

PUBLICACIONES INDEXADAS WoS, Scopus, SciELO ACEPTADAS DURANTE NOVIEMBRE DE 2018

UNIVERSIDAD SAN SEBASTIÁN

Facultad de Arquitectura, Arte y Diseño

1.-“ *Construcción rural como representación. Infraestructura agrícola menor en el valle central de Chile*”

Rita Fundamentos. Scopus

Juan Paulo Alarcón

Abstrac: Los gallineros, secadores de maíz, bodegas, caballerizas, etc. del valle central de Chile, son construcciones menores que funcionan como infraestructuras que complementan la producción agrícola básica y de pequeña escala que allí se desarrolla con lo cual su resolución, que roza lo arcaico, está desprovista de un germen disciplinar. Estas construcciones si bien pueden ser la culminación material de una idea, más bien se plantean como la representación en sí misma de un proyecto, en un estado pendiente de resolución, que se ha ido forjando generación tras generación. Esparcidas en el territorio representan tanto el carácter agrícola de la zona, como la inteligencia desplegada a lo largo del tiempo determinada por las condiciones geográficas, culturales y sociales, en un contexto de escasez. Si bien tiene antecedentes en las edificaciones residenciales primitivas, se origina como tipo en la reforma agraria, cuando se reparten las tierras en superficies pequeñas que promueven el desarrollo de la agricultura menor. Las construcciones rurales en el valle central de Chile son en sí mismo la representación de su proyecto y como manifestaciones, representan una actividad comunal, un territorio, un paisaje, un modelo económico, un ideal político.

2.- “*Dos centrales de transmisiones o las casas de las máquinas*”

ARQ. WoS

Arturo Scheidegger

Abstract: Visibles desde la lejanía, las infraestructuras de telecomunicaciones transmiten señales a territorios incluso mayores que la distancia a la que podemos verlas. Los dos proyectos que aquí se presentan, sin embargo, nos muestran aquello

que recién aparece cuando las antenas llegan al suelo en un parque público: las arquitecturas que decodifican las señales emanadas por la infraestructura en otras palabras, las caras visibles de las ondas invisibles.

Facultad de Ciencias de la Educación

1.- *“Caracterização e correlação entre as variáveis do desempenho motor de atletas de elite praticantes de basquete em cadeira de rodas no início do período preparatório”*

Revista Brasileira do Esporte. WoS

Cristián Luarte

Abstract: O presente estudo tem como objetivo correlacionar e caracterizar o perfil de desempenho motor dos atletas de elite praticantes de basquete em cadeira de rodas no início do período preparatório. Participaram do estudo 12 atletas de elite, do sexo masculino, praticantes de basquete em cadeira de rodas da cidade de Concepción/Chile. Os atletas foram submetidos aos testes de arremesso de Medicine Ball (AMB) de 3Kg, teste de velocidade 20m (V20m), de agilidade 8-ball, teste de sprint em 30s (S30s) e o teste OMFT. Observou-se correlação significativa entre AMB e VO₂máx ($r=0,82$), entre agilidade 8-ball realizado com e sem o controle de bola ($r=0,72$) e entre V20m e VO₂máx ($r= -0,64$). A média dos resultados obtidos dos atletas foi de 5,1 1,5m para o AMB, de 6,8 1,2s no teste V20m, de 16,1 1,0 passagens no teste 8-ball sem bola e de 12 2,3 passagens com bola. No teste S30s a média foi de 75,0 7,0m e no OMFT, a distância média percorrida foi de 1706±712,8m e VO₂máx de 28,1 3,3 ml.kg.min⁻¹. O diagnóstico e o acompanhamento do comportamento de desempenho motor dos atletas durante os diferentes períodos de preparação são estratégias fundamentais de controle e monitoramento do treinamento, como também, contribuem substancialmente para melhorar o desempenho dos jogadores por meio da organização e estruturação do treinamento cada vez mais específico.

