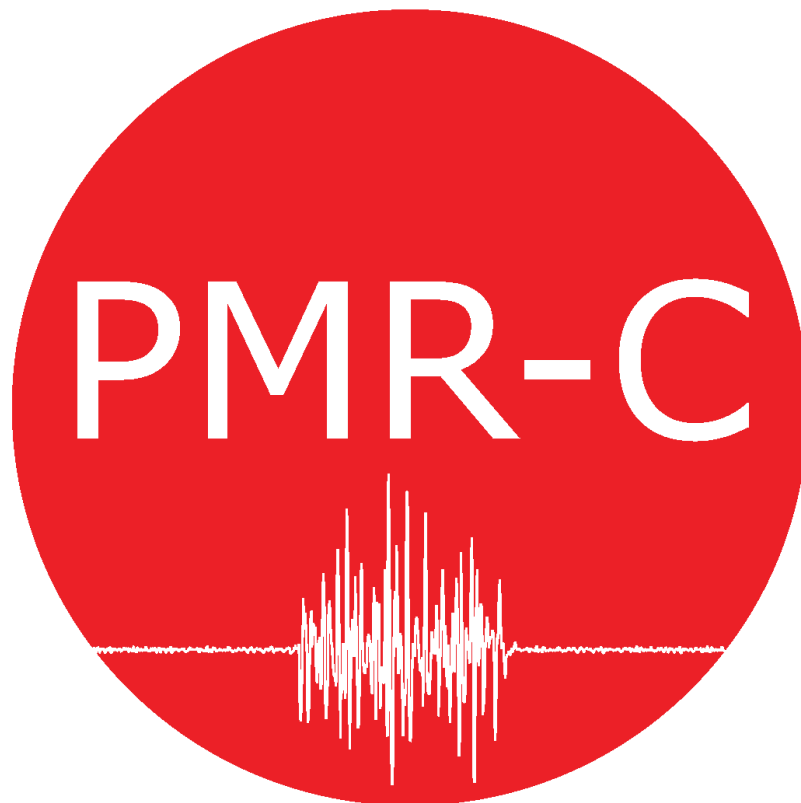


Annual report 2016

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

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



Copenhagen University Hospital, Amager-Hvidovre, DENMARK

1. ABOUT

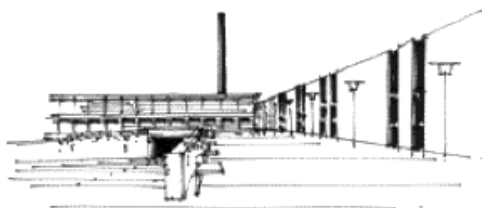
Physical Medicine & Rehabilitation Research – Copenhagen (PMR-C) is a multidisciplinary research program in physical medicine and rehabilitation, based in Copenhagen, Denmark. PMR-C is the research division of the Department of Physical- and Occupational Therapy at Copenhagen University Hospital, Hvidovre, 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, and 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, Copenhagen University Hospital, Hvidovre, Denmark. 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 2016

Firstly, Kristian Thorborg was part of two consensus statements published in the British Journal of Sports Medicine; The Warwick agreement on femoroacetabular impingement syndrome and the Bern consensus statement on return to sport after injury. Secondly, Postdoc with PMR-C and Optimized Senior Patient Program (Optimed), Clinical Research Centre, Ann Christine Bodilsen, received a full Postdoc stipend from the Velux Foundation (2,545,371 DKK).



3. PEOPLE

Curriculum and list of publications of PMR-C people can be found at pmrc.dk/people.

PMR-C steering committee

Thomas Bandholm: Dr. Bandholm is a senior researcher and head of research at PMR-C, and an Associate Professor with the Department of Clinical Medicine, University of Copenhagen. He is responsible for research in enhanced recovery programs following total hip and knee arthroplasties and acute hospitalization for medical illnesses in older patients at PMR-C. Dr. Bandholm has published more than 70 international peer-reviewed papers since 2006.

Morten Tange Kristensen: Dr. Kristensen is a senior researcher at PMR-C. He is responsible for research in enhanced recovery programs in patients with hip fracture and lower limb amputations at PMR-C. Dr. Kristensen has published more than 45 peer-reviewed papers since 2005.

