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Employment

Facultad de Medicina

Universidad de los Andes
Chile
1 Mar 2011 → present

Kinesiología

Universidad de los Andes
Chile
1 Mar 2011 → present

Laboratorio Integrativo de Biomecánica y Fisiología del Esfuerzo

Universidad de los Andes
Chile
1 Mar 2011 → present

Research outputs

Individuals with chronic ankle instability show altered regional activation of the peroneus longus muscle during ankle eversion

Mendez-Rebolledo, G., Guzmán-Venegas, R., Cruz-Montecinos, C., Watanabe, K., Calatayud, J. & Martínez-Valdes, E., Jan 2024, In: *Scandinavian Journal of Medicine and Science in Sports*. 34, 1, p. 1-12 12 p., e14535.

Effect of M-wave Amplitude on Inter-evaluator Concordance and Number of Detected Innervation Zones in the Medial Gastrocnemius Using Multichannel Electromyography

Rodrigo, G. V., Felipe, P. T., Javier, C. & Cristian, C. M., 1 Dec 2023, In: *International Journal of Morphology*. 41, 6, p. 1775-1780 6 p.

Task-related differences in peroneus longus muscle fiber conduction velocity

Mendez-Rebolledo, G., Guzmán-Venegas, R., Orozco-Chavez, I., Cruz-Montecinos, C., Watanabe, K. & Martínez-Valdes, E., Aug 2023, In: *Journal of Electromyography and Kinesiology*. 71, p. 1-7 7 p., 102795.

Acute Deltoid Injury in Ankle Fractures: A Biomechanical Analysis of Different Repair Constructs

Wagner, E., Wagner, P., Escudero, M. I., Pacheco, F., Salinas, D., Godoy-Santos, A. L., Palma, F., Guzmán-Venegas, R. & Berral-De la Rosa, F. J., 2023, In: *Foot and Ankle International*. 44, 9, p. 10711007231184844 8 p.

Muscle coactivation during gait after percutaneous repair of Achilles tendon: a case report

Valencia, O., Silva, D., Rossi, R., Pellegrini, M., Carcuro, G., Avilés, C., Guzmán-Venegas, R. & Weinstein, A., 2023, *18th International Symposium on Medical Information Processing and Analysis*. Brieva, J., Guevara, P., Lepore, N., Linguraru, M. G., Rittner, L. & Castro, E. R. (eds.). SPIE, 1256704. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 12567).

Location In Vivo of the Innervation Zone in the Human Medial Gastrocnemius Using Imposed Contractions: A Comparison of the Usefulness of the M-Wave and H-Reflex

Guzmán-Venegas, R. A., Palma-Traro, F. H., Valencia, O. D., Hudson, M. J. & Pincheira, P. A., 28 Nov 2022, In: *Journal of Functional Morphology and Kinesiology*. 7, 4, 107.

Temporal differences in the myoelectric activity of lower limb muscles during rearfoot and forefoot running: A statistical parametric mapping approach

Valencia, O., Weinstein, A., Salas, R., Guzmán-Venegas, R., Arvanitidis, M. & Martínez-Valdes, E., 24 Jun 2022, In: European Journal of Sport Science. p. 1-9 9 p.

Biomechanical cadaveric evaluation of the role of medial column instability in hallux valgus deformity

Wagner, E., Wagner, P., Pacheco, F., López, M., Palma, F., Guzmán-Venegas, R. & Berral-de la Rosa, F. J., Jun 2022, In: Foot and Ankle International. 43, 6, p. 830-839 10 p.

Muscle coactivation. A proposal to calculate its index utilising Python. //Coactivación Muscular. Una Propuesta para Calcular su Índice utilizando Python.

Valencia, O., Varas, M., Moya, C., Besomi, M., Weinstein, A. & Guzmán Venegas, R. A., Jun 2022, In: Kinesiología. p. 120-123 3 p., 41.

