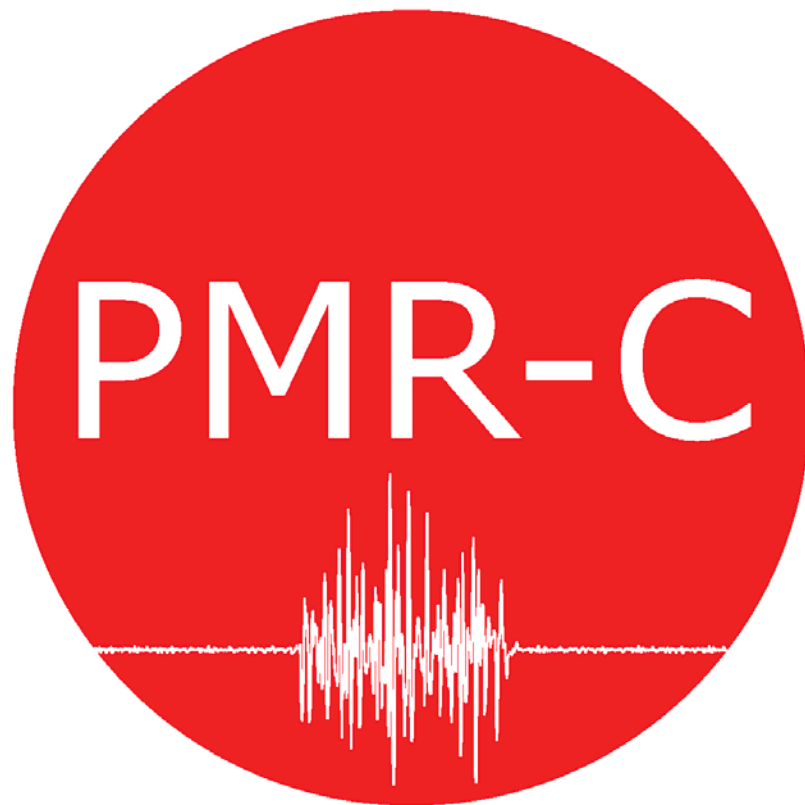


Annual report 2013

Physical Medicine & Rehabilitation Research –
Copenhagen (PMR-C)

www.pmrc.dk, [twitter@PhysMed_CPH](https://twitter.com/PhysMed_CPH)



Hvidovre Hospital, University of Copenhagen, DENMARK

1. ABOUT

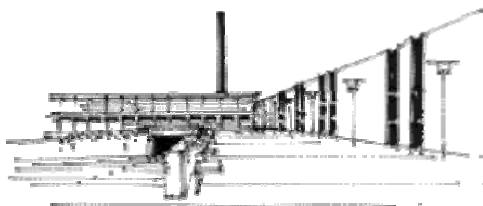
Physical Medicine & Rehabilitation Research – Copenhagen (PMR-C) is a multidisciplinary research program in physical medicine and rehabilitation, based in Copenhagen, Denmark. PMR-C is the research division of the Department of Physical- and Occupational Therapy at Hvidovre Hospital, University of Copenhagen, Denmark. The core of PMR-C is an extensive collaboration between three departments at the hospital: Department of Physical- and Occupational Therapy, Department of Orthopedic Surgery, and Clinical Research Centre. The hospital is well known for a broad clinical research within enhanced recovery after surgery, and the research focus of PMR-C is inspired by this research tradition.

The main research focus of PMR-C is the use of physical medicine to enhance recovery in patients, or to prevent injury or disease. Our approach is clinical, but we also conduct basic research to investigate mechanisms and research to develop new outcome measures.

PMR-C was initiated by Thomas Bandholm, Morten Tange Kristensen and Kristian Thorborg, and was formally established in 2013 in collaboration with Jette Christensen, Head of the Department of Physical- and Occupational Therapy, Peter Gebuhr, Head of the Department of Orthopedic Surgery, and Ove Andersen, Head of Clinical Research Centre, Hvidovre Hospital, University of Copenhagen. These six people form the PMR-C steering committee. Finally, four highly esteemed researchers form an advisory board that advises the steering committee in the management of PMR-C.

2. MAIN ACHIEVEMENTS IN 2013

Firstly, PMR-C was successfully launched, which was officially celebrated at a large PMR-C research symposium in collaboration with Metropolitan University College, Copenhagen. More than 300 people attended the symposium. Secondly, people from PMR-C published 29 peer-reviewed papers in 2013 and had an additional 5 accepted. Thirdly, Kristian Thorborg continued on the editorial board with British Journal of Sports Medicine, and published his second invited Editorial (Advancing hip and groin injury management – from eminence to evidence). Morten Tange Kristensen continued on the editorial board with World Journal of Orthopedics, and Thomas Bandholm joined the editorial board with PLOS ONE. Finally, PMR-C had its first PhD defence in 2013.



