutional Court), meeting in plenary, by its Ruling number 15/2020 of 28 January 2020, related to the impossibility of appealing against the decree resolving the so-called “reposición” (a sort of

appeal for reconsideration or revocation); which created an area not subject to judicial control and which could involve a procedural obstacle to the continuation of the enforcement procedure.

PÉREZ-CALERO, C., BAYONA-FELIU, A., XUE, X., BARROSO, S.I., MUÑOZ, S., GONZÁLEZ-BASALLOTE, V.M., SUNG, P. y AGUILERA, A., 2020. UAP56/DDX39B is a major cotranscriptional RNA-DNA helicase that unwinds harmful R loops genome-wide. *Genes & development*, vol. 34, no. 13-14, pp. 898-912. DOI 10.1101/gad.336024.119

Nonscheduled R loops represent a major source of DNA damage and replication stress. Cells have different ways to prevent R-loop accumulation. One mechanism relies on the conserved THO complex in association with cotranscriptional RNA processing factors including the RNA-dependent ATPase UAP56/DDX39B and histone modifiers such as the SIN3 deacetylase in humans. We investigated the function of UAP56/DDX39B in R-loop removal. We show that UAP56 depletion causes R-loop accumulation, R-loop-mediated genome instability, and replication fork stalling. We demonstrate an RNA-DNA helicase activity in UAP56 and show that its overexpression suppresses R loops and genome instability induced by depleting five different unrelated factors. UAP56/DDX39B localizes to active chromatin and prevents the accumulation of RNA-DNA hybrids over the entire genome. We propose that, in addition to its RNA processing role, UAP56/DDX39B is a key helicase required to eliminate harmful cotranscriptional RNA structures that otherwise would block transcription and replication. © 2020 Pérez-Calero et al.; Published by Cold Spring Harbor Laboratory Press.

PÉREZ-DE-GUZMÁN, V., BAS PEÑA, E. y TRUJILLO HERRERA, J.F., 2020. La educación social en España: claves, definiciones y componentes contemporáneos. *Revista Colombiana de Ciencias Sociales*, vol. 11, no. 2, pp. 632-658. ISSN 2216-1201.

El desarrollo epistemológico, disciplinario y profesional de la educación social ha traído consigo la evolución del concepto. Los objetivos de este artículo son: determinar cuáles son las claves actuales para una reinterpretación y lectura de la educación social e identificar los componentes contemporáneos que deben tenerse en cuenta para definir su concepto. La metodología de investigación que se utilizó fue la del estado del arte, una investigación cualitativa-documental de carácter crítico-interpretativa, que ha permitido formular la comprensión del objeto analizado desde los referentes más inmediatos, permitiendo enlazar la descripción, explicación y construcción teórica. Se han seguido unos criterios para la elección, clasificación e identificación de los conceptos: a) Derecho, legislación y políticas públicas; b) Profesión social-educativa, acción profesional, trabajo y empleo; c) Las agencias-agentes, privados-públicos y d) Titulación universitaria y habilitación profesional. Los resultados contemplan las



claves actuales para una reinterpretación y lectura de las definiciones sobre Educación Social en España, su clasificación y los componentes a tener en cuenta para realizar una definición de la misma, de acuerdo con las definiciones aportadas desde 1983 hasta 2015. Como conclusión es importante señalar que, para entender la educación social, se deben tener en cuenta los elementos y componentes atendiendo a un criterio geo-social, desde la visión del conjunto de las microhistorias de la educación social.

PÉREZ-PÉREZ, I., ALCANTARA, A., LÓPEZ TEULÓN, M.P. y VALERO, XIMO, 2020. Asociacionismo, participación y animación sociocultural: El caso ANRIE\_ASC. *Quaderns d'animació i educació social*, no. 31, pp. 6- 0. ISSN 1698-4404.

Si partimos de la base de que un proceso es una secuencia de pasos que busca lograr algún resultado concreto y que, por tanto, no es un momento en exclusiva sino que supone una sucesión de acciones; y que el adjetivo participativo explicita que diferentes personas toman parte, se implican, debaten y proponen, podemos concluir que cuando hablamos de proceso participativo estamos haciendo referencia a la suma de momentos y acciones que posibilitan la implicación, individual o grupal, de las personas en busca de un desarrollo comunitario pleno. Sobre este marco conceptual y vivencial, con el objetivo de dignificar la Animación Sociocultural y a sus profesionales, la asociación ANRIE\_ASC cimienta su razón de ser.

PÉREZ-RODRÍGUEZ, Á., 2020a. Brecha digital, desafección tecnológica y comunicaciones electrónicas societarias: soluciones legislativas adoptadas en el derecho de sociedades inglés. *Revista de derecho del mercado de valores*, no. 26, pp. 13- 0. ISSN 1888-4113.

Bajo los términos «brecha digital» y «desafección tecnológica» se hace referencia a sectores de la población que carecen de acceso a dispositivos electrónicos, de habilidades digitales o que, simplemente, no quieren prescindir de los medios tradicionales de comunicación. Este fenómeno no les ajeno al Derecho de sociedades y se manifiesta, particularmente, en el ámbito de las comunicaciones entre la sociedad y sus socios. En este trabajo se analizan las medidas adoptadas en el Derecho inglés, que mediante el juego de la exigencia de un consentimiento individualizado del socio en sus diversas modalidades junto con el amplio reconocimiento de un derecho a copia impresa, ofrece un alto grado de protección del socio sin merma de la progresiva generalización de las comunicaciones electrónicas. Esta preocupación no es cosa del pasado. El ICLEG en su informe DE 2016 sobre «Digitalización del Derecho de sociedades» también aborda esta cuestión y hace algunas recomendaciones al

respecto.

PÉREZ-RODRÍGUEZ, Á., 2020b. Comunicaciones electrónicas societarias y derecho del socio a solicitar copia impresa. *Derecho de Sociedades: los derechos del socio*. S.l.: Tirant lo Blanch, pp. 219-238. ISBN 978-84-13-36778-1.