Comparison of the risk of falls in older people before and after to application of a multicomponent exercise program based on subsystems of postural stability

González Galleguillos, D., Caro Vargas, K., Guzmán-Venegas, R., Rodríguez, C. & Valenzuela Bravo, M. T., 1 May 2022, In: Fisioterapia. 44, 3, p. 137-144 8 p.

Electromyographic and kinematic parameters of the shoulder in wheelchair rugby players: case reports

O D Valencia, D., Danes-Daetz, C., Haro, S., Didyk, M. P., Rossato, M., Benavides, P. & Guzman-Venegas, R., 2022, In: Research in Sports Medicine.

Importance of Midfoot Ligaments in a Hallux Valgus Cadaveric Model

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La Rotación Axial de la Clavícula que Plantea la Maniobra de Mulligan ¿Produce una reducción de la presión en el espacio subacromial? Un estudio ex vivo exploratorio

Gumucio, J. C., Traro, F. P. & Guzmán-Venegas, R., 2022, In: International Journal of Morphology. 40, 5, p. 1165-1168 4 p.

Muscle activation times facing to a perturbation in patients with early-stage Parkinson's disease

Moya-Jofré, C., Valencia, O., León-Barrera, M., Araneda Valenzuela, O. & Guzmán-Venegas, R., 2022, In: Rehabilitacion. 57, 2, 100755.

Changes in muscle coactivation during running: A comparison between two techniques, forefoot vs rearfoot

Araya, D., López, J., Villalobos, G., Guzmán-Venegas, R. & Valencia, O., Sep 2021, In: Archivos de Medicina del Deporte. 38, 5, p. 332-336 5 p.

Ejercicio excéntrico y velocidad de conducción de la fibra muscular: una revisión bibliográfica

Valencia, O., Toro, B., Nieto, R. & Guzmán-Venegas, R., Sep 2021, In: Archivos de Medicina del Deporte. 38, 5, p. 337-342 6 p.

Propuesta de Flujo de Procesamiento utilizando Python para ajustar la Señal Electromiográfica Funcional a la Contracción Voluntaria Máxima.

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Comparación de mediciones clínicas e instrumentadas de control postural entre personas con y sin inestabilidad crónica de tobillo.

Palma, F. H., Puentes, C., Zuccone, L., Valencia, O. & Guzmán Venegas, R. A., Aug 2021, In: Revista Archivos de la Sociedad Chilena de Medician del Deporte. 66, 1, p. 72-80 9 p.

Activación de los músculos escapulohumerales superficiales en tres planos distintos de elevación del hombro

Palma, F. H., Cifre, M. J., Clemo Mancilla, I., Flores-León, A. & Guzmán-Venegas, R., 28 Jul 2021, In: Journal of Movement & Health. 18, 2

There is direct relationship between bone bridge length and coracoclavicular fixation resistance to failure: Biomechanical study in a porcine model

Vaisman, A., Guiloff, R., Guzmán Venegas, R., Convalía, F., De la Cruz, I., Baron, S. L. & Toro, F., Jun 2021, In: Clinical Biomechanics. 86, 105386.

Contribution of the peroneus longus neuromuscular compartments to eversion and plantarflexion of the ankle

Watanabe, K., Mendez-Rebolledo, G., Guzmán Venegas, R. A. & Valencia, O., 1 Apr 2021, In: PLoS ONE. 16, 4 April, e0250159.

Regional changes in muscle activity do not underlie the repeated bout effect in the human gastrocnemius muscle

Pincheira, P. A., Martínez-Valdes, E., Guzman-Venegas, R., Falla, D., Garrido, M. I., Cresswell, A. G. & Lichtwark, G. A., 1 Apr 2021, In: Scandinavian Journal of Medicine and Science in Sports. 31, 4, p. 799-812 14 p.

An Isolated Transosseous Flexible Suture Frame in the Treatment of Patellar Tendon Rupture Provides Adequate Mechanical Resistance

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Correlation between clinical tests for gait and stability using biomechanical variables in the gait of institutionalized elderly subjects

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Comparación de la cinemática 3D de la articulación de la rodilla entre hombres y mujeres futbolistas durante tareas funcionales asociadas a práctica del fútbol

Guzmán Venegas, R. A., Acuña Riquelme, K. A., Ibaceta Facuse, V. A., Palma, F. H. & Valencia, O., 2021, In: Kinesiología. 40, 2, p. 98-104 6 p.