3. PEOPLE

Jette Christensen: Ms Christensen is Head of PMR-C and Head of the Department of Physical- and Occupational Therapy. Curriculum and list of publications can be found at pmrc.dk/people.

Thomas Bandholm: Dr. Bandholm is a senior researcher and research coordinator at PMR-C. He is responsible for enhanced recovery program research in patients following total hip and knee arthroplasties and acute hospitalization for medical illnesses in older patients at PMR-C. Curriculum and list of publications can be found at pmrc.dk/people. Please see summary below.

Parameter	Value
Total PubMed papers	41
Year of first Pubmed paper	2006
Average PubMed papers per year since first paper	5.9
Year of PhD-degree	2009
H-index	10
M-quotient (H-index/length of academic career)	1.4

Morten Tange Kristensen: Dr. Kristensen is a senior researcher at PMR-C. He is responsible for enhanced recovery program research in patients with hip fracture and lower limb amputations at PMR-C. Curriculum and list of publications can be found at pmrc.dk/people. Please see summary below.

Parameter	Value
Total PubMed papers	29
Year of first Pubmed paper	2005
Average PubMed papers per year since first paper	3.2
Year of PhD-degree	2010
H-index	13
M-quotient (H-index/length of academic career)	1.6

Kristian Thorborg: Dr. Thorborg is a senior researcher at PMR-C. He is responsible for sports medicine research at PMR-C. Curriculum and list of publications can be found at pmrc.dk/people. Please see summary below.

Parameter	Value
Total PubMed papers	32
Year of first Pubmed paper	2010
Average PubMed papers per year since first paper	10.7
Year of PhD-degree	2011
H-index	7
M-quotient (H-index/length of academic career)	2.3

PhD-students

Lise Kronborg: Ms Kronborg is a PhD-student at PMR-C and enrolled at University of Copenhagen. Her PhD deals with in-hospital exercise to enhance recovery following a hip fracture (Morten Tange Kristensen, faculty supervisor, Thomas Bandholm co-supervisor).

Mette Merete Pedersen: Ms Pedersen is a PhD-student at PMR-C, co-affiliated with Optimized Senior Patient Programme (OPTIMED), and enrolled at University of Copenhagen. Her PhD deals with exercise to prevent functional decline following acute hospitalization for a medical illness in older patients (Thomas Bandholm, faculty supervisor).

Christine Bodilsen: Ms Bodilsen is a PhD-student at PMR-C, co-affiliated with Optimized Senior Patient Programme (OPTIMED), and enrolled at University of Copenhagen. Her PhD deals with prediction of low functional performance following acute hospitalization for a medical illness in older patients (Thomas Bandholm, faculty supervisor).

Derek Curtis: Mr. Curtis is a PhD-student at PMR-C, co-affiliated with Gait Analysis Laboratory, Department of Orthopedic Surgery, Copenhagen University Hospital, Hvidovre, and enrolled at University of Copenhagen. His PhD deals with exercise to improve functional performance in children with cerebral palsy (external supervisors).

Patrocinio Ariza-Vega: Ms. Ariza-Vega is a PhD-student at the University of Granada, Spain and co-affiliated with PMR-C. Her PhD deals with the recovery of function and mortality within one year of hip fracture surgery in southern Spain (Morten Tange Kristensen, co-supervisor).

Thomas Linding Jakobsen: Mr Jakobsen was a PhD-student at PMR-C, co-affiliated with the Lundbeckfoundation Centre for Fast-Track Hip- and Knee Arthroplasty. His PhD dealt with exercise to enhance recovery following a total knee arthroplasty (faculty supervisor: Thomas Bandholm).

MSc-students

Nadia Ørbæk: Ms Ørbæk is an MSc-student at PMR-C, and enrolled at University of Southern Denmark. Her MSc deals with patient experiences of rehabilitation in hospital and after discharge in patients with hip fracture (Morten Tange Kristensen, co-supervisor).

Linette Kofoed: Ms Kofoed is an MSc-student at PMR-C, and enrolled at University of Southern Denmark. Her MSc deals with strength training in patients with exacerbation in chronic obstructive pulmonary disease and is a collaboration with North Sealand Hospital, Frederiksund (Morten Tange Kristensen, co-supervisor).

Maria Svennergren: Ms Svennergren is an MSc-student at PMR-C, and enrolled at Lund University. Her MSc deals with the development of a measure of Achilles tendon length (Morten Tange Kristensen, faculty-supervisor).