PIQUERAS-SANCHIZ, F., MARTÍNEZ-ARANDA, L.M., PAREJA-BLANCO, F., RODRÍGUEZ-RUIZ, D. y GARCÍA-GARCÍA, Ó., 2020. Evolution of contractile properties of the lower limb muscles throughout a season in elite futsal players. *The Journal of sports medicine and physical fitness*, vol. 60, no. 7, pp. 965-973. DOI 10.23736/S0022-4707.20.10345-1

**BACKGROUND:** Futsal is a team sport involving intermittent technical actions of high intensity, and high physical (strength) and muscular demands. In this regard, the tensiomyography (TMG) is a useful and non-invasive tool for the monitoring and assessment of the muscle's contractile capacity. This study aimed to analyze the changes in the contractile properties produced during the season, as well as to determine the potential cumulative effect of a resistance training (RT) program in futsal players. **METHODS:** Fourteen elite futsal players (2 goalkeepers, 4 defenders, 4 wingers and 3 pivots) were assessed by TMG at 11th, 18th, and 28th week of the season. The maximal radial displacement of the muscle belly (Dm); contraction time (Tc); delay time (Td) and radial displacement velocity (90%) Dm (VrD90) were assessed. After the second measurement, a RT program was included in the regular training sessions and focused on the lower body musculature. It was performed during 9 weeks (1-weekly). Finally, a third measurement was performed between 28th-29th weeks. Repeated measures analysis of variance was used to detect in-season changes. Two factors were included: Time (changes detected after resistance training program) was used as the within-subject factor and the specific position was used as the between-subject factor. **RESULTS:** An increment in Tc for several muscles: biceps femoris (BF; P=0.02), semitendinosus (ST; P=0.04), adductor longus (AL; P=0.008) and gastrocnemius medialis (GM; P=0.009) was observed throughout the season. Similarly, significant increments in Dm for GM (P=0.02) and AL (P=0.05), as well as increments in Td for BF (P=0.002) were found. Moreover, no significant changes in VrD90 between time points 2-3 (analysis of RT effect) were observed. Additionally, the player's positions reported no significant changes for any of the variables analyzed. **CONCLUSIONS:** An increase respect to baseline levels was observed for Tc, Td and Dm during the season. However, the adaptations to contractile properties were muscle specific. In addition, an in-season 9-week RT program (1-weekly), had no significant effects (time points 2-3) on the contractile properties of futsal players. In addition, there were no differences when comparing different positions.

PIZARRO MORENO, E., 2020. La mediación como auténtica justicia alternativa: en pro de su obligatoriedad cuando hay menores. *Cuestiones actuales en materia de mediación, familia y sucesiones*. S.l.: Editorial Bosch, pp. 4. ISBN 978-84-9090-439-8.

POVEDANO, A. y MUÑIZ RIVAS, M., 2020. La Dependencia a las Redes Sociales Virtuales y el Clima Escolar en la Violencia de Pareja en la Adolescencia. *RISE*, vol. 9, no. 2, pp. 213-233. ISSN 2014-3575. 10.17583/rise.2020.5203

En este estudio se analizaron las relaciones entre la dependencia a las redes sociales virtuales, el clima escolar y la violencia de pareja online en adolescentes desde una perspectiva de género. La muestra estuvo formada por 919 adolescentes escolarizados de la Comunidad Autónoma de Andalucía (52.4% chicas) con edades comprendidas entre los 15 y los 18 años (M= 16.12; DT= .99) que indicaron tener o haber tenido pareja en el último año. Se establecieron dos grupos de contraste: adolescentes violentos (8.8%) y no violentos (91.2%) con sus parejas (o exparejas) en el espacio online y se realizaron análisis multivariados (MANOVAS). Los resultados obtenidos en el estudio mostraron que el grupo de adolescentes violentos puntuaron significativamente más alto en dependencia a Internet y obtuvieron puntuaciones más bajas en clima escolar (implicación, afiliación y percepción de ayuda del profesor). Asimismo, los análisis inter-género revelaron que existen diferencias significativas en la dependencia y la percepción de ayuda del profesor entre chicos y chicas. En la discusión se plantea el alcance de los resultados y su implicación en la prevención de este tipo de violencia.

PRADANA, M., PÉREZ-LUÑO, A. y FUENTES-BLASCO, M., 2020. Innovation as the key to gain performance from absorptive capacity and human capital. *Technology Analysis and Strategic Management*, vol. 32, no. 7, pp. 822-834. DOI 10.1080/09537325.2020.1714578

This study aims to investigate how firms can achieve high levels of organisational performance through innovation, absorptive capacity (ACAP) and human capital (HC). Using a sample of 138 Spanish companies from the wine industry, our findings show that ACAP and HC allow businesses to fully capture the benefits of innovation. These results contribute to the literature of ACAP, human resources management (HRM) innovation and resource-based view (RBV) of the firm by showing that a number of resources and capabilities (ACAP, HC, and innovation) can be seen as good drivers of performance and, by extension, of competitive advantage. © 2020, © 2020 Informa UK Limited, trading as Taylor & Francis Group.

PYDZIŃSKA-BIAŁEK, K., DRUSHLIAK, V., COY, E., ZAŁĘSKI, K., FLACH, J., IDÍGORAS, J., CONTRERAS-BERNAL, L., HAGFELDT, A., ANTA, J.A. y ZIÓŁEK, M., 2020. Understanding the Interfaces between Triple-Cation Perovskite and Electron or Hole Transporting Material. *ACS applied materials & interfaces*, vol. 12, no. 27, pp. 30399-30410. DOI 10.1021/acsami.0c07095

The properties of efficient solar cells fabricated with triple-cation perovskite placed between a mesoporous titania layer and a spiro-OMeTAD layer are studied by using devices either prepared under water-free drybox conditions or fabricated under ambient room humidity. The morphological studies indicate that the content of unreacted PbI<sub>2</sub> phase in the perovskite structure is much higher near the interface with titania than near the interface with spiro-OMeTAD. The stationary emission spectra and transient bleach peaks of perovskites show additional long-wavelength features close to the titania side. Time-resolved techniques ranging from femtoseconds to seconds reveal further differences in charge dynamics at both interfaces. The population decay is significantly faster at the titania side than at the spiro-OMeTAD side for the cells prepared under ambient conditions. An increased hole injection rate correlates with higher photocurrent seen in the devices prepared under drybox conditions. The charge recombination loss on the millisecond time scale is found to be slower at the interface with titania than at the interface with spiro-OMeTAD. The ideality factor of the cells is found to increase with increasing DMSO content in the precursor solution, indicating a change in recombination mechanism from bulk to surface recombination. We also found that the charge dynamics are not uniform within the whole perovskite layer. This feature has significant implications for understanding the operation and optimizing the performance of solar devices based on mixed cation perovskites.