Kristian Thorborg: Dr. Thorborg is a senior researcher at PMR-C and an Associate Professor with the Department of Clinical Medicine, University of Copenhagen. He is responsible for sports medicine research at PMR-C. Dr. Thorborg has published more than 80 peer-reviewed papers since 2004.

Jette Christensen: Ms. Christensen is head of the Department of Physical and Occupational Therapy, Copenhagen University Hospital, Amager-Hvidovre.

Peter Gebuhr: Dr. Gebuhr is head of the Department of Orthopedic Surgery, Copenhagen University Hospital, Amager-Hvidovre.

Ove Andersen: Dr. Andersen is head of Clinical Research Center, Copenhagen University Hospital, Amager-Hvidovre and research director for Copenhagen University Hospital, Amager-Hvidovre.

Visiting researchers

Erneste Esteve, PT, MSc: Mr. Esteve (ESP) was a research fellow with PMR-C for 1 month in 2016. Mr. Esteve is a PhD-student at Girona University, Spain, and co-affiliated with Sports Orthopedic Research Centre - Copenhagen (SORC-C), Amager-Hvidovre Hospital and PMR-C.

Postdocs

Ann Christine Bodilsen: Dr. Bodilsen is a Postdoc at PMR-C and co-affiliated with Optimized Senior Patient Programme (Optimed). Her Postdoc deals with cross-continuum optimization of physical activity in relation to an acute hospital admission in older medical patients.

Mette Merete Pedersen: Dr Pedersen is a Postdoc at PMR-C and co-affiliated with Optimized Senior Patient Programme (Optimed). Her Postdoc deals with exercise to prevent functional decline following acute hospitalization for a medical illness in older patients.

PhD-students

Dorte Melgaard: Ms. Melgaard is a PhD-student at Center for Clinical Research, Vendsyssel Hospital, Department of Clinical Medicine, Aalborg University, co-affiliated with PMR-C, and enrolled at University of Aalborg. Her PhD focuses on how a therapeutic intervention can optimize the treatment of patients with community-acquired pneumonia (Morten Tange Kristensen, co-supervisor).

Helle Gybel Juul-Larsen: Ms. Juul-Larsen is a PhD-student with Optimized Senior Patient Programme (Optimed), co-affiliated with PMR-C, and enrolled at the University of Copenhagen. Her PhD deals with multimorbidity-grouping based on disease patterns to optimize disease management programs for older patients with several chronic diseases (Thomas Bandholm, co-supervisor).

Christian Wied: Mr. Wied is a PhD-student at Clinical Orthopedic Research Hvidovre (CORH), Department of Orthopedic Surgery, Copenhagen University Hospital, Hvidovre, co-affiliated with PMR-C, and enrolled at the University of Copenhagen. His PhD deals with examination of peri-operative bleeding and effect of blood-sparing interventions in patients with lower-extremity amputations (Morten Tange Kristensen, principal co-supervisor).

Mikkel Bek Clausen: Mr. Clausen is a PhD-student with Sports Orthopedic Research Centre - Copenhagen (SORC-C), co-affiliated with PMR-C, and enrolled at the University of Copenhagen. His PhD deals with rehabilitation of impairments in patients with subacromial impingement (Kristian Thorborg, main supervisor).

Martin Wollin: Mr. Wollin is a PhD-student at La Trobe University, Melbourne, Victoria, Australia, and co-affiliated with Sports Orthopedic Research Centre - Copenhagen (SORC-C) and PMR-C. His PhD deals with Athlete monitoring including hamstring and hip strength profiles, injury and training load in elite youth football (Kristian Thorborg, co-supervisor).

Tobias Wörner: Mr. Wörner is a PhD-student at Lund University, Sweden, and co-affiliated with Sports Orthopedic Research Centre - Copenhagen (SORC-C) and PMR-C. His PhD deals with current rehabilitation practice in Scandinavia and outcomes after hip arthroscopy (Kristian Thorborg, co-supervisor).

Neil Light: Mr. Light is a PhD-student at Chichester University, England, and co-affiliated with Sports Orthopedic Research Centre - Copenhagen (SORC-C) and PMR-C. His PhD deals with groin injury in English elite youth football (Kristian Thorborg, co-supervisor).

