Results: Forty four wrists were included in the group with normal EMG (NEMG) and 83 in the group with patologic EMG (PEMG).

Mean age was 49 years in the NEMG group and 54 years in the PEMG group (p = 0,063). The mean time of symptoms evolution was 26 weeks in the NEMG group and 38 weeks in the PEMG group (p = 0,33).

Mean p-VAS was 59 mm in the NEMG group and 42 mm in the PEMG group (p = 0,001). In the table we can see the percentage of wrists that reached a 20%, 50% and 70% reduction in p-VAS in the follow-up.

	Response 20%			Response 50%			Response 70%		
Months	3	6	12	3	6	12	3	6	12
NEMG	88%	85	90	81%	75	81	69%	61	62
PEMG	96%	87	87	89%	85	86	83%	79	79
p	0,199	0,706	0,910	0,186	0,205	0,551	0,076	0,03	0,07

Conclusion: Clinically relevant responses to local corticosteroid injections in CTS tend to be more frequent in wrists with pathologic EMG than in wrists with clinically typical symptoms of CTS, but with normal EMG.

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New Formulation to Improve Tendon Tissue Organization in Tendinopathies. Anna Torrent[1], Ramon Ruhí[1], Cristina Martínez[2], Mar Cid[2], Constanze Buhrmann[3] and Mehdi Shakibaei[3]. [1]BIOIBERICA S.A., Palafolls, Spain, [2]BIOIBERICA S.A., Barcelona, Spain, [3]LMU, Institute of Anatomy, Munich, Germany

Background/Purpose: Tendons are dense fibrous connective tissues that connect muscle to bone. The functional properties of the tendon are derived from the structure and components of the extracellular matrix (ECM). When diseased or injured, adult tendons do not heal to the same regenerative capacity of embryonic tissue, but exhibit a highly disorganized matrix that consequently affects normal tissue function. Collagen disorientation, disorganization and variations in the diameters of collagen fibrils are characteristics of a tendinopathic tendon. It is crucial to maintain the structure of the tendinous matrix for the ability of the tendon to resist mechanical forces and the repair response to injury.The aim of this study was to evaluate the potential effectiveness of a novel formulation (BIS033) including mucopolysaccharides on fibrillogenesis of collagen type I and tenomodulin (TeM) levels in the presence/absence of IL-1β in a 3-dimensional culture of human tenocytes.

Methods: Primary human tenocytes in 3-dimensional high density cultures were incubated for 0–14 days under different treatments. BIS033 is a nutraceutical formulation that contains mainly mucopolysaccharides. Tenocytes were either treated with BIS033, non-stimulated or stimulated with IL-1β or stimulated with IL-1β and BIS033.We evaluated the effect of this natural formulation on fibrillogenesis and on the tendon specific matrix glycoprotein called TeM in the presence or absence of IL-1β.The potential efficacy of BIS033 in the extracellular matrix (ECM) estructure, and especially in the orientation, organization and morphology of the collagen fibrils was investigated by Transmission Electron Microscopy (TEM).By Western Blot we evaluated whether incubation of tenocytes with the formulation could prevent IL-1β-induced upregulation of catabolic events leading to downregulation of production of matrix specific proteins such as TeM. This glycoprotein is highly expressed in normal, healthy tenocytes and is described in literature that there is a close correlation between TeM expression and the regular alignment of collagen fibers, further indicating that TeM is involved in the formation of organized tendon structures.

Results: Tenocytes treated with IL-1β underwent apoptosis and showed a completely disorganized extracellular matrix. The treatment with BIS033 was able to counteract the catabolic effects and cells looked healthy and with abundant and well organized extracellular matrix consisting of thick fibrils of collagen. Also tenocytes displayed high amount of euchromatin that indicates that cells were very active and with a high rate of protein biosynthesis. Western blot demonstrated a considerable prophylactic effect of BIS033 on human tenocytes co-treated with IL-1β on TeM synthesis. Additionally an anabolic effect of the formulation was observed: cells showed higher TeM levels compared to the untreated control cells.

Conclusion: These results indicate that the formulation BIS033 could be useful in the prevention and/or treatment of tendinopathies (tendinitis, tendinosis, etc). The administration of this product is believed to contribute to remodelling the tendon, which is crucial to return to its mature functional structure.