QIU, Z., WANG, J., DELGADO-BAQUERIZO, M., TRIVEDI, P., EGIDI, E., CHEN, Y.-M., ZHANG, H. y SINGH, B.K., 2020. Plant Microbiomes: Do Different Preservation Approaches and Primer Sets Alter Our Capacity to Assess Microbial Diversity and Community Composition? *Frontiers in Plant Science*, vol. 11. DOI 10.3389/fpls.2020.00993

The microbial communities associated with plants (the plant microbiome) play critical roles in regulating plant health and productivity. Because of this, in recent years, there have been significant increase in studies targeting the plant microbiome. Amplicon sequencing is widely used to investigate the plant microbiome and to develop sustainable microbial agricultural tools. However, performing large microbiome surveys at the regional and global scales pose several logistic challenges. One of these challenges is related with the preservation of plant materials for sequencing aiming to maintain the integrity of the original diversity and community composition of the plant microbiome. Another significant challenge involves the existence of multiple primer sets used in amplicon sequencing that, especially for bacterial communities, hampers the comparability of datasets across studies. Here, we aimed to examine the effect of different preservation approaches (snap freezing, fresh and kept on ice, and air drying) on the bacterial and fungal diversity and community composition on plant leaves, stems and roots from seven plant species from contrasting functional groups (e.g. C<sub>3</sub>, C<sub>4</sub>, N-Fixers, etc.). Another major challenge comes when comparing plant to soil microbiomes, as different primers sets are often used for plant vs.

soil microbiomes. Thus, we also investigated if widely used 16S rRNA primer set (779F/1193R) for plant microbiome studies provides comparable data to those often used for soil microbiomes (341F/805R) using 86 soil samples. We found that the community composition and diversity of bacteria or fungi were robust to contrasting preservation methods. The primer sets often used for plants provided similar results to those often used for soil studies suggesting that simultaneous studies on plant and soil microbiomes are possible. Our findings provide novel evidence that preservation approaches do not significantly impact plant microbiome data interpretation and primer differences do not impact the treatment effect, which has significant implication for future large-scale and global surveys of plant microbiomes. © Copyright © 2020 Qiu, Wang, Delgado-Baquerizo, Trivedi, Egidi, Chen, Zhang and Singh.

QUILES GARCÍA, F., 2020. Epílogo. De la fértil tierra andaluza... *Doñana y su entorno como zona patrimonial*. S.l.: Enredars, pp. 555-556. ISBN 978-84-09-21441-9.

RAPOSO, F., BORJA, R. y IBELLI-BIANCO, C., 2020. Predictive regression models for biochemical methane potential tests of biomass samples: Pitfalls and challenges of laboratory measurements. *Renewable and Sustainable Energy Reviews*, vol. 127. DOI 10.1016/j.rser.2020.109890

This paper is a compilation of some experimental results published in peer-reviewed articles dealing with predictive regression models between biochemical methane potential tests and different chemical parameters characterizing the organic content of biomass samples. Results reviewed were focused on laboratory measurements with the main objective of bringing together the existing experience to evaluate pitfalls and challenges that could be generalized for future research using this kind of substrates. Firstly, BMP test measurements were briefly described for experimental approaches according to different factors such as inoculum, physical and chemical experimental conditions, inoculum to substrate ratio and gas measurement systems. A lot of information necessary when reporting BMP studies was not included in the description of most articles. It is also unexpectedly the lack of positive control tests as a way to check the reliability of the experimental results obtained. As consequence, BMP test results from different laboratories are normally inconsistent and irreproducible. Secondly, chemical parameters analysed in experimental research works such as moisture/dry matter, total chemical oxygen demand, carbohydrates, lipids, proteins and lignin were also reported in a comparative way. In fact, 70% of analytical determinations were covered in some degree, but the presence of a correct reference description was only occasional. Finally, general regression models were summarized. However, the development of one overall model that applies to all kind of samples is difficult to achieve. In order to be reliable and widely applicable, predictive regression models for methane production of biomass samples should be based on accurate laboratory measurements.

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RAYA-GONZALEZ, J., SUAREZ-ARRONES, L., SANCHEZ-SANCHEZ, J., RAMIREZ-CAMPILLO, R., NAKAMURA, F.Y. y DE VILLARREAL, E.S., [sin fecha]. Short and Long-Term Effects of a Simple-Strength-Training Program on Injuries Among Elite U-19 Soccer Players. *Research Quarterly for Exercise and Sport*, ISSN 0270-1367. DOI 10.1080/02701367.2020.1741498.

Purpose: The aim of this study was to examine the short and long-term effects of a simple strength training program on muscle injury prevention in soccer players. Methods: Twenty-seven U-19 elite male soccer players participated in the study. The investigation was conducted over two consecutive and similar seasons (e.g., the same staff, players, weekly training schedule), the first being the control and the second the experimental season. The strength program was carried out 2 times per week, for 10 weeks, during part of the preseason and in-season. Injury incidence and absence days were compared between both seasons, according to the injury rate ratio (IRR), with 95% CI and the Z test. Results: A lower number of total and hamstring injuries were recorded during the experimental (9 and 2, respectively) compared to the control (15 and 7, respectively) period. During the 10 weeks intervention period, the injury rate ratio (IRR) was lower in the experimental season than in the control season (IRR = 8.12; 95% CI: 1.00-66.03; effect size (ES) = 3.30, large). In addition, there was a decline in absence days per injury and in the number of absence days/1000 h (IRR = 2.44; 95% CI: 1.90-3.14; ES = 1.12) during the experimental season. Conclusion: The results of this study suggest that this simple strength-training program could reduce the muscle injury incidence during its application period in young soccer players.

