

Musculoskeletal

RECOOP HST Research Activity Inventory	
Please complete the template for each selected project your organization would like to share with the partners of the RECOOP HST Consortium and would like to invite other organizations to write FP7 or NIH proposals.	
Organization	Department of Traumatology and Hand Surgery, Trauma Centre (CRC) Medical School
Area of the Research	Aging - Musculoskeletal
Title of the Research Activity	Fractures in the elderly, osteoporosis, femoral neck fracture, osteoscopy, fractures of the proximal humerus, fractures of the distal humerus, radius fractures of the typical sites
Department (complete address)	Principal Investigator or Head of the Research Group
H-7632 Pécs, Akác u. 1, Hungary	Name: Prof. Dr. NYÁRÁDY, József
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Abstract	Maximum 500 characters
<p>Research area In the elderly age, with progression of osteoporosis, the fracture of the femoral neck, which still remains unsolved, occur more frequently, and so do those of the proximal and distal ends of the humerus and fractures of the typical sites of the radius. For treating these fractures, special devices were constructed and adapted to the anatomical form of the given bone region. With these devices, even a porous bone may firmly be fixed. By use of angle-fixed plates, a lot of complications and subsequent corrective procedures may be avoided.</p> <p>In the case of medial femur neck fractures, blood supply of the femoral head can be studied by a simple searching method. In the case of a sufficient blood supply, the very expensive prosthetic replacement may be substituted by a successful cheaper and simpler compression screw fixation.</p> <p>Human resources: medical staff of the department: traumatologists (19) (including 6 PhD degree holders) and junior assistants (11)</p> <p>Special instruments arthroscope for small joints, anglefixed plates and screws, compression femur neck screw</p> <p>Products and services</p> <ul style="list-style-type: none"> ▪ Compression femur neck screw and implantation set ▪ Anglefixed shoulder plates and screws ▪ Anglefixed plates and screws for the distal humerus ▪ Anglefixed plates and screws for the distal radius 	
Methods used	Maximum 300 characters

Related references (max 3)	Indicate the impact factor of the cited reference
Related Inventions Disclosures and Patents	Invention: Osteoscopy at femoral neck fracture (Ongoing Patent with CSMC)

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Organization	Biomechanical Laboratory (CRC) Medical School, University of Pécs
Area of the Research	biomechanics, movement analysis, spine-, equilibrium-, gait examinations
Title of the Research Activity	Mobility of the spinal column in orthopedic conditions
Department (complete address)	Principal Investigator or Head of the Research Group
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Abstract	Maximum 500 characters
<p>Research area The research laboratory, in cooperation with other research units, performs clinical examinations of the gait connected to orthopedic conditions and interventions in the case of implanted lower extremity orthosis, as well as investigations of the mobility of the spinal column in orthopedic conditions, and also gait examinations in healthy humans, for theoretical research. Our aim is to spread the applications of biomechanics and to utilise the research outcomes.</p> <p>Human resources In accordance with the interdisciplinary character of the research the colleagues provide engineering (mobility examinations and statics) and medical background.</p> <p>Special instruments Zebris CMS-HS ultrasound 3D movement detector system and analytic softwares</p> <p>Products and services: Biomechanics is an interdisciplinary field of science, whose results are utilised by the borderline areas of medical biology.</p> <p>The research unit provides research opportunities for</p> <ul style="list-style-type: none"> • clinical • theoretical 	

- technological projects.

The equipment of the laboratory is applicable for any spinal column, gait, and mobility investigations, which require high-accuracy location determination.

Results gained are applicable for

- the assessment of clinical therapeutic interventions,
- the assessment of mobility state,
- data collection of the research on musculo-skeletal system,
- testing therapeutic measures, implants and new treatment procedures.

For the analysis of motion detected, analytical softwares belonging to the Zebris equipment are available, while the specific investigations carried out in accordance with the projects, the the data of the 0.1 mm-accuracy original position can be used.

Besides standard measurement procedures, there will be opportunities to construct individual configurations and perform analyses.

The research unit is available for clinical and research motion investigations and projects the research unit is available.

Methods used	Maximum 300 characters
Related references (max 3)	Indicate the impact factor of the cited reference
Related Inventions Disclosures and Patents	