Louisa Wilquin: Ms Wilquin is an MSc-student at PMR-C and enrolled at the University of Southern Denmark. Her MSc deals with the effect of contraction velocity during strength training on efferent activation of the quadriceps muscle shortly following total knee arthroplasty (Thomas Bandholm, co-supervisor).

Elin Mikkelsen: Ms Mikkelsen was an MSc-student at PMR-C and enrolled at the University of Southern Denmark. Her MSc dealt with central (CNS) activation of the quadriceps muscle during strength training with repetitions to contraction failure after total knee arthroplasty (Thomas Bandholm, co-supervisor).

Gry Søbye: Ms Søbye was an MSc-student at PMR-C and enrolled at the University of Copenhagen. Her MSc dealt with Variables that influence the response to progressive strength training shortly following total knee arthroplasty (Thomas Bandholm, faculty supervisor).

Lars Tang: Mr. Tang was an MSc-student at PMR-C, and enrolled at University of Copenhagen. His MSc dealt with previous knee injuries and self-reported lower limb function score as risk factors for future knee injuries in adolescent female soccer (Kristian Thorborg, faculty supervisor).

Jan Overgaard: Mr Overgaard is an MSc-student at PMR-C, and enrolled at University of Southern Denmark. His MSc deals with reliability of the six minutes' walk test in patients with hip fracture and is a collaboration with Lolland Municipality (Morten Tange Kristensen, co-supervisor).

4. ADVISORY BOARD

The PMR-C is proud to have an advisory board of highly esteemed researchers to advise the management of PMR-C. The members of the PMR-C advisory board are listed below. Their biographies can be found at pmrc.dk/advisory-board/

Per Hölmich, Associate Professor, MD

Professor Hölmich is Head of Arthroscopic Centre Amager, Hvidovre Hospital, Copenhagen, Denmark.

Henrik Kehlet, Professor, Dr Med Sci

Professor Kehlet is Head of The Lundbeck Foundation Centre for Fast-Track Hip and Knee Arthroplasty and Section of Surgical Pathophysiology, Rigshospitalet, Copenhagen, Denmark.

Michael Kjær, Professor, Dr Med Sci

Professor Kjær is Head of Institute of Sports Medicine – Copenhagen, Bispebjerg Hospital, Copenhagen, Denmark.

Jens Bo Nielsen, Professor, Dr Med Sci

Professor Nielsen is Head of Neural Control of Movement – Copenhagen, University of Copenhagen, Copenhagen, Denmark.

Comments from the advisory board to the annual report

The first year of PMR-C activities has been impressive with numerous scientific publications as well as extensive educational activities. The focus for the coming year should be to consolidate this level of productivity.

5. PUBLICATIONS

People from PMR-C published 29 papers in 2013, and an additional 5 were accepted. Thank you to all our collaborators. Please see pmrc.dk/collaborators for a list.