RODRÍGUEZ BECERRA, S. y HERNÁNDEZ GONZÁLEZ, S., 2020. Devociones y culto mariano en la comarca del condado de Huelva. *Doñana y su entorno como zona patrimonial*. S.l.: Enredars, pp. 497-524. ISBN 978-84-09-21441-9.

Dentro de la riqueza y variedad de las expresiones que adquiere la religiosidad popular en la comarca del Condado de Huelva, sobresalen las manifestaciones festivas del culto mariano, encabezadas por la célebre romería del Rocío. Pero en las demás poblaciones se sucede a lo largo del año un amplio programa de fiestas patronales y romerías, que tienen por escenario tanto parroquias como ermitas urbanas y rurales. El repertorio de advocaciones refleja los diferentes agentes implicados en la conformación de la religiosidad popular, desde el clero secular y regular, hasta la propia espontaneidad del pueblo que otorga carta de naturaleza local al universalismo del culto mariano

RODRIGUEZ GUERRERO, M. y BARRERA ALGARIN, E., 2020. The

criminalization of social movements in the dispute for the media space: the Gamonal conflict. *APOSTA-Revista de Ciencias Sociales*, vol. 86, pp. 29-50. ISSN 1696-7348.

This paper aims to analyze the information coverage carried out by media Antena 3TV (Atresmedia Group) on the social mobilizations that occurred in Gamonal (Burgos) in early 2014. Through a methodology that alternates quantitative and qualitative methods, studies on media production processes of information-building and discourses integrated into the 19 video-news that the corporate developed to broadcast the events. The results show a process of criminalization towards social movement by means of a high percentage of treatment of content related to the physical violence and as part of latent commercial interests that tend to reproduce and legitimize the system.

RODRÍGUEZ-RODRÍGUEZ, M., MORAL MARTOS, F., FERNÁNDEZ AYUSO, A. y CARO, R., 2020. Monitorización hidrológica y caracterización de la relación laguna-acuífero en las lagunas de los mantos eólicos de Doñana. *Geogaceta*, no. 67, pp. 87-90. ISSN 0213-683X.

En este trabajo se ha realizado un estudio hidrogeológico en la-gunas costeras de la Reserva Biológica de Doñana. Dichas lagunas se encuentran situadas en las depresiones de trenes de dunas cuasi estables del acuífero de los mantos eólicos de Doñana, a diferentes cotas. Se ha registrado la evolución del nivel de agua en las lagunas mediante sensores instalados en las cubetas lacustres y se han cuantificado las entradas, salidas y variaciones en el almacenamiento a escala diaria durante el periodo comprendido entre marzo de 2016 y septiembre de 2018. También se han tomado muestras de agua superficial y subterránea en piezómetros cercanos para analizar la facies hidroquímica del agua. Salvo la laguna de Santa Olalla, que es la situada a menor cota, el resto de las lagunas son estacionales o temporales. De los resultados de los balances de agua se deduce que la mayoría de las lagunas son de tránsito o flow-through. Sin embargo, la importancia de la descarga subterránea en algunas de las lagunas es mucho mayor que en otras. Hay sistemas que dependen fundamentalmente de las precipitaciones y cuyas salidas hídricas son, en su mayor parte, recarga o infiltración hacia el acuífero.

ROMÁN GRAVÁN, P., BALLESTEROS-REGAÑA, C., FERNÁNDEZ MÁRQUEZ, E. y HERVÁS-GÓMEZ, C., 2020. *Accesibilidad de las TIC para la diversidad funcional cognitiva*. S.l.: Octaedro. ISBN 978-84-18083-26-6.

A pesar de que los valores fundamentales, tanto de las sociedades democráticas como de

los sistemas educativos más reconocidos, se han ido posicionando tradicionalmente en la defensa de una atención educativa centrada en las necesidades de todos y en la individualidad de cada ciudadano, muchas personas siguen encontrando serias dificultades para superar las distintas barreras que impiden su participación y que aumentan su riesgo de exclusión social. En el abordaje de estos obstáculos, las tecnologías de la información y la comunicación (TIC) pueden adquirir su mayor expresión, mediante el diseño de medios y recursos tecnológicos cada vez más accesibles para atender la diversidad de características, necesidades e intereses que se pueden presentar. En torno a esta cuestión, este libro se ha estructurado en dos partes. En la primera analizamos las posibilidades técnicas y didácticas de accesibilidad que pueden ofrecernos las TIC para potenciar la igualdad social y educativa e identificamos, desde la perspectiva del diseño universal de aprendizaje, algunos principios clave relativos a su diseño. En la segunda parte presentamos una selección de aplicaciones gratuitas para dispositivos móviles que se centran en las principales dificultades asociadas a la diversidad funcional cognitiva: la estimulación cognitiva, los procesos de lectura y escritura, la capacidad de asociación y percepción visoespacial, la memoria, la atención y el razonamiento secuencial.

ROMÁN GRAVÁN, P., BALLESTEROS-REGAÑA, C., HERVÁS-GÓMEZ, C. y FERNÁNDEZ MÁRQUEZ, E., 2020. Apps para trabajar la memoria, la atención y el razonamiento secuencial. *Accesibilidad de las TIC para la diversidad funcional cognitiva*. S.l.: Octaedro, pp. 77-88. ISBN 978-84-18083-26-6.

RUÍZ, M., SANTAMARÍA-LÓPEZ, E., BLASCO, V., HERNÁEZ, M.J., CALIGARA, C., PELLICER, A., FERNÁNDEZ-SÁNCHEZ, M. y PRADOS, N., 2020. Effect of Group Embryo Culture under Low-Oxygen Tension in Benchtop Incubators on Human Embryo Culture: Prospective, Randomized, Controlled Trial. *Reproductive Sciences*, vol. 27, no. 7, pp. 1522-1533. DOI 10.1007/s43032-020-00150-5