Ernesto Esteve: Mr. Esteve is a PhD-student at Girona University, Spain, and co-affiliated with Sports Orthopedic Research Centre - Copenhagen (SORC-C) and PMR-C.

His PhD deals with groin injury in Spanish male footballers: Incidence, prevalence, risk factors and prevention (Kristian Thorborg, main supervisor).

Research Assistants

Rasmus Skov Husted: Mr. Husted is a research assistant with PMR-C and Clinical Orthopaedic Research Hvidovre (CORH). His project deals with coordinated conservative and surgical care of patients with end-stage knee osteoarthritis. Mr. Husted is enrolled at the University of Copenhagen as a PhD-student per January 1st, 2017.

Kasper Krommes: Mr. Krommes is a research assistant with PMR-C and Sports Orthopaedic Research Center – Copenhagen (SORC-C). His projects deal with knee pain in adolescents and hamstring injuries in footballers.

PMR-C affiliates

Jan Arnholtz Overgaard. Mr Overgaard is a research physical therapist at the Department of Rehabilitation in the Municipality of Lolland, Denmark. His area of expertise is patients with hip fracture.

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 <http://pmrc.dk/advisory-board/>

Per Hölmich, Professor, Dr Med Sci

Professor Hölmich is Head of Sports Orthopaedic Research Center – Copenhagen (SORC-C), Amager-Hvidovre Hospital, University of Copenhagen, 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 Laboratory, University of Copenhagen, Copenhagen, Denmark.

5. PUBLICATIONS

People from PMR-C published 39 papers, and successfully defended 2 PhD and 2 MSc theses in 2016. Thank you to all our collaborators.

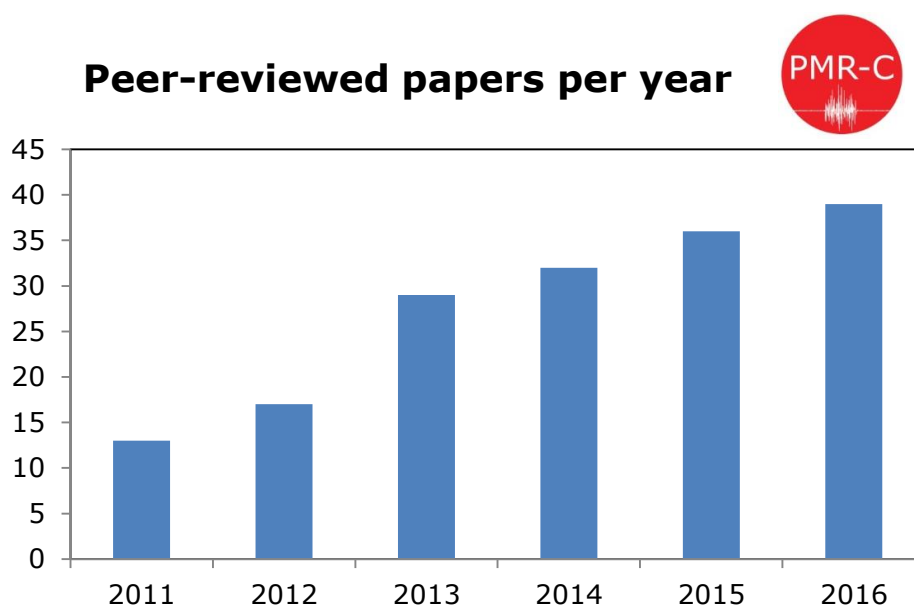


Figure 1: Trend in peer-reviewed papers. Status per January 1st, 2017.

Published peer-review papers

Hansen MS, Barfod KW, Kristensen MT (2016). Development and reliability of the Achilles Tendon Length Measure and comparison with the Achilles Tendon Resting Angle on patients with an Achilles tendon rupture. *Foot and Ankle Surgery* (Epub ahead of print).

Wied C, Foss NB, Kristensen MT, Holm G, Kalleose T, Troelsen A (2016). Surgical appgar score predicts early complication in transfemoral amputees: Retrospective study of 170 major amputations. *World J Orthop* 7: 832-838.

Thorborg K, Branci S, Nielsen MP, Langelund MT, Hölmich P (2016). Copenhagen five-second squeeze: a valid indicator of sports-related hip and groin function. *Br J Sports Med* (Epub ahead of print).