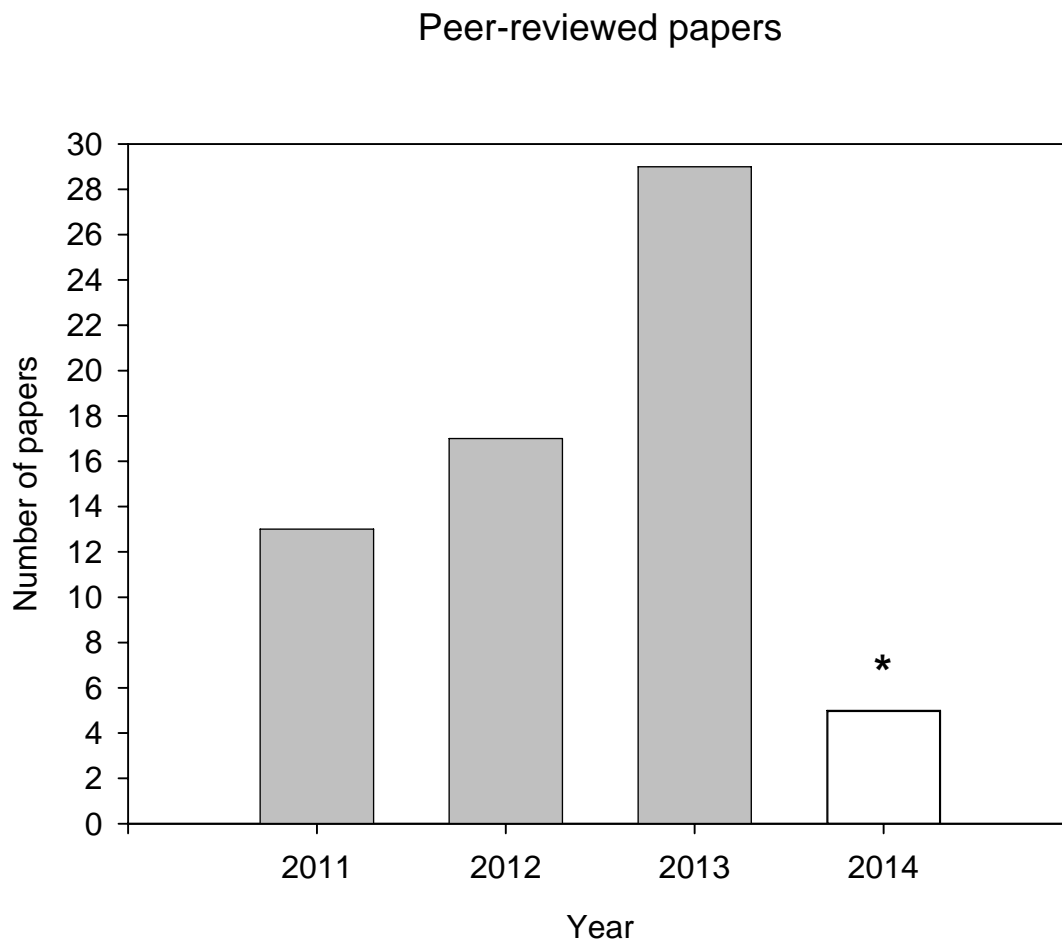


Figure 1: Trend in peer-reviewed papers. *Accepted papers to be published in 2014. Status per January 1st, 2014.

Published peer-review papers

Overgaard J, Kristensen MT (2013). Feasibility of progressive strength-training commenced shortly after hip fracture in community-dwelling patients. *World J Orthop* 4: 248-258

Smith M, Curtis D, Bencke J, Stebbins J (2013). Use of wand markers on the pelvis in three dimensional gait analysis. *Gait Posture* 38: 1070-1073.

Rathleff MS, Thorborg K, Bandholm T (2013). Concentric and eccentric time-under-tension during strengthening exercises: validity and reliability of stretch-sensor recordings from an elastic exercise-band. *PLOS ONE* 8: e68172.

Thorborg K, Bandholm T, Hölmich P (2013). Men are stronger than women – Also in the hip. *J Sci Med Sport* 16: E1-3.

Thorborg K, Petersen J, Nielsen MB, Hölmich P (2013). Clinical recovery of two adductor longus ruptures: A case-report of a soccer player. *BMC Res Notes* 6: 205.

Holm B, Thorborg K, Husted H, Kehlet H, Bandholm T (2013). Surgery-induced changes and early recovery of hip muscle strength, leg-press power, and function after fast-track total hip arthroplasty: a prospective cohort study. *PLOS ONE* 8: e62109.

Bodilsen C, Pedersen MM, Petersen J, Beyer N, Andersen O, Lawson-Smith L, Kehlet H, Bandholm T (2013). Acute hospitalization of the old medical patient: changes in muscle strength and functional performance during hospitalization and 30 days after discharge. *Am J Phys Med Rehabil* 92: 789-796.

Aalund PK, Larsen K, Hansen TB, Bandholm T (2013). Normalized leg-press power or knee-extension strength after fast-track knee arthroplasty: which measure is closest associated to functional performance and self-reported knee function? *Arch Phys Med Rehabil* 94: 384-390.

Lunn TH, Andersen LØ, Kristensen BB, Husted H, Gaarn-Larsen L, Bandholm T, Ladelund S, Kehlet H (2013). Effect of high-dose preoperative methylprednisolone on recovery after total hip arthroplasty: a randomized, double-blind, placebo-controlled trial. *Br J Anaesth* 110: 66-73.

Pedersen MM, Bodilsen C, Petersen J, Beyer N, Andersen O, Lawson-Smith L, Kehlet H, Bandholm T (2013). 24-hour mobility during hospitalization in old medical patients. *J Gerontol A Biol Sci Med Sci* 68: 331-337.

Bencke J, Curtis D, Krogshede C, Christensen JN, Jensen LK, Bandholm T, Zebis MK (2013). Biomechanical evaluation of a movement associated with ACL injury: the side-cutting manoeuvre. *Knee Surg Sports Traumatol Arthrosc* 21: 1876-1881.

Jakobsen TL, Kehlet H, Bandholm T (2013). Reliability of the 6-minute walk test after total knee arthroplasty. *Knee Surg Sports Traumatol Arthrosc* 21: 2625-2628.

Kristensen MT (2013). Hip fracture related pain strongly influences functional performance of patients with an intertrochanteric fracture upon discharge from hospital. *PM R* 5: 135-141.

Ban I, Troelsen A, Christiansen DH, Svendsen SW, Kristensen MT (2013). Standardised test protocol (Constant Score) for evaluation of functionality in patients with shoulder disorders. *Dan Med J* 60: A4608.