2.- *“Modelação Competitiva da Seleção Brasileira de Futebol de 5 pela Frequência Cardíaca, Percepção Subjetiva de Esforço e Carga Média durante o Mundial IBSA 2018”*

Revista Brasileira do Esporte. WoS

Cristián Luarte

Abstract: O objetivo do presente estudo foi de investigar a carga interna imposta aos atletas da Seleção Brasileira de futebol de 5 durante o Mundial IBSA 2018. Participaram do estudo 8 atletas que foram monitorados quanto ao tempo de

permanência, em percentual, da frequência cardíaca, categorizados em 5 zonas de esforços (I abaixo de 59,9%FCmáx, II 60-69,9%FCmáx, III 70-79,9%FCmáx, IV 80-89,9%FCmáx e V acima de 90%FCmáx) e quanto a percepção subjetiva de esforço (PSE) em 6 partidas oficiais, sendo 3 na etapa classificatória (EC) e 3 na etapa eliminatória (EE). Os principais resultados apontaram diferenças apenas entre a EC e a EE na zona I (EC51%, EE31%), II (EC177%, EE71%) e V (EC232%, EE343%). Foram observados também, maior tempo de permanência em zonas de intensidades mais elevadas (IV e V) em ambas etapas da competição e média de PSE de 5,21,1UA na EC e de 5,61,1UA na EE, classificados como forte. Como conclusão, os resultados apontam que as partidas realizadas pelos atletas são disputadas majoritariamente em esforços de alta intensidade e que tais informações apontam para direcionamento no processo de planejamento e estruturação do treinamento.

Facultad de Ciencias de la Salud

1.- *“AP39, a modulator of mitochondrial bioenergetics, reduces anti-angiogenic response and oxidative stress in hypoxia-exposed trophoblasts: relevance for preeclampsia”*

The American Journal of Pathology. WoS

Ambart Covarrubias

Abstract: Although the etiology of preeclampsia, a pregnancy complication with significant maternal and neonatal morbidity, has not been fully characterized, placental ischemia due to impaired spiral artery remodeling and abnormal secretion of anti-angiogenic factors are thought to be important in the pathogenesis of the disease. Placental ischemia could impair trophoblast mitochondrial function and energy production leading to the release of reactive oxygen species (ROS). ROS has been shown to stabilize hypoxia inducible factor (HIF-1), which in turn may induce transcription of anti-angiogenic factors, soluble fms-like tyrosine kinase 1 (sFLT1) and soluble endoglin in trophoblasts. Here, we tested whether the angiogenic imbalance and oxidative stress in the preeclamptic placenta may be prevented by improving mitochondrial function. First, to evaluate the cause-effect relationship between mitochondrial function and sFLT1 production, a human trophoblast primary cell culture model was established in which hypoxia induced mitochondrial ROS production and concurrent sFLT1 increase. Second, treatment with AP39 - a novel mitochondria-targeted hydrogen sulfide donor - prevented ROS production, reduced HIF-1 protein levels, and diminished sFLT1 production. Finally AP39, a modulator of mitochondrial bioenergetics enhanced cytochrome C oxidase activity, reversed oxidative stress and anti-angiogenic response in hypoxic trophoblasts. These results suggest that placental hypoxia induces ROS production, HIF-1 stabilization, and sFLT1 up-regulation these

pathophysiological alterations can be attenuated by mitochondrial-targeted antioxidants.

2.- *“Reseña bibliográfica libro: Políticas públicas e inmigración ¿Posibilidades de inclusión efectiva en Chile?”*

Perfiles Latinoamericanos. WoS

Andrés Bianchetti

Abstract: Reseña bibliográfica del libro Políticas públicas e inmigración ¿posibilidades de inclusión efectiva en Chile de los autores Caterine Galaz, Rolando Poblete y Carla Frias.