Comparison of the Electromyographic Activity of Different Zones of the Abductor digiti minimi manus Muscle in Search of a Functional Compartmentalisation.

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Rojas-Quinchavil, G., Venegas-Jeldrez, P., Valencia, O., Guzmán-Venegas, R., Aranceda, O. F., de la Rosa, F. J. B. & Flores-Leon, A. F., 2021, In: Retos. 39, p. 697-704 8 p.

Modification of kinematic and electromyographic patterns in the lower limb by the use of cell phones

Valencia, O., Hudson, M. J., Carpes, F., Kunzler, M., Gándara, F., Le Roy, I. & Guzmán-Venegas, R., 2021, In: Retos. 39, p. 354-358 5 p.

Novel Hallux Valgus Cadaveric Model: Role of Ligament Damage and Tendon Pull in Recreating the Deformity

Wagner, E., Wagner, P., Pacheco, F. J., Villarroel, C., Palma, F. H. & Venegas, R. G., 6 Nov 2020, In: Foot and Ankle Orthopaedics. 5, 4

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

Flores-León, A., Redenz, G., Valencia, O. D., Guzmán-Venegas, R., Araneda, O. F. & Berral de la Rosa, F., 2 Jul 2020, In: *Physiotherapy Theory and Practice*. 36, 7, p. 810-817 8 p.

Quantifying Topographical Changes in Muscle Activation: A Statistical Parametric Mapping Approach

Pincheira, P. A., Martínez-Valdes, E., De la Fuente, C., Palma, F., Valencia, O., Redenz, G. & Guzman-Venegas, R., 15 Jun 2020, In: *Proceedings*. 49, 1, p. 71

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Valencia, O., Cristi, I., Ahumada, D., Meza, K., Salas, R., Weinstein, A. & Guzmán-Venegas, R., 2020, In: *Retos*. 83, p. 271-275 5 p.

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Wagner, P., Wagner, E., López, M., Etchevers, G., Valencia, O. & Guzmán-Venegas, R., 1 Dec 2019, In: *Foot and Ankle International*. 40, 12, p. 1424-1429 6 p.

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De la Fuente, C., Weinstein, A., Guzman-Venegas, R., Arenas, J., Cartes, J., Soto, M. & Carpes, F. P., Aug 2019, In: *Journal of Electromyography and Kinesiology*. 47, p. 105-112 8 p.

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Pincheira, P. A., De La Maza, E., Silvestre, R., Guzmán-Venegas, R. & Becerra, M., Feb 2019, In: *Clinical Biomechanics*. 62, p. 7-14 8 p.

Actividad muscular del complejo lumbo-Pelvis-Cadera en tres ejercicios isométricos usando TRX® rip trainer™

Flores-Leon, A. F., Soto, V., Araneda, O. F., Guzman-Venegas, R. & De La Rosa, F. J. B., 1 Jan 2019, In: *Retos*. 35, p. 216-220 5 p.

Centro de presión y patrones de actividad muscular durante la ejecución de una sentadilla monopodal isométrica realizada sobre una superficie esponjosa en mujeres jóvenes sanas

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Biomechanical Evaluation of Circumtibial and Transmembranous Routes for Posterior Tibial Tendon Transfer for Dropfoot

Wagner, E., Wagner, P., Zanolli, D., Radkievich, R., Redenz, G. & Guzman, R., 1 Jul 2018, In: *Foot and Ankle International*. 39, 7, p. 843-849 7 p.

Influence of fatigue and velocity on the latency and recruitment order of scapular muscles

Mendez-Rebolledo, G., Gatica-Rojas, V., Guzman-Muñoz, E., Martínez-Valdes, E., Guzman-Venegas, R. & Berral de la Rosa, F. J., Jul 2018, In: *Physical Therapy in Sport*. 32, p. 80-86 7 p.