To evaluate the efficacy of group embryo culture under low-oxygen tension in benchtop incubators on human embryo development in vitro. The study was designed as a prospective, patient blind, randomized, controlled trial of a complex intervention. One hundred forty-eight women undergoing IVF were recruited in our fertility practice and randomized into two groups: intervention group (study culture strategy) or control group (control culture strategy). Intervention group embryos were cultured grouped under low-oxygen tension in benchtop incubators while control group embryos were cultured individually under atmospheric oxygen tension in large-box incubators. Using the study culture strategy, there were a significantly higher implantation rate (65.1% vs 49.2%; RR, 1.42; 95% CI, 1.17–1.73) and live birth delivery rate per embryo transfer (52.7% vs 39.5%; RR, 1.33; 95% CI, 1.02–1.75) with the first fresh embryo transfer. Cumulative implantation rate (56.7% vs 43.6%; RR, 1.30; 95% CI, 1.05–1.62) and cumulative live birth rate per embryo transfer (47.4% vs 36.2%; RR, 1.31; 95% CI, 1.01–1.69) were also statistically significantly increased in



the study culture strategy. Human embryos exposed to our study culture condition strategy had statistically significant increased cumulative implantation rate and cumulative live birth rate per embryo transferred. Our findings suggest that this strategy specially favours poor quality embryos. Clinical Trial Registration Number: NCT 01904006. © 2020, Society for Reproductive Investigation.

SÁNCHEZ LERÍA, R., 2020a. Plataformas de alojamiento y contenidos ilícitos en Internet. Reflexiones a propósito de la nueva Directiva 2019/790 sobre derechos de autor en el mercado digital. *Revista de Derecho Civil*, vol. 7, no. 3, pp. 163-198. ISSN 2341-2216.

Since the enactment of the Electronic Commerce Directive and the Information Society Services and Electronic Commerce Act 34/2002 (LSSICE), new business models and internet services have emerged, which are very different to those the legislators had in mind when regulating information society services. Hence, the development of the Web 2.0 has given rise, among other things, to the birth of new content hosting platforms. The nature of these new services, the major social impact they have had in recent years, the market consolidation achieved by many of them, and the scope of the damage that can be caused today through the Internet, have led to, among other issues, the amendment and adaptation of the regime of responsibility affecting these service providers, contained in art. 16 of the LSSICE legislation. This paper highlights how, for certain scenarios in which there is a greater incidence of conflicts between hosting providers and the affected third parties, new criteria have been consolidated that, far from offering a safe port to providers, have imposed upon them duties of care and diligence in order to avoid the commission of infractions through their spaces. It also underscores the possibility of applying these criteria to certain platforms, such as social media, which must also contribute to avoiding the publication of patently illicit contents on the Net

SÁNCHEZ LERÍA, R., 2020b. Sobre el deber de información y transparencia material en la nueva Ley reguladora de los contratos de crédito inmobiliario. *Estudios sobre la Ley Reguladora de los Contratos de Crédito Inmobiliario*. S.l.: Reus, pp. 145-170. ISBN 978-84-290-2297-1.

SÁNCHEZ MARTÍN, A.R., DE LA FUENTE MORENO, A. y GARCÍA DÍAZ, M.A., 2020. ¿Hacia una contrarreforma de pensiones? Notas para el Pacto de Toledo. *Hacienda Pública Española / Review of Public Economics*, no. 232, pp. 115-143. ISSN 0210-1173. 10.7866/hpe-rpe.20.1.5

En este artículo se analizan las posibles consecuencias de la derogación de la reforma de 2013 de la normativa sobre pensiones. Con este fin, se construyen proyecciones

de los ingresos y gastos del sistema de pensiones contributivas de la Seguridad Social hasta 2070 con y sin dicha reforma y se exploran sus implicaciones para las cuentas públicas y para el reparto de la renta entre activos y pensionistas bajo dos escenarios alternativos sobre el influjo de inmigrantes en las próximas décadas.

SÁNCHEZ RUBIO, D., 2020a. Ciencia-ficción, tramas sociales y derechos humanos *Derecho, inteligencia artificial y nuevos entornos digitales*. S.l.: Punto Rojo, pp. 237-275. ISBN 978-84-18416-15-6.

SÁNCHEZ RUBIO, D., 2020b. Multi-garantie, droits de l'homme et traite des personnes. *Les migrations, la traite des personnes et les vulnérabilités transfrontalières: Approches du point de vue des droits de l'homme*. S.l.: Dykinson, pp. 12-23. ISBN 978-84-13-24809-7.

SÁNCHEZ-MEDINA, J.A., ORTEGA TORRES, W.E. y VAHOS ANAYA, M.A., 2020. Escuela y comunidad: La experiencia colombiana con los Proyectos de Servicio Social Estudiantil. *IJERI: International journal of Educational Research and Innovation*, no. 14, pp. 304-323. ISSN 2386-4303. 10.46661/ijeri.4986

Uno de los grandes problemas a los que se enfrenta actualmente la escuela, es que se generan conocimientos y procesos de aprendizaje encapsulados y desarticulados de las características del contexto que definen a sus estudiantes. Frente a este panorama, se plantea que el aprendizaje por servicio puede erigirse como una alternativa que logra articular los saberes de la escuela con la comunidad en miras de generar procesos de aprendizaje auténtico. A partir de estas premisas, este artículo presenta un estudio práctico sobre los Proyectos de Servicio Social Estudiantil (PSSE), como alternativa para superar la visión dualista escuela-comunidad. Los PSSE son un requisito estatal que todo estudiante de educación pública o privada de Colombia debe cumplir en los grados superiores y que, desde la teoría, se reconoce como un escenario de articulación entre la escuela, la comunidad y el individuo. Sin embargo, los hallazgos evidencian una serie de dificultades que han limitado su alcance formativo y dejan entrever un sistema educativo nacional históricamente fragmentado y lleno de carencias, desde el que la escuela necesita ser repensada y resignificada para fortalecer los procesos de aprendizaje y formación de los estudiantes.