Facultad de Ciencias para el Cuidado de la Salud

1.- *“Dinamometría, masa muscular y masa grasa braquial en adultos mayores autovalentes”*

Revista Española de Nutrición Comunitaria. Scopus

Samuel Durán y Jessica Fuentes

Abstract: Relacionar la dinamometría con diversos parámetros antropométricos en adultos mayores (AM) autovalentes chilenos. Métodos: Estudio de corte transversal (n500 AM), atendidos en centros de salud familiar. La funcionalidad se evaluó mediante el Examen Funcional Adulto Mayor (EFAM-Chile). Las medidas antropométricas evaluadas fueron: peso, talla, circunferencia brazo, pliegue tricipital y dinamometría. Resultados: Hubo un predominio de mujeres (61,2%). El 61,3% presentaba valores de dinamometría inferiores a los puntos de corte utilizados en Chile. Se encontro en el modelo de regresión logística que el tener un IMC 23,5 Kg/Mt², ser 75 años, tener un pliegue tricipital p25, ser de sexo femenino, presentar una CB p25 y un AMB p25 se asocian con un menor valor de dinamometría. Conclusiones: valores inferiores de parámetros de masa muscular se relaciona con menor fuerza de agarre especialmente en mujeres. Estos antecedentes muestran la importancia de implementar programas preventivos enfocados en mantener la masa muscular y funcionalidad en el adulto mayor, con énfasis en las mujeres.

2.- *“Pérdida rápida de peso: el caso de los deportes de combate”*

Revista Médica de Chile. WoS

Samuel Durán

Abstract: Las especialidades deportivas de combate olímpicas, distribuyen a sus atletas en divisiones de peso corporal para favorecer una competencia justa. Sin embargo, muchos atletas utilizan estrategias para perder peso rápidamente, con la intención de competir en divisiones más ligeras.

3.- *“Suicide risk configuration system in a clustered clinical sample: a generalized linear model obtained through the LASSO technique”*

Brazilian Journal of Psychiatry. WoS

Claudia Moya

Abstract: To identify clinical and sociodemographic factors that increase or decrease suicidal risk in a clinical sample of subjects seeking mental health care. Method: A cross-sectional study was performed at three health centers in Santiago, Chile. The Parental Bonding Instrument (PBI), Depressive Experience Questionnaire (DEQ), Outcome Questionnaire (OQ-45.2), Reasons for Living Inventory (RFL), and State Trait Anger Expression Inventory (STAXI-2), in addition to a sociodemographic survey, were applied to 544 participants (333 with suicidal behavior and 211 without current suicidal behavior). Through hierarchical clustering analysis, participants were grouped by similarity regarding suicidal risk. Then, a regression analysis was performed using the Least Absolute Shrinkage and Selection Operator (LASSO) technique, and factors that decrease or increase suicide risk (SR) were identified for each cluster. Results: The resultant clusters were grouped mainly by the age of participants. The most important protective factor was having confidence in ones own coping skills in difficult situations. Relevant risk factors were major depressive disorder (MDD), poor anger management, and difficulties in interpersonal relationships. Conclusions: Suicidal risk manifests differently throughout the life cycle, and different types of bonds may protect from or increase risk of suicide.

Facultad de Derecho y Gobierno

1.- *“De la amistad a la Diplomacia. El reconocimiento Internacional del gobierno de la Unidad Popular a la República Democrática Alemana. 1971.”*

Izquierdas. Scopus

Cristián Medina y Gustavo Gajardo

Abstract: El artículo aborda el Reconocimiento Internacional que el gobierno de la Unidad Popular realizó a la República Democrática Alemana (RDA) en 1971,

centrándose en cómo ambos Estados se acercaron, primero con simples relaciones comerciales, para luego avanzar a vínculos diplomáticos. Se analiza la posición de Chile dentro del contexto internacional de Guerra Fría, y el panorama político nacional. La investigación se basa en una exhaustiva revisión de fuentes inéditas obtenidas del Archivo Histórico del Ministerio de Relaciones Exteriores de Chile (AGHMINREL).