Thorborg K, Rathleff MS, Petersen P, Branci S, Holmich P (2016). Prevalence and severity of hip and groin pain in sub-elite male football: a cross-sectional cohort study of 695 players. *Scand J Med Sci Sports* (Epub ahead of print).

Serner A, Roemer FW, Hölmich P, Thorborg K, Niu J, Weir A, Tol JL, Guermazi A (2016). Reliability of MRI assessment of acute musculotendinous groin injuries in athletes. *Eur J Radiol* (Epub ahead of print).

Overgaard JA, Larsen CM, Holtze S, Ockholm K, Kristensen MT (2016). Inter-rater reliability of the 6-Minute walk test in women with hip fracture. *J Geriatr Phys Ther* (Epub ahead of print).

Wollin M, Thorborg K, Pizzari T (2016). The acute effect of match play on hamstring strength and lower limb flexibility in elite youth football players. *Scand J Med Sci Sports* (Epub ahead of print).

Bloch ML, Jønsson LR, Kristensen MT (2016). Introducing a third Timed Up & Go Test trial improves performances of hospitalized and community-dwelling older individuals. *J Geriatr Phys Ther* (Epub ahead of print).

Mikkelsen LR, Petersen MK, Mechlenburg I, Mikkelsen S, Søballe K, Bandholm T (2016). Description of load progression and pain response during progressive resistance training early after total hip arthroplasty: secondary analyses from a randomized controlled trial. *Clin Rehabil* (Epub ahead of print).

Griffin DR, Dickenson EJ, O'Donnell J, Agricola R, Awan T, Beck M, Clohisy JC, Dijkstra HP, Falvey E, Gimpel M, Hinman RS, Hölmich P, Kassarian A, Martin HD, Martin R, Mather RC, Philippon MJ, Reiman MP, Takla A, Thorborg K, Walker S, Weir A, Bennell KL (2016). The Warwick Agreement on femoroacetabular impingement syndrome (FAI syndrome): an international consensus statement. *Br J Sports Med* 50: 1169-1176.

Barfod KW, Hansen MS, Holmich P, Troelsen A, Kristensen MT (2016). Efficacy of early controlled motion of the ankle compared with no motion after non-operative treatment of an acute Achilles tendon rupture: study protocol for a randomized controlled trial. *Trials* 17: 564.

Thorborg K, Bandholm T, Zebis MK, Andersen LL, Hölmich P (2016). Large strengthening effect of a hip-flexor training program: a randomized controlled trial. *Knee Surg Sports Traumatol Arthrosc* 24: 2346-2352.

Hansen MS, Christensen M, Budolfson T, Østergaard TF, Kallemose T, Troelsen A, Barfod KW (2016). Achilles tendon Total Rupture Score at 3 months can predict patients' ability to return to sport 1 year after injury. *Knee Surg Sports Traumatol Arthrosc* 24: 1365-1371.

Clausen MB, Tang L, Zebis MK, Krstrup P, Hölmich P, Wedderkopp N, Andersen LL, Christensen KB, Møller M, Thorborg K (2016). Self-reported previous knee injury and low knee function increase knee injury risk in adolescent female football. *Scand J Med Sci Sports* 26: 919-926.

Rafn BS, Tang L, Nielsen MP, Branci S, Hölmich P, Thorborg K (2016). Hip Strength Testing of Soccer Players With Long-Standing Hip and Groin Pain: What are the Clinical Implications of Pain During Testing? *Clin J Sport Med* 26: 210-215.

Mikkelsen EK, Jakobsen TL, Holsgaard-Larsen A, Andersen LL, Bandholm T (2016). Strength training to contraction failure increases voluntary activation of the quadriceps muscle shortly following total knee arthroplasty: A cross sectional study. *Am J Phys Med Rehabil* 95: 194-203.

Zebis MK, Andersen LL, Brandt M, Myklebust G, Bencke J, Lauridsen HB, Bandholm T, Thorborg K, Hölmich P, Aagaard P (2016). Effects of evidence-based prevention training on neuromuscular and biomechanical risk factors for ACL injury in adolescent female athletes: a randomised controlled trial. *Br J Sports Med* 50: 552-557.

Rathleff MS, Richter C, Brushøj C, Bencke J, Bandholm T, Hölmich P, Thorborg K (2016). Custom-Made Foot Orthoses Decrease Medial Foot Loading During Drop Jump in Individuals With Patellofemoral Pain. *Clin J Sports Med* 26: 335-337.