SÁNCHEZ-SALGUERO, R., COLANGELO, M., MATÍAS, L., RIPULLONE, F. y CAMARERO, J.J., 2020. Shifts in growth responses to climate and exceeded drought-vulnerability thresholds characterize dieback in two Mediterranean deciduous oaks. *Forests*, vol. 11, no. 7. DOI 10.3390/F11070714

Drought stress has induced dieback episodes affecting many forest types and tree species worldwide. However, there is scarce information regarding drought-

triggered growth decline and canopy dieback in Mediterranean deciduous oaks. These species face summer drought but have to form new foliage every spring which can make them vulnerable to hotter and drier conditions during that season. Here, we investigated two stands dominated by *Quercus frainetto* Ten. and *Quercus canariensis* Willd. and situated in southern Italy and Spain, respectively, showing drought-induced dieback since the 2000s. We analyzed how radial growth and its responses to climate differed between non-declining (ND) and declining (D) trees, showing different crown defoliation and coexisting in each stand by: (i) characterizing growth variability and its responsiveness to climate and drought through time, and (ii) simulating growth responses to soil moisture and temperature thresholds using the Vaganov-Shashkin VS-lite model. Our results show how growth responsiveness to climate and drought was higher in D trees for both oak species. Growth has become increasingly limited by warmer-drier climate and decreasing soil moisture availability since the 1990s. These conditions preceded growth drops in D trees indicating they were more vulnerable to warming and aridification trends. Extremely warm and dry conditions during the early growing season trigger dieback. Changes in the seasonal timing of water limitations caused contrasting effects on long-term growth trends of D trees after the 1980s in *Q. frainetto* and during the 1990s in *Q. canariensis*. Using growth models allows identifying early-warning signals of vulnerability, which can be compared with shifts in the growth responses to warmer and drier conditions. Our approach facilitates establishing drought-vulnerability thresholds by combining growth models with field records of dieback. © 2020 by the authors.

SANTAMARÍA-BONFIL, G., IBÁÑEZ, M.B., PÉREZ-RAMÍREZ, M., ARROYO-FIGUEROA, G. y MARTÍNEZ-ÁLVAREZ, F., 2020. Learning analytics for student modeling in virtual reality training systems: Lineworkers case. *Computers and Education*, vol. 151. DOI 10.1016/j.compedu.2020.103871

Live-line maintenance is a high risk activity. Hence, lineworkers require effective and safe training. Virtual Reality Training Systems (VRTS) provide an affordable and safe alternative for training in such high risk environments. However, their effectiveness relies mainly on having meaningful activities for supporting learning and on their ability to detect untrained students. This study builds a student model based on Learning Analytics (LA), using data collected from 1399 students that used a VRTS for the maintenance training of lineworkers in 329 courses carried out from 2008 to 2016. By employing several classifiers, the model allows discriminating between trained and untrained students in different maneuvers using three minimum evaluation proficiency scores. Using the best classifier, a Feature Importance Analysis is carried out to understand the impact of the variables regarding the trainees' final performances. The model also involves the exploration of the trainees' trace data through a visualization tool to pose non-observable behavioral variables related to displayed errors. The results show that the model can discriminate between trained and untrained students, the Random Forest algorithm standing out. The feature importance analysis

revealed that the most relevant features regarding the trainees' final performance were profile and course variables along with specific maneuver steps. Finally, using the visual tool, and with human expert aid, several error patterns in trace data associated with misconceptions and confusion were identified. In the light of these, LA enables disassembling the data jigsaw quandary from VRTS to enhance the human-in-the-loop evaluation. © 2020 Elsevier Ltd

SANTANA-MOLINA, C., RIVAS-MARIN, E., ROJAS, A.M., DEVOS, D.P. y URSULA BATTISTUZZI, F., 2020. Origin and Evolution of Polycyclic Triterpene Synthesis. *Molecular Biology and Evolution*, vol. 37, no. 7, pp. 1925-1941. DOI 10.1093/molbev/msaa054

Polycyclic triterpenes are members of the terpene family produced by the cyclization of squalene. The most representative polycyclic triterpenes are hopanoids and sterols, the former are mostly found in bacteria, whereas the latter are largely limited to eukaryotes, albeit with a growing number of bacterial exceptions. Given their important role and omnipresence in most eukaryotes, contrasting with their scant representation in bacteria, sterol biosynthesis was long thought to be a eukaryotic innovation. Thus, their presence in some bacteria was deemed to be the result of lateral gene transfer from eukaryotes. Elucidating the origin and evolution of the polycyclic triterpene synthetic pathways is important to understand the role of these compounds in eukaryogenesis and their geobiological value as biomarkers in fossil records. Here, we have revisited the phylogenies of the main enzymes involved in triterpene synthesis, performing gene neighborhood analysis and phylogenetic profiling. Squalene can be biosynthesized by two different pathways containing the HpnCDE or Sqs proteins. Our results suggest that the HpnCDE enzymes are derived from carotenoid biosynthesis ones and that they assembled in an ancestral squalene pathway in bacteria, while remaining metabolically versatile. Conversely, the Sqs enzyme is prone to be involved in lateral gene transfer, and its emergence is possibly related to the specialization of squalene biosynthesis. The biosynthesis of hopanoids seems to be ancestral in the Bacteria domain. Moreover, no triterpene cyclases are found in Archaea, invoking a potential scenario in which eukaryotic genes for sterol biosynthesis assembled from ancestral bacterial contributions in early eukaryotic lineages. © 2020 The Author(s) 2020. Published by Oxford University Press on behalf of the Society for Molecular Biology and Evolution.

SEGOVIA, J., CHEN, C., CUI, Z.-F., LU, Y. y ROBERTS, C.D., 2020. Nucleon-to-resonance form factors at large photon virtualities. *AIP Conference Proceedings*. S.l.: s.n., DOI 10.1063/5.0008725

We present a unified description of elastic and transition form factors involving the nucleon and its resonances; in particular, the N(1440),  $\Delta(1232)$  and  $\Delta(1600)$ . We

compare predictions made using a framework built upon a Faddeev equation kernel and interaction vertices that possess QCD-kindred momentum dependence with results obtained using a confining, symmetry-preserving treatment of a vector - vector contact-interaction in a widely-used leading-order (rainbow-ladder) truncation of QCD's Dyson-Schwinger equations. This comparison explains that the contact-interaction framework produces hard form factors, curtails some quark orbital angular momentum correlations within a baryon, and suppresses two-loop diagrams in the elastic and transition electromagnetic currents. Such defects are rectified in our QCD-kindred framework and, by contrasting the results obtained for the same observables in both theoretical schemes, shows those objects which are most sensitive to the momentum dependence of elementary quantities in QCD. © 2020 Author(s).

