Results & Conclusion
The first study participants were included back in March 2016. Until now the analysed data of the questionnaires, reveal that the parameters for quality of life and pain show a significant improvement after cure in all indications. Similar data are illustrated in the disease-specific questionnaires. These preliminary data exhibit that the Rn cure treatment adduces a positive effect in the investigated parameters. In the long term the comparison of cure effectiveness against duration, type and intensity of treatments should bring an insight into the way Rn acts in patients.

A13-3
THE EFFECTS OF STRESS ON THE ACTION POTENTIAL OF SKELETON MUSCLES

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INTRODUCTION-PURPOSE: Its effects and harms on human body have been studied in real terms in recent years, and it has been concluded that stress has more negatively affected all the systems in human body biochemically, histologically and physiologically.

In the current study, the effects of exam stress on students" skeleton, chewing, swallowing, and temporal and biceps muscles.

MATERIAL-METHOD: 20 male and 20 female university student volunteers participated in the study. Recording BioPac mp100 device and surface electrode as electrode were used.

First, before the exams action potentials of the right and left masseter, right and left temporal, right and left digastric, right and left biceps muscles of the student volunteers were recorded through Biopac mp 100 device. Later, towards the end of fifteen days of exams, the action potentials of the same muscles were recorded again.

Through four different movements of resting, tightening, chewing and swallowing of right and left masseter chewing muscles, right and left temporal, and right and left digastric muscles helping swallowing, and finally right and left biceps muscles, and lifting a certain weight with biceps muscles, EMG recording was performed.

RESULTS: There was a significant correlation with the ANOVA test between the data of the male students before the exams and the data of the male students after the exams with the ANOVA tests ($p < 0.01$).

There was a significant correlation between female students ($p < 0.03$). The result is that the stressed muscles cause a decrease in the action potential millivolt, in other words, it produces less power.

KEYWORDS: Stress, Action potential, Chewing and swallowing muscles

A13-4
Functional evaluation in post-viral myositis

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The purpose of this study is to evaluate the clinical utility of electromyography (EMG) in the positive diagnosis of post-viral myositis.We investigated 32 patients in County Hospital Timisoara (2017). The myositis appearance is determinated by viral infection. The clinical signs and the functional investigations were considered. All patients were evaluated for personal history and biochemical parameters. The clinical aspects of the disease were expressed by joints and muscles pain, reduced mobility, asthenia and fever.

The electromyography (bilateral vast medial and anterior tibial muscles) aspect revealed normal and low amplitude and duration of unit motor potentials in 82.7% of patients and normal recruitment pattern. Polyphasic potentials present for bilateral anterior tibial muscles in 29.4% of patients. All this aspects revealed a myogenic aspect of EMG but in 78.5 % of patients with good prognosis.

The efficiency of treatment with specific anti – inflammatory agents is expressed by the decrease of simptomatology, optimization of the lab blood tests and the aspect of electromyography.

A13-5
Cartilage Marker Plots for Monitoring of Osteoarthritis Patients. A Pilot study

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Osteoarthritis (OA) is the most frequent cause of pain in the ageing population. Currently there are no disease modifying OA drugs available. Treatment is limited to pain reduction, improvement of joint mobility/functionality and delay of disease progression or joint replacement in severe cases. The knowledge of systemic biomarkers, which reflect the ongoing situation in the affected joint(s), would facilitate a fast assessment of improvement or aggravation of disease during treatment.

Starting from October 2016 patients (n=26) with OA of one or both knees were enrolled in a randomized, controlled pilot study in the Bad Gastein Health area. They attended a health regimen comprising conventional physical therapies (control group (n=13) and 8 additional visits to the radon gallery in the intervention group (n=13). Blood and urine samples were taken during the therapy and three and six months after the therapy to evaluate long term effects. A disease related questionnaire (WOMAC), the *EQ-5D* health questionnaire and a numeric rating scale for the assessment of pain were also given out. In May 2017, the study will be completed, providing us with blood, urine samples and questionnaire data from OA patients over five time points. Anabolic and catabolic cartilage biomarkers will be quantified in the samples by ELISA. These data will be used for the creation of cartilage marker plots to represent prevailing changes in the balance of cartilage metabolism during the cure regimen. For comparison, the same biomarkers are analyzed in urine, blood samples and primary chondrocytes of OA patients undergoing total knee arthroplasty. Radiographic analysis and macroscopic assessment will be correlated to levels of biomarkers to define their validity.