Facultad de Ingeniería y Tecnología

1.- *“Development and Complex Dynamics at School Environment”*

Complexity. WoS

Miguel Fuentes

Abstract: In this work we use Complex Systems methodologies to analyze quantitatively the impact of an intervention involving cooperative and self-awareness activities on social interactions in children. The aim of this study is to evaluate behavioral plasticity of social relationships between peers in 6-7 year-olds who participated in the intervention conducted in a school context. The intervention consisted of 8 one hour long sessions comprising: mindfulness-based practices, collaborative activities that required cooperation, and perspective-taking instances in which children shared feelings, perceptions and needs felt during the activities. We used complex network and game theory to evaluate pre-post-intervention variations. Social relationships were analyzed with a sociogram in both the intervention group, and a control group which continued with regular classes. By means of the sociometric questionnaire we asked each child to mention which classmates he/she would choose as playmates and which he/she would not. Changes in the number of peers selected and rejected reflected changes in the pattern of social relationships pre-post intervention. Our findings show that participating in the intervention positively modulated social interactions since we found: an increase in the diversity and quality of positive links and a reduction in negative ones a higher level of integration, indicated by enhanced positive networks where children with many positive connections tended to connect with those with few links and more positive interactions between genders. These findings were not observed in the control group. Through the use of the mentioned methodologies, the current investigation provides new quantitative evidence of social network plasticity in children, an important topic which, to our knowledge, has been little studied. Results from this work indicate that positive transformations in social relationships can be fostered through the performance of this kind of intervention.

2.- *“Energetics and Electronic Properties of Interstitial Chlorine in CdTe”*

Physica Status Solidi B. WoS

Mauricio Flores

Abstract: The role of interstitial chlorine in the electronic properties of CdTe is addressed by density functional theory calculations including hybrid functionals and large unit cells. The stability and diffusion energy barriers of the impurity are analyzed as a function of the Fermi level position in the band gap. Chlorine is found to be stable in at least five interstitial sites with rather close formation energies, suggesting that they are all probable to be found. In p-type CdTe, the most stable sites are at the center of a CdTe bond and at a split-interstitial configuration, both acting as shallow donors. Whereas in n-type CdTe, it is found at the tetrahedral site surrounded by Cd hosts, acting as a shallow acceptor. We also find that chlorine can induce a deep acceptor level in the bandgap after binding with three Cd host atoms, which can explain the experimentally observed high resistivity in Cl-doped CdTe. The energy barriers for chlorine diffusion in both p-type and n-type CdTe are also discussed.

3.- *“Evaluation of the bio-protection mechanism in diffusive exchange permeable reactive barriers for the treatment of acid mine drainage”*

Science of the Total Environment. WoS

Iván Nancucheo

Abstract: This research studied the bio-protection mechanism based on chemical gradients in diffusive exchange permeable reactive barriers, evaluating the thickness of the reactive layers in the treatment of concentrated acid mine drainage (AMD). Six bench-scale reactors were constructed with reactive layer thicknesses of 2.5, 5, and 7.5 cm in duplicate. The reactors were first fed a sulfated solution for 55 days, followed by concentrated AMD for 166 days. The change of feed to AMD mainly affected the reactors with thinner 2.5 cm layers in comparison to the reactors with 5 and 7.5 cm layers. Cu and Zn removal efficiency was practically 100% in all the reactors however, in the thinner layer reactors, metal breakthrough occurred towards the end of the experiment concurrently with inhibitory metal concentrations in the reactive layers. On the contrary, the reactors with layer thicknesses of 5 and 7.5 cm evaluated did not present toxic concentrations of these metals at any of the monitoring points. The bio-protection criterion qD correctly predicted that the thin-layer reactor would be the most affected by the toxicity of AMD. The criterion also indicated that all the reactors should fail. Nevertheless, the fault in the thinner layer reactor registered in the effluent after more than 150 days therefore, the possibility of failure in the 5 and 7.5 cm thickness reactors is not rejected, as it could have occurred if the experiment had continued.