Thorborg K, Bandholm T, Hölmich P (2013). Hip- and knee-strength assessments using a hand-held dynamometer with external belt-fixation are inter-tester reliable. *Knee Surg Sports Traumatol Arthrosc* 21: 550-555.

Thorborg K, Hölmich P (2013). Advancing hip and groin injury management: from eminence to evidence. *Br J Sports Med* 47: 602-605.

Branci S, Thorborg K, Nielsen MB, Hölmich P (2013). Radiological findings in symphyseal and adductor-related groin pain in athletes: a critical review of the literature. *Br J Sports Med* 47: 611-619.

Kristensen MT, Nielsen AØ, Topp UM, Jakobsen B, Nielsen KJ, Juul-Larsen HG, Jakobsen TL (2013). Number of test trials needed for performance stability and interrater reliability of the one leg stand test in patients with a major non-traumatic lower limb amputation. *Gait Posture* (Epub ahead of print).

Stensbirk F, Thorborg K, Konradsen L, Jørgensen U, Hölmich P (2013). Iliotibial band autograft versus Bone-patella-tendon-bone autograft, a possible alternative for ACL-reconstruction: A 15-year prospective randomized controlled trial. *Knee Surg Sports Traumatol Arthrosc* (Epub ahead of print).

Hölmich P, Thorborg K, Dehlendorff C, Gluud C (2013). Incidence and clinical presentation of groin injuries in sub-elite male soccer. *Br J Sports Med* (Epub ahead of print).

Ariza-Vega P, Jiminez-Moleon J, Kristensen MT (2013). Change of residence and functional status within three months and one year following hip fracture surgery. *Disabil Rehabil* (Epub ahead of print).

Thorborg K, Branci S, Stensbirk F, Jensen J, Hölmich P (2013). Copenhagen hip and groin outcome score (HAGOS) in male soccer: Reference values for hip and groin injury-free players. *Br J Sports Med* (Epub ahead of print).

Hölmich P, Thorborg K, Nyvold P, Klit J, Nielsen MB, Troelsen A (2013). Does bony hip morphology affect the of treatment for patients with adductor-related groin pain? – Long term results of a randomized controlled trial. *Br J Sports Med* (Epub ahead of print).

Serner A, Jakobsen MD, Andersen LL, Hölmich P, Sundstrup E, Thorborg K (2013). EMG evaluation of hip adduction exercises for soccer players: implications for exercise selection in prevention and treatment of groin injuries. *Br J Sports Med* (Epub ahead of print).

Rathleff MS, Bandholm T, Ahrendt P, Olesen JL, Thorborg K (2013). Novel stretch-sensor technology allows quantification of adherence and quality of home-exercises: a validation study. *Br J Sports Med* (Epub ahead of print).

Jensen J, Hölmich P, Bandholm T, Zebis MK, Andersen LL, Thorborg K (2013). Eccentric strengthening effect of training with elastic bands in soccer players: a randomized controlled trial. *Br J Sports Med* (Epub ahead of print).

Thomeé R, Jónasson P, Thorborg K, Sansone M, Ahldén M, Thomeé C, Karlsson J, Baranto A (2013). Cross-cultural adaptation to Swedish and validation of the Copenhagen Hip and Groin Outcome Score (HAGOS) for pain, symptoms and physical function in patients with hip and groin disability due to femoro-acetabular impingement. *Knee Surg Sports Traumatol Arthrosc* (Epub ahead of print).

Petersen MB, Jakobsen MD, Thorborg K, Sundstrup A, Andersen LL (2013). Perceived loading and muscle activity during hip strengthening exercises: comparison of elastic resistance and machine exercises. *Int J Sports Phys Ther* (Epub ahead of print).

Petersen J, Thorborg K, Nielsen MB, Skjødt T, Bang N, Hölmich P (2013). The Diagnostic and Prognostic Value of Ultrasonography in Soccer Players with Acute Hamstring Injuries. *Am J Sports Med* (Epub ahead of print).

Accepted peer-reviewed papers

Thorborg K (2013). What are the risk factors for hamstring muscle injury? *Clin J Sports Med* (Accepted).

Dippmann C, Thorborg K, Kraemer O, Winge S, Holmich P (2013). Symptoms of nerve dysfunction after hip arthroscopy: An under-reported complication? *Arthroscopy* (Accepted).

Thorborg K and Holmich P (2013). Measurement qualities of hip and groin outcome scores. *Am J Sports Med* (Accepted)

Sundstrup E, Jakobsen MD, Andersen CH, Bandholm T, Thorborg K, Zebis MK, Andersen LL (2013). Evaluation of elastic bands for lower-extremity resistance training in adults with and without musculoskeletal pain. *Scand J Med Sci Sports* (Accepted).