SEGOVIA-GONZALEZ, M.M., DOMINGUEZ, C. y CONTRERAS, I., 2020. An assessment of the efficiency of Spanish schools: evaluating the influence of the geographical, managerial, and socioeconomic features. *International Transactions in Operational Research*, vol. 27, no. 4, pp. 1845-1868. DOI 10.1111/itor.12711

The aim of the present paper is to explore the efficiency of Spanish schools while simultaneously considering data envelopment analysis (DEA) and multivariate analysis. Test scores from the Program for International Assessment reports are used as outputs while the resources of each institution are considered as inputs to the analysis. The methodology utilized determines the DEA efficiencies under various input/output combinations and the results are interpreted through the application of factor analysis and property-fitting techniques. The objective of the study is to identify the strengths and weaknesses of each type of school and the connections with the way in which the efficiency is obtained. In the light of the results, the study concludes that there exist differences related with two of the criteria considered: the type of management of the schools and the parental socioeconomic level of the students. However, no differences appear when the geographical location of the institutions is considered to characterize the entities. © 2019 The Authors. *International Transactions in Operational Research* © 2019 International Federation of Operational Research Societies

SERRANO RUIZ, M.Á., 2020. Responsabilidad de la aerolínea ante la cancelación de un viaje combinado, aun cuando la agencia de viajes ha quebrado.: Comentario a la STJUE (sala tercera) de 10 de julio de 2019 (TJCE/2019/136). *Revista Aranzadi de derecho patrimonial*, no. 52, pp. 9- 0. ISSN 1139-7179.

The Court of Justice of the European Union responds to a reference for a preliminary ruling requested from a District Court in the Netherlands, consisting of two interrelated questions. The purpose of these questions is to determine whether a

passenger can claim the reimbursement of his ticket directly from the air carrier when he has the right to claim it from the tour operator under Directive 90/314/EEC and, more specifically, whether this action could be enforced when the tour operator is in financial bankruptcy. The Court of Justice examines the compatibility of Article 8(2) of Regulation (EC) No 261/2004 with the protection afforded to the user of a package travel by Directive 90/314/EEC.

SERRANO-FERNÁNDEZ, M., 2020. El ámbito de aplicación de la Ley reguladora de los contratos de crédito inmobiliario. *Estudios sobre la Ley Reguladora de los Contratos de Crédito Inmobiliario*. S.l.: Reus, pp. 15-51. ISBN 978-84-290-2297-1.

SILVA-ARDANUY, M., 2020. Impacto de los principios de estabilidad presupuestaria y sostenibilidad financiera en las competencias de las administraciones locales en materia de derechos sociales (2011-2019). *Lex social: revista de los derechos sociales*, vol. 10, no. 2, pp. 631-681. ISSN 2174-6419. 10.46661/lexsocial.5079

The approval of the reform of Article 135 of the Spanish Constitution on 27 September 2011 in the framework of the implementation of the principles of budgetary stability and financial sustainability established at Community level resulted in the adoption of Organic Law 27/2012, April 27 on Budgetary Stability and Financial Sustainability (LOEPSF) and Law 27/2013 of December 27 on Local Government Rationalization and Sustainability (LRSAL) which established measures of fiscal discipline and severe deficit containment in the field of local governments. As a result of its implementation, the local governments lost 57,073 employees in the period 2008-2018, they altered their sharing regime in the State's income and their respective regions while their ability to realize public policies based on the deployment of social rights in a context of economic recession were compromised. Knowing the impact that the incorporation of the principles of stability and financial sustainability into the Spanish legal system has had on the local administration in the period 2011-2019 is the object of this article.

SORA, B. y VERA, M., 2020. Emotional Dissonance in the Spanish Services Sector: The Role of Support in the Workplace. *The Spanish journal of psychology*, vol. 23, pp. e28. DOI 10.1017/SJP.2020.29

The purpose of this study was twofold. The first aim was to analyze the detrimental effect that emotional dissonance may have on service workers by testing its relationship with job satisfaction, intention to leave the organization, and organizational deviance. The second was to test whether two types of social support (i.e., co-worker and organizational support) and their combination moderate these relationships from a multilevel perspective. The sample was composed of 556 employees from Spanish service sector. Using random coefficient models analyses, results showed, first, that emotional dissonance was related to lower levels of job satisfaction ( $PE = -.1, p < .05$ ) and higher levels of

intention to leave the organization (PE = .12,  $p < .05$ ); second, that co-worker support moderate the relationship between emotional dissonance and job satisfaction (PE = .10,  $p < .05$ ), organizational deviance (PE = -.08,  $p < .05$ ), and intention to leave the organization (PE = -.13,  $p < .05$ ); third, organizational support, conceptualized as a collective construct at organizational level, moderate the relationship between emotional dissonance and organizational deviance (PE = -.08,  $p < .05$ ); and finally, the combination of both types of support do not explained additional variance of the emotional dissonance-outcomes relation. These results underline the need to take into consideration different source of social support and their levels of analysis to better understand emotional dissonance and its outcomes.

SOULET, F., BODINEAU, C., HOOKS, K.B., DESCARPENTRIE, J., ALVES, I., DUBREUIL, M., MOUCHARD, A., EUGENIE, M., HOEPFFNER, J.-L., LÓPEZ, J.J., ROSADO, J.A., SOUBEYRAN, I., TOMÉ, M., DURÁN, R.V., NIKOLSKI, M., VILLOUTREIX, B.O., EVRARD, S., SIEGFRIED, G. y KHATIB, A.-M., 2020. ELA/APELA precursor cleaved by furin displays tumor suppressor function in renal cell carcinoma through mTORC1 activation. *JCI insight*, vol. 5, no. 14. DOI 10.1172/jci.insight.129070

Apelin is a well-established mediator of survival and mitogenic signaling through the apelin receptor (Aplnr) and has been implicated in various cancers; however, little is known regarding Elabela (ELA/APELA) signaling, also mediated by Aplnr, and its role and the role of the conversion of its precursor proELA into mature ELA in cancer are unknown. Here, we identified a function of mTORC1 signaling as an essential mediator of ELA that repressed kidney tumor cell growth, migration, and survival. Moreover, sunitinib and ELA showed a synergistic effect in repressing tumor growth and angiogenesis in mice. The use of site-directed mutagenesis and pharmacological experiments provided evidence that the alteration of the cleavage site of proELA by furin induced improved ELA antitumorigenic activity. Finally, a cohort of tumors and public data sets revealed that ELA was only repressed in the main human kidney cancer subtypes, namely clear cell, papillary, and chromophobe renal cell carcinoma. Aplnr was expressed by various kidney cells, whereas ELA was generally expressed by epithelial cells. Collectively, these results showed the tumor-suppressive role of mTORC1 signaling mediated by ELA and established the potential use of ELA or derivatives in kidney cancer treatment.