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Wagner, E., Wagner, P., Ortiz, C., Radkievich, R., Palma, F. & Guzmán-Venegas, R., 1 Jun 2018, In: *Foot and Ankle International*. 39, 6, p. 741-745 5 p.

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Guzmán-Venegas, R. A., Palma, F. H., Biotti P, J. L. & de la Rosa, F. J. B., Jun 2018, In: Archives of Oral Biology. 90, p. 130-137 8 p.

Ankle perturbation generates bilateral alteration of knee muscle onset times after unilateral anterior cruciate ligament reconstruction

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Valencia, O., Araneda, O., Cárcamo, M., Carpes, F. & Guzmán-Venegas, R., 2018, In: Retos. 33, p. 258-260 3 p.

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Reproducibility of quantifying Timed Up and Go test, measured with smartphone accelerometers in older people living in the community

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Wagner, E., Wagner, P., Zanolli, D., Ortiz, C., Keller, A., Radkievich, R., Palma, F. & Guzman, R., 2017, In: Foot and Ankle Surgery. 23, p. 11-12 2 p.

Diferencia entre el nivel de activación del músculo vasto medial oblicuo y longitudinal durante un ejercicio de cadena cinética abierta

Guzmán-Venegas, RA., Valencia, OD., Haro, S., Ibarra, K., Jara, M., Orlandini, MP., Quintana, A. & Berral, J., 13 Dec 2016, In: Journal of Movement & Health. 17, Supl 1, p. 51-53 3 p.

Efecto de dos tipos de vendaje funcional sobre la mecánica de la rotación de la rodilla durante la carrera.

Valencia, OD., García, SP., Didyk, MP., Guzmán-Venegas, RA. & Berral, FJ., 13 Dec 2016, In: Journal of Movement & Health. 17, 1, p. 54-55 2 p.

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Concordance of the location of the innervation zone of the tibialis anterior muscle using voluntary and imposed contractions by electrostimulation

Guzmán-Venegas, R. A., Bralic, M. P., Cordero, J. J., Cavada, G. & Araneda, O. F., 1 Apr 2016, In: Journal of Electromyography and Kinesiology. 27, p. 18-23 6 p.

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Efecto agudo del uso de zapatos de tacón sobre la cinética del tobillo.

Valencia, OD., De Petris, FJ., Weisser, NS., Palma, FH. & Guzman-Venegas, RA., 2016, In: Archivos de la Sociedad Chilena de Medicina del Deporte. 61, 1, p. 59-65 7 p.

Functional compartmentalization of the human superficial masseter muscle

Guzmán-Venegas, R. A., Picand, J. L. B. & De La Rosa, F. J. B., 18 Feb 2015, In: PLoS ONE. 10, 2, 10 p., e0116923.

Differences between motor point and innervation zone locations in the biceps brachii. An exploratory consideration for the treatment of spasticity with botulinum toxin

Guzmán-Venegas, R. A., Araneda, O. F. & Silvestre, R. A., 1 Dec 2014, In: Journal of Electromyography and Kinesiology. 24, 6, p. 923-927 5 p.

Biomechanical evaluation of various suture configurations in side-to-side tenorrhaphy

Wagner, E., Ortiz, C., Wagner, P., Guzman, R., Ahumada, X. & Maffulli, N., 5 Feb 2014, In: Journal of Bone and Joint Surgery - Series A. 96, 3, p. 232-236 5 p.

Effect of cyclic tension on the biomechanical properties of flexor tendon grafts. Results of an ex-vivo porcine study

Orrego, M., Matas, J., Abusleme, S., Guzmán-Venegas, R. & Amenabar, D., 1 Jan 2014, In: Knee. 21, 6, p. 1029-1032 4 p.

Flexor pollicis brevis muscle innervation zone location in healthy individuals of both sexes

Guzmán, R. A., Bralic Echeverría, M. P. & Cordero Garayar, J., Jun 2013, In: International Journal of Morphology. 31, 2, p. 449-454 6 p.