Jensen J, Bandholm T, Hölmich P, Thorborg K (2013). Acute and sub-acute effects of repetitive kicking on hip adduction torque in elite youth soccer players. *J Sports Sci* (Accepted).

Curtis DJ, Bencke J, Mygind B (2013). The effect of training in an interactive dynamic stander on ankle dorsiflexion and gross motor function in children with cerebral palsy, Dev Neurorehabil (Accepted).

6. COMPLETED THESES

Thomas Linding Jakobsen, PhD-thesis, University of Copenhagen. Project title: Physical therapy with progressive strength training after fast-track total knee arthroplasty: How early, which exercises and what effect? (Thomas Bandholm, faculty supervisor).

Elin Mikkelsen, MSc-thesis, University of Southern Denmark. Project title: Central (CNS) activation of the quadriceps muscle during strength training with repetitions to contraction failure after total knee arthroplasty (Thomas Bandholm, co-supervisor).

Gry Søbye, MSc-thesis, University of Copenhagen. Project title: Variables that influence the response to progressive strength training shortly following total knee arthroplasty: secondary analyses of a randomized controlled trial (Thomas Bandholm, faculty supervisor).

Lars Tang. MSc-thesis, University of Copenhagen. Project title: Previous knee injury and self-reported lower limb function score as risk factors for future knee injuries in adolescent female soccer (Kristian Thorborg, faculty supervisor).

7. RESEARCH GRANTS

With PMR-C acting as main or co-applicant, we received a total of 5,113,896 DKK (686,316 Euro) in 2013 from a variety of funding bodies. Thank you very much for the support. The funding bodies included:

The Research Foundation of the Capital Region: Quadriceps muscle inhibition after total knee arthroplasty: mechanisms and perspectives. Main applicant: Thomas Bandholm (1,499,125 DKK).

The Research Foundation of the Capital Region: Implementing risk-patient identification in the acute medical ward. Main applicant: Ove Andersen, co-applicant: Thomas Bandholm (1,490,301 DKK).

The IMK Foundation: Early and intensive in-hospital strength training and rehabilitation in municipalities in Denmark after surgery for an acute hip fracture. Main applicant: Henrik Kehlet, co-applicant: Morten Tange Kristensen (592,000 DKK).

The Research Foundation of the Danish Physical Therapy Organization: Early and intensive in-hospital strength training and rehabilitation in municipalities in Denmark after surgery for an acute hip fracture. Main applicant: Lise Kronborg, enclosed CVs from PMR-C supervisors: Thomas Bandholm and Morten Tange Kristensen (38,750 DKK + 400,000 DKK [PhD-scholarship]).

The Research Foundation for Hvidovre Hospital: Early and intensive in-hospital strength training and rehabilitation in municipalities in Denmark after surgery for an acute hip fracture. Main applicant: Lise Kronborg, enclosed CVs from PMR-C supervisors: Thomas Bandholm and Morten Tange Kristensen (50,000 DKK).

The Research Foundation of the Hvidovre Hospital: An early, structured intervention in the acute medical unit to identify the frail older medical patients. Main applicant: Christine Bodilsen, enclosed CVs from PMR-C supervisor: Thomas Bandholm (25,000 DKK).

The UCSF Lundbeck foundation: Early and intensive in-hospital strength training and rehabilitation in municipalities in Denmark after surgery for an acute hip fracture. Main applicant: Lise Kronborg, enclosed CVs from PMR-C supervisors: Thomas Bandholm and Morten Tange Kristensen (100,000 DKK).

The UCSF Lundbeck foundation: Early identification of older patients with low functional level in the acute medical unit. Main applicant: Christine Bodilsen, enclosed CVs from PMR-C supervisors: Thomas Bandholm (100,000 DKK).

The Research Foundation of the Danish Physical Therapy Organization: Six versus twelve weeks of progressive strength training in patients with hip fracture: a randomized controlled trial. Main applicant: Jan Overgaard, enclosed CVs from PMR-C supervisors: Morten Tange Kristensen (25,000 DKK).

The Research Foundation for Danish Sports Physical Therapists. Elastic band stretch sensor used in rehabilitation of patients with patellofemoral pain. Main applicant Michael Rathleff, co-applicants: Kristian Thorborg and Thomas Bandholm (25,000 DKK).

The Research Foundation for Hvidovre Hospital: Physical therapy with progressive strength training after fast-track total knee arthroplasty: How early, which exercises and what effect? Main applicant: Thomas Linding Jakobsen, enclosed CV from PMR-C supervisor: Thomas Bandholm (45,000 DKK).