Couppé C, Svensson RB, Kongsgaard M, Kovanen V, Grosset JF, Snorgaard O, Bencke J, Larsen JO, Bandholm T, Christensen TM, Boesen A, Helmark IC, Aagaard P, Kjær M, Magnusson SP (2016). Human Achilles tendon glycation and function in diabetes. *J Appl Physiol* 120: 130-137.

Light N and Thorborg K (2016). The precision and torque production of common hip adductor squeeze tests used in elite football. *J Sci Med Sports* 19: 888-892.

Thorborg K, Krommes K, Esteve E, Clausen MB, Bartels EM, Rathleff MS (2016). High Risk of Bias and Low Transparency in "How Effective are F-MARC Injury Prevention Programs for Soccer Players? A Systematic Review and Meta-Analysis" A Letter to the Editor. *Sports Med* 46: 293-294.

Griffin DR, Dickenson EJ, O'Donnell J, Agricola R, Awan T, Beck M, Clohisy JC, Dijkstra HP, Falvey E, Gimpel M, Hinman RS, Hölmich P, Kassarian A, Martin HD, Martin R, Mather RC, Philippon MJ, Reiman MP, Takla A, Thorborg K, Walker S, Weir A, Bennell KL. The Warwick Agreement on femoroacetabular impingement syndrome (FAI syndrome): an international consensus statement. *Br J Sports Med* 50: 1169-1176.

Serner A, Weir A, Tol JL, Thorborg K, Roemer F, Guermazi A, Hölmich P. Can standardised clinical examination of athletes with acute groin injuries predict the presence and location of MRI findings? *Br J Sports Med* 50: 1541-1547.

Rathleff MS, Bandholm T, McGirr K, Haring S, Sørensen A, Thorborg K (2016). New exercise-integrated technology can monitor the dosage and quality of exercise performed against an elastic resistance band: an observational study in adolescents with patellofemoral pain *J Physiother* 62: 159-163.

Ardern CL, Glasgow P, Schneiders A, Witvrouw E, Clarsen B, Cools A, Gojanovic B, Griffin S, Khan KM, Moksnes H, Mutch SA, Phillips N, Reurink G, Sadler R, Silbernagel KG, Thorborg K, Wangensteen A, Wilk KE, Bizzini M (2016). 2016 Consensus Statement on Return to Sport from the First World Congress in Sports Physical Therapy, Bern. *Br J Sports Med* 50: 853-864.

Ban I, Troelsen A, Kristensen MT (2016). High inter-rater reliability, agreement and convergent validity of Constant score in patients with clavicle fractures. *J Shoulder Elbow Surg* 25: 1577-1582.

Riel H, Matthews M, Vincenzino B, Bandholm T, Thorborg K, Rathleff MS (2016). Efficacy of live feedback to improve objectively monitored compliance to prescribed, home-based exercise therapy-dosage in 15 to 19 year old adolescents with patellofemoral pain: A study protocol of a randomized controlled superiority trial (The XRCISE-AS-INSTRUcted-1 trial). *BMC Musculoskelet Disord* 17: 242.

Strøm M, Thorborg K, Bandholm T, Tang L, Zebis M, Nielsen K, Bencke J (2016). Ankle joint control during single-legged balance using common balance training devices – implications for rehabilitation strategies. *Int J Sports Phys Ther* 11: 388-399.

Reiman MP, Thorborg K, Hölmich P (2016). Femoroacetabular Impingement Surgery Is on the Rise—But What Is the Next Step? *J Orthop Sports Phys Ther* 46: 406-408.

Ellegaard K, Christensen R, Rosager S, Bartholdy C, Torp-Pedersen S, Bandholm T, Danneskiold-Samsøe B, Bliddal H, Henriksen M (2016). Exercise therapy after ultrasound guided corticosteroid injections in patients with subacromial pain syndrome: A randomized controlled trial. *Arthritis Res Ther* 18: 129.

Bodilsen AC, Klausen HH, Petersen J, Beyer N, Andersen O, Jørgensen LM, Juul-Larsen HG, Bandholm T (2016). Prediction of mobility limitations after hospitalization in older medical patients by simple measures of physical performance obtained at admission to the Emergency Department. *PLoS One* 11: e0154350.