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Trochanteric Bursitis: Is there Ultrasonographic Evidence to Suggest Inflammation? P. Dundeva-Baleva[1], A. Abdel-Megid[1], A. Borham[1] and Naomi Schlesinger[2]. [1]UMDNJ/Robert Wood Johnson Medical School, New Brunswick, NJ, [2]UMDNJ-Robt Wood Johnson MS, New Brunswick, NJ

Background/Purpose: Trochanteric bursitis (Tb) is one of the most common soft tissue abnormalities in the hip region; affecting 10–25% of the population. Tb is a clinical diagnosis that includes lateral hip pain and tenderness around the greater trochanter. Power Doppler (PD) ultrasonography (US) is a sensitive method for demonstrating the presence of blood flow in small vessels. PD US enables visualization of synovial hyperemia. High frequency and PD US in combination are sensitive and reproducible tools for determining joint effusions and synovitis. The term Tb may be a misnomer given that three of the cardinal symptoms of inflammation: warmth, erythema and swelling are rarely seen in these patients. Could use of US help identify how commonly US and PD US changes suggestive of Trochanteric bursa inflammation are seen in patients with the clinical syndrome of Tb.

Methods: This study was a retrospective chart and US image review of patients seen in the Rheumatology clinic between 12/1/2006 and 2/1/2010 with a primary or secondary diagnosis of trochanteric bursitis (diagnosis codes CPT 76942 and/or 20610). Trochanteric bursa US images were reviewed for signs of inflammation (bursa swelling and capsule thickening), as well as PD US signals. Recorded were patients' past medical history and medications at the time of diagnosis and the response to intrabursal corticosteroid injections given by a Rheumatologist (AB,NS).

Results: 287 patient charts with CPT 76942 and 20610 were reviewed. Seventy five patients were found to have a diagnosis of Tb. Of these 75 patients; 52 underwent trochanteric bursa injections and had US images. 13 patients had bilateral trochanteric bursa images; 4 patients had the same bursa examined more than once. Total number of US images n=67, total number of PD US n=51.

The average age of the patients was 49 (range: 24–76) years. 50 (99%) patients were female; only two (1%) patients were male. Most patients had underlying osteoarthritis (OA) n= 23 (44%) and Fibromyalgia syndrome (FM) n= 26 (50%). Five (9.6%) patients with Tb had Sjogren's Syndome. 31(60%) patients diagnosed with Tb were on NSAIDs at the time of the diagnosis and 12(23%) on a neuropathic pain medication.

The Rt trochanteric bursa was most commonly involved (n= 44 (66%)). All (n=51 (100%)) of PD US were Grade 0 (normal: no evidence of inflammation). Only 2 of 67 (<1%) trochanteric bursa US images showed an effusion. None had bursal wall thickening. Pain relief was seen for an average of 4.5 months post-injection in 26 (50%) patients who had a follow up visit.

Conclusion: This is the first study to date examining the use of US and PD US as a means to review inflammation in patients with Tb. We found that patients with clinical Tb do not have US evidence to support a diagnosis of bursal inflammation. The right trochanteric bursa was commonly involved (dominant side in most patients). The involvement of mostly females is not surprising since females suffer more commonly from soft tissue rheumatism than men. Since we did not find signs of inflammation in the trochanteric bursa, we suggest that the most appropriate term to be used for what was previously known as trochanteric bursitis is **Trochanteric Pain Syndrome.**

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Stress Is a Key Modulator of Mood, Coping, Type of Control and Characteristic Symptoms in Females with Fibromyalgia. Katrina Malin[1] and Geoffrey O. Littlejohn[2]. [1]Monash Medical Centre, Clayton, Australia, [2]Monash Medical Center, Melbourne, Australia

Background/Purpose: Stress is an important feature of fibromyalgia [FM] with links to aberrant autonomic nervous system function, perturbed hypothalamic pituitary adrenal function and dysregulation of brain-related control over spinal cord sensory processing. However, it remains unclear how stress interacts with central processes such as personality, control styles, coping techniques and mood that in turn associate with the predictable phenotypic symptom characteristics of fibromyalgia, such as pain, fatigue, sleep and confusion. We aimed to identify the associations of stress with these central and "down-stream" variables in patients with FM.

Methods: We identified 98 women with fibromyalgia diagnosed according to standard ACR criteria. Applied questionnaires included Fibromyalgia Impact Questionnaire [FIQ], Perceived control of internal states scale (PCOISS), Mastery scale, the Coping Scale and Perceived Stress scale. Correlation and regression modelling were used to explore the relationships