4.- *“Massive stealth scalar fields from deformation method”*

The European Physical Journal C. WoS

Mauricio Valenzuela, Almeida Sampson, Cristián Cortés, Paola Meza

Abstract: We propose an uni-parametric deformation method of action principles of scalar fields coupled to gravity which generates new models with massive stealth field configurations, i.e. with vanishing energy- momentum tensor. The method applies to a wide class of models and we provide three examples. In particular we observe that in the case of the standard massive scalar action principle, the respective deformed action contains the stealth configurations and it preserves the massive ones of the undeformed model. We also observe that, in this latter example, the effect of the energy-momentum tensor of the massive (non-stealth) field can be amplified or damped by the deformation parameter, alternatively the mass of the stealth field.

5.- *“Performance of a sulfidogenic bioreactor inoculated with indigenous acidic communities for treating an extremely acidic mine wáter”*

Minerals Engineering. WoS

Iván Ñancuqueo, Daniella González, Camila Colipai

Abstract: Mining contributes to water pollution through generation and uncontrolled release of acid and metalliferous drainage (AMD). One of the main limitations to using sulfate-reducing bioreactors to treat AMD is that most species are highly sensitive to acidity, therefore it is necessary to avoid direct contact between acidic mine waters and the bacteria, which is normally achieved by using off-line systems. There have been few successful applications using acidophilic, sulfate-reducing bacterial populations, which tolerate low pH and high metal concentrations and allow direct metal sulfide precipitation to occur within a single bioreactor unit. Here, we describe the performance of a low pH sulfidogenic bioreactor inoculated with an indigenous microbial community to treat mine-impacted water. The inoculum was obtained from anaerobic sediments collected from an acidic river located in northern Chile. The sulfidogenic bioreactor system (2.3 L) was operated as a continuous flow mode unit for 99 days at 30°C and fed with synthetic water based on the chemical composition of the acidic river, characterized by extremely low pH (2.1) and, zinc and iron as main transition metals (0.5 and 2 mM, respectively). The bioreactor pH was set to 4.5 initially and was increased in stages to pH 6.0 during the experiment. The results show that zinc concentrations in liquors draining the bioreactor were below the detection level in most of the samples analyzed. In addition, by progressively increasing the glycerol concentration, it was possible to increase the removal of iron (70% of the total present), though more acetic acid (from 1 to 5 mM) was generated. Analysis of the microbial

populations showed that they changed with varying operation parameters, and a known acetogenic sulfidogen (*Desulfoporosinus acididurans*) became more dominant over time. The modular unit used for treating mine-impacted water demonstrated robust activity with low complexity engineering.

6.- *“Strange metal crossover in the doped holographic superconductor”*

Journal of High Energy Physics. WoS

Rodrigo Soto

Abstract: In a recent paper, Kiritsis and Li presented a holographic model to study the competition between different orders at finite doping in holographic superconductors. In the present work, we introduce fermions into such model and study the fermionic spectral functions in the normal phase at zero and finite temperatures. Combining analytic and numerical methods, we found that there is a crossover from a strange metal with short lived excitations at small doping, into a Fermi liquid with well defined quasiparticles at large doping. The critical doping at which excitations becomes long lived increases with temperature. The emerging phase diagram is qualitatively similar to that of High Temperature Superconductors.