The Research Foundation of the Danish Physical Therapy Organization: Physical therapy with progressive strength training after fast-track total knee arthroplasty: How early, which exercises and what effect? Main applicant: Thomas Linding Jakobsen, enclosed CV from PMR-C supervisor: Thomas Bandholm (88,750 DKK).

Lundbeck Foundation Centre for Fast-Track Hip and Knee Arthroplasty: Physical therapy with progressive strength training after fast-track total knee arthroplasty: How early, which exercises and what effect? Main applicant: Thomas Linding Jakobsen, enclosed CV from PMR-C supervisor: Thomas Bandholm (386,000 DKK).

The University of Copenhagen: Mild Cognitive Impairment Status and Mobility Performance: an Analysis from the Boston RISE Study. Supporting 4 month in Boston as a visiting scholar for the main applicant. Main applicant: Mette Merete Pedersen (42,500 DKK).

The Capital Region of Denmark: Mild Cognitive Impairment Status and Mobility Performance: an Analysis from the Boston RISE Study. Supporting 4 month in Boston as a visiting scholar for the main applicant. Main applicant: Mette Merete Pedersen (16,470 DKK).

The Research Foundation of the Danish Physical Therapy Organization: In-hospital and post-discharge training of older medical patients. Main applicant: Mette Merete Pedersen, enclosed CVs from PMR-C supervisors: Thomas Bandholm (90,000 DKK).

The UCSF Lundbeck Foundation: In-hospital and post-discharge training of older medical patients. Main applicant: Mette Merete Pedersen, enclosed CVs from PMR-C supervisors: Thomas Bandholm (100,000 DKK).

8. INVITED LECTURES

Lecture title: Prediction of function after hip fracture. Venue: The Swedish Orthopedic Congress (Ortopediveckan), Uppsala, Sweden. (Morten Tange Kristensen).

Lecture title: Prevention of soccer injuries. Venue: Danish Sports Medicine Congress 2013, Kolding, Denmark (Kristian Thorborg).

Lecture title: Prevention of soccer injuries. Venue: Danish Football Association seminar for physical trainers 2013, Copenhagen, Denmark (Kristian Thorborg).

Lecture title: Patient-related scores for groin pain: HAGOS. Venue: 3rd Sporting Groin pain Conference 2013, Doha, Qatar (Kristian Thorborg).

Lecture title: Strength measurements in groin pain. Venue: 3rd Sporting Groin pain Conference 2013, Doha, Qatar (Kristian Thorborg).

Lecture title: Hofte og lyskesmerter hos fysisk aktive – brugen af måleinstrumenter i praksis. Venue: Minifagfestival Region Midtjylland 2013, Denmark (Kristian Thorborg).

Lecture title: Groin injuries in football – Clinical examination and differential diagnostics. Venue: Norwegian Football Federation Sports Medicine Seminar 2013 (Kristian Thorborg).

Lecture title: Groin injuries in football – Treatment and prognosis. Venue: Norwegian Football Federation Sports Medicine Seminar 2013 (Kristian Thorborg).

Lecture title: Targeted Training: Evidence and experiences. Venue: CPOP annual meeting 2013, Fredericia (Derek Curtis).

Lecture title: Pathological gait in children with motor disability and treatment of pathological gait in children with cerebral palsy. Venue: ETAC A/S Horsens (Derek Curtis).

Lecture title: Trunk control: new evidence for assessment and treatment. Venue: Connecticut Physical Therapy Association Fall Congress, Hartford CT (Derek Curtis).

Lecture title: Concepts for assessment and treatment of postural control in individuals with moderate-to severe motor impairment. Venue: Connecticut Physical Therapy Association Fall Congress, Hartford CT (Derek Curtis).

9. MAIN TEACHING AND COURSE ACTIVITIES

6 weeks of course leading and lecturing. Course: Physical activity. Cand.Scient.San., University of Copenhagen (Kristian Thorborg).

4 weeks of course leading and lecturing. Course: Analysis of movement and muscle function. Cand.Scient.Phys., University of Southern Denmark and Section of Sports Physical Therapists (Kristian Thorborg).

4 weeks of course leading and lecturing. Course: Rehabilitation of muscle and tendon injuries. Cand.Scient.Phys., University of Southern Denmark and Section of Sports Physical Therapists (Kristian Thorborg).

3 weeks of course leading and lectures. Course: Exercise and movement. Pre-graduate PT-level, Copenhagen. Metropolitan University College. Topic: Physical activity in health and rehabilitation (Lise Kronborg).

4 days of course leading and teaching. Course: Exercise in clinical practice. Post-graduate PT level, Copenhagen. Danish Physical Therapist Organization (Thomas Bandholm).