Pedersen MM, Petersen J, Beyer N, Damkjær L, Bandholm T (2016). Supervised progressive cross-continuum strength training compared with usual care in older medical patients: study protocol for a randomized controlled trial (the STAND-Cph trial). *Trials* 17: 176.

Grana E, Verzellotti S, Grassi FA, Ferriero G, Kristensen MT, Cisari C, Invernizzi M (2016). Cross-cultural validation of the Italian version of the Cumulated Ambulation Score. *Int J Rehabil Res* 39: 160-164.

Kristensen MT, Holm G, Krashennikov M, Jensen PS, Gebuhr H (2016). An enhanced treatment program markedly reduces mortality after a transtibial or higher non-traumatic lower extremity amputation. A single-center comparison of 129 amputations with historical and national controls. *Acta Orthop* 87: 306-311.

Ginnerup-Nielsen E, Christensen R, Thorborg K, Tarp S, Henriksen M (2016). Physiotherapy for pain: a meta-epidemiological study of randomised trials. *Br J Sports Med* 50: 965-971.

Kirk H, Geertsen SS, Lorentzen J, Krarup KB, Bandholm T, Nielsen JB (2016). Explosive strength training increases rate of force development in ankle dorsiflexors and increases active range of movement in the ankle joint during gait in adults with cerebral palsy. *J Strength Cond Res* 30: 2749-2760.

Jans Ø, Bandholm T, Kurbegovic S, Solgaard S, Kjærsgaard-Andersen P, Johansson PI, Kehlet H, on behalf of the Lundbeck Foundation Centre for Fast-track Hip and Knee Replacement Collaborative Group (2016). Postoperative anemia and early functional outcomes after fast-track hip arthroplasty: a prospective cohort study. *Transfusion* 56: 917-925.

Kronborg L, Bandholm T, Palm H, Kehlet H, Kristensen MT (2016). Physical activity in the acute ward following hip fracture surgery is associated with a lower degree of fear of falling. *J Aging Phys Act* 24: 525-532.

Rathleff MS, Petersen KK, Arendt-Nielsen L, Thorborg K, Graven-Nielsen T (2016). Impaired conditioned pain modulation in young female adults with long-standing patellofemoral pain – a single blinded cross sectional study. *Pain Medicine* 17: 980-988.

Defended theses

Lise Kronborg Poulsen: PhD thesis, University of Copenhagen. Main affiliation: PMR-C. Project title: Physical Rehabilitation after Acute Hip Fracture Surgery: Feasibility and Efficacy of In-Hospital Progressive Strength Training and National Status of Community-Based Rehabilitation (Morten Tange Kristensen, main supervisor).

Mette Merete Pedersen: PhD thesis, University of Copenhagen. Main affiliation: PMR-C and Optimized Senior Patient Program (Optimed). Project title: Mobility in older acutely admitted and primary care patients: In-hospital physical activity and simple strength training (Thomas Bandholm, main supervisor).

Maria Svennergren Hansen: MSc thesis, Lund University, Sweden. Main affiliation: PMR-C. Project title: Development and reliability of the Achilles Tendon Length Measure and comparison with the Achilles Tendon Resting Angle on patients with an Achilles tendon rupture (Morten Tange Kristensen, main supervisor).

Signe Hulsbæk: MSc thesis, University of Copenhagen. Main affiliation: Zealand Hospital, Køge. Project title: The properties of DEMMI for the assessment of mobility in acute hospitalized patients with a hip fracture (Morten Tange Kristensen, main supervisor).

6. RESEARCH GRANTS

With PMR-C acting as main or co-applicant, we received a total of 3,887,948 DKK (523,030 Euro) in 2015 from a variety of funding bodies. Thank you very much for the support. The funding bodies included:

The Velux Foundation: Physically active older patients during and after hospitalization: an implementation-designed, cross-continuum study of possibilities and effectiveness. Main applicant: Ann Christine Bodilsen, enclosed CV's from PMR-C: Ann Christine Bodilsen and Thomas Bandholm (2,545.371 DKK).