7.- *“Study of the structural order of native starch granules using combined FTIR and XRD analysis”*

Journal of Polymer Reseach. WoS

Johanna Castaño

Abstract: The structural order of native starch granules with different crystalline patterns was analyzed by combined X-ray diffraction (XRD) and Fourier transform infrared spectroscopy (FTIR) and the results were compared to that of X-ray diffraction (XRD). The FTIR spectra of 13 starch samples were evaluated by principal component analysis (PCA). The main differences among the polymorphs were observed in the intensity of two regions: the OH vibration region, 3650-3000 cm^{-1} , and the region of major adsorption bands, 1200-800 cm^{-1} . The variation in these regions showed that two different groups can be distinguished, one for B-type starches and one for A- and C-type starches. A-type starches exhibited a well-resolved band at 1022 cm^{-1} , suggesting that A-type starch granules have a greater amount of ordered short-range double helices than B-type starches. The intensity and shape of the OH band were different for the three starches and were associated with different local molecular environments of the two water populations of the starch granule. The PCA analysis for X-ray diffraction patterns showed a clear segregation between A- and B-type starches,

defined by three typical diffraction peaks at 2 15.0°, 18.1° and 23.1° for A-type starches. There was no correlation in the crystallinity degree obtained by the FTIR and XRD methods.

Facultad de Medicina y Ciencia

1.- *“Comentario sobre los efectos de la estimulación cognitiva en la prevención y tratamiento de la demencia”*

Revista Chilena de Neuro Psiquiatría. Scopus

Jean Gajardo

2.- *“HIV/SIV-Nef: Pas de trois Choreographies to Evade Immunity”*

Trends in Microbiology. WoS

Gonzalo Mardones

Abstract: Nef is a major pathogenic factor of human and simian immunodeficiency viruses that hijacks protein trafficking through physical interaction with vesicle coats. This alters the subcellular localization of proteins involved in immunity and neutralizes their function. Understanding the structural bases for these interactions could reveal new targets for antiviral intervention.

3.- *“Modeling amyloid beta and tau pathology in human cerebral organoids”*

Molecular Psychiatry. WoS

César González

Abstract: The typical abnormalities observed in the brain of Alzheimers disease (AD) patients include synaptic alterations, neuronal death, brain inflammation, and the accumulation of protein aggregates in the form of amyloid plaques and neurofibrillary tangles. Despite the development of many animal and in vitro models for AD, there is a lack of an experimental approach that fully recapitulates essential aspects of the disease in human cells. Here, we report the generation of a new model to study AD, consisting of cerebral organoids (COs) produced from human-induced pluripotent stem cells (iPSCs). Under our experimental conditions, COs grow to form three-dimensional (3D) structures containing neural areas with cortical-like organization. Analysis of COs by histological and biochemical methods revealed that organoids produced from iPSCs derived from patients affected by familial AD or Down syndrome (DS) spontaneously

develop over time pathological features of AD, including accumulation of structures highly reminiscent to amyloid plaques and neurofibrillary tangles. These pathological abnormalities were not observed in COs generated from various controls, including human iPSCs from healthy individuals, human iPSCs from patients affected by Creutzfeldt-Jakob disease, mouse embryonic stem cells (ESCs), or mouse iPSCs. These findings enable modeling genetic AD in a human cellular context in a 3D cortical-like tissue developed in vitro from patient-specific stem cells. This system provides a more relevant disease model compared to pre-existing methods and offers a new platform for discovery of novel targets and screening of drugs for therapeutic intervention.

4.- *“Purification and characterization of indochrome type blue pigment produced by Pseudarthrobacter sp. 34LCH1 isolated from Atacama desert”*