SUN, Y., DHAMNE, S.C., CARRETERO-GUILLEN, A., SALVADOR, R., GOLDENBERG, M.C., GODLEWSKI, B.R., PASCUAL-LEONE, A., MADSEN, J.R., STONE, S.S.D., RUFFINI, G., MARQUEZ-RUIZ, J. y ROTENBERG, A., [sin fecha]. Drug-Responsive Inhomogeneous Cortical Modulation by Direct Current Stimulation. *Annals of Neurology*, ISSN 0364-5134. DOI 10.1002/ana.25822.

Objective Cathodal direct current stimulation (cDCS) induces long-term depression (LTD)-like reduction of cortical excitability (DCS-LTD), which has been tested in the treatment of epilepsy with modest effects. In part, this may be due to variable cortical neuron orientation relative to the electric field. We tested, in vivo and in vitro, whether DCS-LTD occurs throughout the cortical thickness, and if not, then whether drug-DCS pairing can enhance the uniformity of the cortical response and the cDCS antiepileptic effect. Methods cDCS-mediated changes in cortical excitability were measured in vitro in mouse motor cortex (M1) and in human postoperative neocortex, in vivo in mouse somatosensory cortex (S1), and in a mouse kainic acid (KA)-seizure model. Contributions of N-methyl-D-aspartate-type glutamate receptors (NMDARs) to cDCS-mediated plasticity were tested with application of NMDAR blockers (memantine/D-AP5). Results cDCS reliably induced DCS-LTD in superficial cortical layers, and a long-term potentiation (LTP)-like enhancement (DCS-LTP) was recorded in deep cortical layers. Immunostaining confirmed layer-specific increase of phospho-S6 ribosomal protein in mouse M1. Similar nonuniform cDCS aftereffects on cortical excitability were also found in human neocortex in vitro and in S1 of alert mice in vivo. Application of memantine/D-AP5 either produced a more uniform DCS-LTD throughout the cortical thickness or at least abolished DCS-LTP. Moreover, a combination of memantine and cDCS suppressed KA-induced seizures. Interpretation cDCS aftereffects are not uniform throughout cortical layers, which may explain the incomplete cDCS clinical efficacy. NMDAR antagonists may augment cDCS efficacy in epilepsy and other disorders where regional depression of cortical excitability is desirable. ANN NEUROL 2020

VILLA DÍAZ, Á. y ANDREU-LARA, C., 2020. El Rocío y Doñana, Naturaleza y Cultura. *Doñana y su entorno como zona patrimonial*. S.l.: Enredars, pp. 281-296. ISBN 978-84-09-21441-9.

Actualmente El Rocío y Doñana son dos términos plenos de significados. Ambos comparten un pasado y un destino común y son reconocidos por su incuestionable valor patrimonial, si bien tienen connotaciones completamente distintas. Si Doñana constituye en el imaginario social el paradigma de naturaleza virgen, El Rocío es reconocido por sus valores sociales, culturales y simbólicos. La Madre de las Marismas, punto central de los espacios protegidos de Doñana, es un lugar clave para entender la unicidad del patrimonio, pues sus valores físicos, naturales, históricos, sociales, culturales y simbólicos son inseparables, manifestándose en el complejo mundo de sensaciones y emociones que despiertan. Y es que La Madre funda su identidad y los valores que acumula en la hibridación de sus componentes, evidenciándose con claridad que naturaleza y cultura son ámbitos inseparables. El análisis del paisaje de este enclave permite poner de manifiesto la unicidad de sus valores patrimoniales y su representatividad del mundo de Doñana



VIOQUE, J., GIRÓN-CALLE, J., TORRES-SALAS, V., ELAMINE, Y. y ALAIZ, M., 2020. Characterization of *Vicia ervilia* (bitter vetch) seed proteins, free amino acids, and polyphenols. *Journal of Food Biochemistry*, vol. 44, no. 7. DOI 10.1111/jfbc.13271

*Vicia ervilia* is an ancient crop from the Mediterranean Region. It may represent a useful source of proteins for food and animal feed, as well as bioactive components. Seed samples from 39 populations of *V. ervilia* have been analyzed. Polyphenol contents ranged from 0.09% to 0.19%. Luteolin, kaempferol, apigenin, and quercetin were the major aglycones. The total free amino acid content of the seeds was 0.05% to 0.19% in which canavanine represented 9% to 22%. The protein content was 24.1%. The amino acid composition indicated a high content in acidic amino acids and a deficit in sulphur amino acids. *V. ervilia* seeds proved to be a good substrate for the preparation of protein isolates. The seed extracts inhibited the proliferation of Caco-2 colon tumor cells, simultaneously, exerting antioxidative effects. Hence, seeds of *V. ervilia* could represent a source of high-value food and feed components, as well as functional components. Practical applications: *Vicia ervilia* (bitter vetch) (Leguminosae) is an ancient crop from the Mediterranean Region. Although it was still grown in many Mediterranean countries at the beginning of the twentieth century, other crops that provide higher and more consistent yield later replaced it. However, *V. ervilia* seeds may represent a useful source of proteins for human nutrition and animal feeding, and a source of bioactive components with health-promoting properties. Our results show that the seeds of *V. ervilia* could, indeed, represent a source of high-value food and feed components, as well as functional, health-promoting components. This may result in a revalorization of this neglected crop. The availability of numerous populations in seed banks guarantees the preservation of a genetic diversity in *V. ervilia* that could be used for the production of new varieties with better nutritional and functional characteristics. © 2020 Wiley Periodicals LLC.