The Capital Region, MVU research funds: Efficacy of progressive resistance exercise combined with anabolic steroids and protein supplementation following hip fracture. Main applicant: Morten Tange Kristensen, enclosed CV's from PMR-C: Lise Kronborg Poulsen and Morten Tange Kristensen (750.000 DKK).

Copenhagen Healthtech Cluster, Copenhagen Capacity, Digitally-supported rehabilitation (DUG stor, Strategi for digital velfærd): Coordinated conservative and surgical care of patients with end-stage knee osteoarthritis: a pragmatic approach. Main applicant: Thomas Bandholm (286.285 DKK).

The Danish Physical Therapist Organization: Pelvic floor muscle exercise therapy to reduce fecal incontinence. Main applicant: Anja Ussing, enclosed CV from PMR-C: Thomas Bandholm (50,000 DKK).

The Danish Regions (Praksisfonden): Strength training for patients with shoulder impingement syndrome. Main applicant: Mikkel Bek Clausen, enclosed CV from PMR-C: Kristian Thorborg (210.000 DKK).

The Danish Physical Therapist Organization: Are the clinical guidelines for shoulder impingement being followed? Main applicant: Mikas Bjørn Merrild, enclosed CV from PMR-C: Kristian Thorborg (46.292 DKK).

7. INVITED LECTURES

XVI Congresso della Societa Italiana Chirurghi Orthopedici dell 'Ospedalita Private, Milan, Italy. Title: Main steps for the management of pain and recovery of muscle function following fast-track total knee replacement (Thomas Bandholm).

National Conference – Rehabilitation after fracture, Odense, Denmark. Title: Rehabilitation after hip fracture surgery (Morten Tange Kristensen).

National Hip Fracture Register Conference, Odense, Denmark. Title: Do patients achieve the expected functional level? (Morten Tange Kristensen).

5th Fragility Fracture Network Global Congress, Rome, Italy (Pre-congress physio day). Title: Factors influencing rehabilitation outcome of patients with hip fracture (Morten Tange Kristensen).

5th Fragility Fracture Network Global Congress, Rome, Italy. Title: Survey of physiotherapy care after hip fracture: Initial results from Denmark and Australia (Morten Tange Kristensen).

5th Fragility Fracture Network Global Congress, Rome, Italy (Pre-congress physio day). Title: Strength training after hip fracture. (Lise Kronborg and Jan Arnholtz Overgaard).

Sports hip 2016 Conference, St Georges Park, United Kingdom. Title: Should we do prehabilitation before FAI surgery? (Kristian Thorborg).

Sports hip 2016 Conference, St Georges Park, United Kingdom. Title: How to diagnose FAI syndrome? (Kristian Thorborg).

Team Concept Conference, Las Vegas, USA. Title: Return to sport following groin injuries: What tells us the athlete is ready to return? (Kristian Thorborg).

Team Concept Conference, Las Vegas, USA. Title: Controversies in Contraction type. Isolated eccentrics or slow isotonic: Is one better? (Kristian Thorborg).

Nordic rehabilitation after ACL reconstruction, Gøteborg, Sweden. Title: Critical review: Return to sport (Kristian Thorborg).

Nordic rehabilitation after ACL reconstruction, Gøteborg, Sweden. Title: Critical review: Initial rehabilitation (Kristian Thorborg).

Nordic rehabilitation after ACL reconstruction, Gøteborg, Sweden. Title: Critical review: Intense rehabilitation (Kristian Thorborg).

Nordic rehabilitation after ACL reconstruction, Gøteborg, Sweden. Title: Return-to-play after ACL reconstruction – a difficult decision (Kristian Thorborg).

Nordic rehabilitation after ACL reconstruction, Gøteborg, Sweden. Title: Duel – Surgery or conservative rehabilitation for ACL surgery? (Kristian Thorborg).

8. MAIN TEACHING AND COURSE ACTIVITIES

3 days of course leading, tutoring, and lecturing. PhD-course: Clinical Research in Health & Medical Sciences, PhD-program: Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen (Kristian Thorborg and Thomas Bandholm).

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

6 weeks of tutoring and lecturing. MSc-course: Physical activity. Cand.Scient.San., University of Copenhagen (Thomas Bandholm).

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

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

Single lecture. MSc-course: Physical activity. Cand.Scient.San., University of Copenhagen. Topic: The "sick" joint – Arthrosis and arthritis (Kristian Thorborg).