Journal of Industrial Microbiology Biotechnology. WoS

Sebastián Finger

Abstract: The interest in and demand for natural dyes has increased significantly in recent years however, very few natural blue dyes are commercially available, because blue colored compounds in nature are relatively rare. In this study, a blue pigment-producing bacteria from Lake Chungará (Atacama Desert, Chile) was isolated, and its blue pigment was purified and chemically characterized. The pigment-producing strain was identified as *Pseudarthrobacter* sp. by 16S rRNA gene sequencing. The pigment was separated from the filtered culture medium by column chromatography/solid-phase extraction using different resins (XAD, QMA, C-18, size exclusion). The strain produced up to 2.5 g L⁻¹ of blue pigment, which was very soluble in water, partially soluble in methanol and insoluble in other organic solvents. The pigment was analyzed and characterized by analytical HPLC, UV-Vis, FT-IR, and ¹H-NMR, and purified by semi-preparative HPLC. The pigment was non-toxic to brine shrimp (LD 50 2.3 g L⁻¹) and was stable at pH 6-10 at temperatures below 60 °C. HPLC analysis shows that the pigment is composed of four major blue fractions. The physicochemical properties and structural analysis demonstrate that this pigment belongs to the indochrome isomers, whose properties have yet to have been characterized. The high solubility in water, good stability in neutral and basic pH, and negligible toxicity of the blue pigment make it a good candidate suitable for several industrial and possibly some food applications.

5.- *“Relación entre el patrón dactiloscópico epidérmico y dérmico”*

International Journal of Morphology. WoS

Juan Silva, Claudia Araya, Andrés Salcedo y Sebastián Arcos

Abstract: El método más utilizado en identificación humana es el dactiloscópico, que registra, analiza y coteja los tipos fundamentales y puntos característicos de las figuras presentes en el dactilograma, determinando el grado de coincidencia, entre un patrón de identidad dubitada y uno de identidad indubitada. Debido a los procesos que afectan la piel de cadáveres, como la putrefacción entre otros, se utilizan las técnicas necropapiloscópicas que ocupan los patrones dérmicos para la identificación humana. El objetivo del presente trabajo es comparar registros epidérmicos con dérmicos, y validar científicamente, este método de identificación (epidérmico dérmico). Para ello se utilizaron 32 dedos de cadáveres de individuos chilenos, de ambos sexos y de entre 40 y 80 años. Para obtener el registro físico artificial epidérmico y dérmico se utilizó la técnica de obtención de impresiones necrodactilares y se comparó a través de la técnica de cotejo dactiloscópico. Estos procedimientos fueron realizados por peritos criminalísticos de Carabineros de Chile. Se logró evidenciar diferencias importantes entre epidermis y dermis en cuanto a cantidad y calidad de puntos característicos y presencia de líneas seniles. En relación a tipos fundamentales, se evidenció que en dermis es difícil la observación de tipos fundamentales (borrosos) pero no se encontró ningún dígito que presentara tipo fundamental diferente entre epidermis y dermis. También se constataron diferencias por sexo y edad. Finalmente se pudo evidenciar, que existe una relación morfológica semejante entre registros físicos artificiales de patrones papiloscópicos epidérmicos con dérmicos provenientes del mismo individuo. Esto permite utilizar los registros dérmicos para la identificación humana positiva. Los resultados de este trabajo son importantes al aportar evidencia científica para la identificación humana en base al patrón dactiloscópico dérmico.

6.- *“Utilidad de la crio-tecnología para uso diagnóstico y terapéutico en neumología intervencionista: Crio-biopsia Pulmonar Transbronquial y Crioterapia”*

Revista Médica de Chile. WoS

Gonzalo Labarca

Abstract: Bronchoscopy cryoprobes are used for palliative treatment of endobronchial obstructions caused by tumors and removal of granulation tissue or foreign bodies. Currently this technology is also used for diagnosis of diffuse interstitial lung disease (ILD). The multidisciplinary team that establishes the clinical, radiological and histopathological correlation in ILD, decides about performing a surgical lung biopsy when the characteristics of the interstitial disease are not similar to Idiopathic Pulmonary Fibrosis (IPF). Although surgical lung biopsy is the gold standard for diagnosis, treatment, and prognosis, transbronchial cryo-biopsy has a high diagnostic yield, low morbidity and mortality rate, low rate of complications and lower cost. It is the diagnostic method of choice in ILD when it is available. Technological

improvements with greater freezing power and tensile strength of the cryo probes, allow their use in cryotherapy and cryo-recanalization for occlusive airway tumors.