4 days of course leading and teaching. Course: Exercise in clinical practice. Post-graduate PT level, Ålborg. Danish Physical Therapist Organization (Thomas Bandholm).

4 days of course leading and teaching. Course: Targeted Training introductory course. Kirkebækskolen (Derek Curtis).

3 days of lecturing. Course: Clinimetrics. Cand.Scient.Phys., University of Southern Denmark and Metropolitan University College. Topic: Assessment of muscle strength (Thomas Bandholm and Kristian Thorborg).

3 days of lecturing. Course: Clinimetrics. Cand.Scient.Phys., University of Southern Denmark and Metropolitan University College. Topic: Performance-based assessment of function (Thomas Linding Jakobsen and Morten Tange Kristensen).

2 days of lecturing. Course: Level I and II course (Sports Medicine Diploma). Post-graduate MD level, Danish Sports Medicine Society. Topic: Hip and groin (Kristian Thorborg).

2 lectures. Course: Analysis of movement and muscle function in relation to sports. Cand.Scient.Phys., University of Southern Denmark and Section of Sports Physical Therapists. Topic: Motor control and ankle injuries (Thomas Bandholm).

2 lectures. Course: Exercise in clinical practice. Post-graduate PT level, Copenhagen. Danish Physical Therapist Organization. Topic: Rehabilitation after hip fracture (Morten Tange Kristensen).

2 lectures. Residence Course: Tests of functional performance in the geriatric patient. Post-graduate MD level, Gentofte Hospital, Danish Health and Medicines Authority. (Christine Bodilsen).

2 lectures. Course: Exercise in clinical practice. Post-graduate PT level, Copenhagen. Danish Physical Therapist Organization. Topic: Rehabilitation of older medical patients. (Christine Bodilsen).

Single lecture. Course: Muscle and matrix throughout the body: similarities and heterogeneity. PhD-course. University of Copenhagen. Topic: Rehabilitation after total hip and knee replacements (Thomas Bandholm).

Single lecture. Course: Physical activity. Cand.Scient.San., University of Copenhagen. Topic: Basic exercise physiology (Thomas Bandholm).

Single lecture. Course: Children with cerebral palsy. Post-graduate PT level, Odense. Danish Physical Therapist Organization. Topic: Eccentric strength training in children with cerebral palsy (Derek Curtis).

Single lecture. Course: Children with cerebral palsy. Post-graduate PT level, Odense. Danish Physical Therapist Organization. Topic: Targeted training in children with cerebral palsy (Derek Curtis).

10. SYMPOSIA

PMR-C was the organizer or co-organizer of two large symposia in 2013.

PMR-C research symposium 2013

The symposium marked the launch of PMR-C and was held at the Metropolitan University College in Copenhagen in collaboration with the Metropolitan University College. More than 300 people attended the symposium, which included talks by the PMR-C advisory board members, the chairperson of the Danish Physical Therapy Organization, Tina Lambrecht, in addition to a large number of PMR-C people and invited non-PMR-C people.

Symposium on rehabilitation after total hip and knee arthroplasty

The symposium was organized by the Lundbeck Foundation Centre for Fast-Track Hip and Knee Arthroplasty, PMR-C and the Danish Physical Therapist Organization. It was held at Rigshospitalet in Copenhagen, and more than 300 people attended. The symposium included talks by Professor Bente Klarlund Pedersen as well as the chairperson of the Danish Physical Therapy Organization, Tina Lambrecht.

11. PEER REVIEWING OF RESEARCH

Editorial board work: British Journal of Sports Medicine, World Journal of Orthopedics, and PLOS ONE (Kristian Thorborg, Morten Tange Kristensen, Thomas Bandholm).

Ad-hoc reviewing: British Journal of Sports Medicine, Clinical Interventions in Ageing, BMJ Open, Disability & Rehabilitation, BMC Anaesthesiology, Journal of Electromyography & Kinesiology, Journal of Sports Sciences, Knee Surgery, Sports Traumatology and Arthroscopy, PLOS ONE, Danish Medical Journal, Osteoarthritis & Cartilage, Quality of Life Research, Scandinavian Journal of Medicine & Science in Sports, Ultraschall in der Medizin, Industrial Health, Canadian Journal of Behavioural Science (Mette Merete Pedersen, Morten Tange Kristensen, Kristian Thorborg, Thomas Bandholm).

Grant reviewing: Arthritis Research UK (Thomas Bandholm), Research Foundation of the Danish Physical Therapy Organization, (Kristian Thorborg), Research Foundation in Danish Regions (Kristian Thorborg).

External review of PhD-protocols prior to enrolment: Blinded (University) (Thomas Bandholm, Kristian Thorborg).