TRASTORNOS DE LA MARCHA EN EL ADULTO MAYOR

Cerda, L., Guzmán Venegas, R. A. & Moyano, Á., 2012, *MEDICINA DE REHABILITACIÓN. LIBRO AMLAR*. p. 381-400 19 p.

Biceps brachii muscle innervation zone location in healthy subjects using High-Density surface electromyography

Guzmán, R. A., Silvestre, R. A. & Arriagada, D. A., Jun 2011, In: International Journal of Morphology. 29, 2, p. 347-352 6 p.

Differences in biomechanical parameters during sit to stand transfer between elderly with and without history of frequent falls

Guzmán, R. A., Porcel Melián, H., Cordier, B. & Adul Silvestre, R., 1 Jan 2010, In: Revista Espanola de Geriatria y Gerontologia. 45, 5, p. 267-273 7 p.

Differences in the momentum development during transfers sit to stand between fall and no fall elderly

Guzmán, R. A., Prado, H. E., Porcel Melián, H. & Cordier, B., 1 Jan 2009, In: Revista Espanola de Geriatria y Gerontologia. 44, 4, p. 200-204 5 p.

Prizes**Colegio de Kinesiólogos de Chile Mejor trabajo científico año 2002**

Guzmán Venegas, Rodrigo Antonio (Recipient), 12 Dec 2002

Excelencia Académica

Guzmán Venegas, Rodrigo Antonio (Recipient), 5 Oct 2001

Excelencia Académica Profesor

Guzmán Venegas, Rodrigo Antonio (Recipient), 31 Aug 2007

Excelencia Académica Profesor

Guzmán Venegas, Rodrigo Antonio (Recipient), 10 Oct 2008

Mejor Trabajo en Presentación Oral

Guzmán Venegas, Rodrigo Antonio (Recipient), 7 Oct 2007

Segundo Lugar Trabajos Libres

Guzmán Venegas, Rodrigo Antonio (Recipient), 13 Aug 2009

Tercer Lugar Trabajos Libres

Guzmán Venegas, Rodrigo Antonio (Recipient), 26 Aug 2010

Projects

Comparación de la actividad Electromiográfica en el músculo masetero entre sujetos desdentados totales rehabilitados con prótesis removibles y rehabilitados con prótesis sobre implantes osteointegrados

Guzmán Venegas, R. A. & Biotti P, J. L.

Universidad de los Andes Chile

26/09/11 → 30/04/14

FONDECYT INICIACIÓN - 11200521: COMPARISON OF EFFECTIVENESS OF TWO TECHNIQUES TO GUIDE THE INJECTION OF BOTULINUM TOXIN TO IMPROVE GAIT IN POST-STROKE PATIENTS. RANDOMIZED CLINICAL TRIAL.

Guzmán Venegas, R. A.

Agencia Nacional de Investigación y Desarrollo (ANID), Chile

1/11/20 → 31/10/23

Student theses

Compartimentalización Neuromuscular de los Músculos Vastus Medialis y Abductor Digiti Minimi en Personas Jóvenes

Author: Guzmán Venegas, R. A., 8 Apr 2021

Supervisor: Izquierdo, M. (External person) (Supervisor)

ESTUDIO DE LA COMPARTIMENTALIZACION FUNCIONAL DEL MÚSCULO MASETERO SUPERFICIAL HUMANO MEDIANTE ELECTROMIOGRAFÍA DE ALTA DENSIDAD

Author: Guzmán Venegas, R. A., 29 Jan 2020

Supervisor: Berral de la Rosa, F. (External person) (Supervisor)

Desarrollo de una interfaz computacional de dinámica inversa para la obtención de parámetros biomecánicos aplicados en la búsqueda de predictores de caídas en adultos mayores

Author: Guzmán Venegas, R. A., 2010

Supervisor: Letelier Parga, J. C. (External person) (Supervisor)

Parámetros espectrales de fatiga muscular local en erectores espinales de sujetos chilenos

Author: Guzmán Venegas, R. A., 2001

Supervisor: Silvestre, R. (External person) (Supervisor)