Single lecture. MSc-course: Physical activity. Cand.Scient.San., University of Copenhagen. Topic: What is problem-based learning? (Kristian Thorborg).

2 lectures. Course: Outcome measures for occupational and physical therapist. The Capital Region of Denmark, Copenhagen, Denmark. Topic: Reliability of outcome measures (Morten Tange Kristensen).

Single lecture. PhD-course: Clinical Research in Health & Medical Sciences, PhD-program: Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen. Topic: Pilot and Feasibility studies (Morten Tange Kristensen).

Single lecture. PhD-course: Clinical Research in Health & Medical Sciences, PhD-program: Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen. Topic: Outcome measures (Kristian Thorborg).

Single lecture. PhD-course: Clinical Research in Health & Medical Sciences, PhD-program: Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen. Topic: Trial protocol finalization and trial registration (Thomas Bandholm).

9. SYMPOSIA, SEMINARS, AND WORKSHOPS

PMR-C was the organizer or co-organizer of the following in 2016:

Symposium: 4th PMR-C research symposium

The symposium marked the fourth year of PMR-C and was held at the Metropolitan University College in Copenhagen in collaboration with IOC Sports Medicine Copenhagen: Center for Injury Prevention and Protection of Athlete Health and Metropolitan University College. Around 400 people attended the symposium entitled "Prevention and Treatment of Knee Injuries" (Thomas Bandholm and Kristian Thorborg).

Symposium: The older medical patient

The symposium marked Mette Merete Pedersen's PhD defense and was held at Copenhagen University Hospital, Hvidovre in collaboration with Optimized Senior Patient Program (Optimed), Clinical Research Centre, Hvidovre Hospital. Around 40 people attended the symposium. Invited speakers included Dr. Cynthia Brown (US), Dr. Carolyn Greig (UK), Dr. Ann Christine Bodilsen (PMR-C), and Dr. Janne Petersen (Optimed) (Mette Merete Pedersen, Ann Christine Bodilsen and Thomas Bandholm).

Symposium: Annual Snekkersten Symposium

The 2-day symposium marked the end of the year for the PhD graduate program Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen (Thomas Bandholm).

Oral presentation competition: Snekkersten PhD Cup

The oral presentation competition was part of the annual 2-day symposium for the PhD graduate program: Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen, held in Snekkersten, Denmark. The 5 best rated abstracts were presented using a "how simple can you go-format" with 3 minutes to present and without any audiovisuals (Michael Kjær and Thomas Bandholm).

Oral presentation competition: Danish Sports Medicine Conference

The oral presentation competition was part of the annual Danish Sports Medicine Congress (#sportskongres) in Copenhagen, Denmark. The 6 best rated international conference abstracts were presented, and formed a competition symposium (Thomas Bandholm and Kristian Thorborg).

Workshop: DSSF Clinical evidence and guidance catalogue (ankle injury)

The workshop was part of the annual Danish Sports Medicine Congress (#sportskongres) in Copenhagen, Denmark. Invited speakers included Lina Ingelsrud (DK) and Rasmus Skov Husted (PMR-C) (Thomas Bandholm).

Workshop: Treatment and prevention of ankle injuries

The workshop was part of the annual Danish Sports Medicine Congress (#sportskongres) in Copenhagen, Denmark. Invited speaker was Eamonn Delahunt (IRL) (Kristian Thorborg).

Workshop: Back pain in athletes. The workshop was part of the annual Danish Sports Medicine Congress (#sportskongres) in Copenhagen, Denmark. Invited speaker was Kieran O' Sullivan (IRL) (Kristian Thorborg).

10. CONGRESSES

PMR-C helped organize the following congresses in 2016:

Danish Sports Medicine Congress (#sportskongres) 2016, Copenhagen, Denmark. Chairman of the scientific committee: Kristian Thorborg.

Danish Sports Medicine Congress (#sportskongres) 2016, Copenhagen, Denmark. Scientific board member: Thomas Bandholm.

Danish Physical Therapy Congress 2018, Odense, Denmark. Scientific board member: Thomas Bandholm (Ongoing work).

The 6th Fragility Fracture Network Global Congress 2017, Malmö, Sweden. Local Organizing Committee member: Morten Tange Kristensen (Ongoing work).

11. ACADEMIC EVALUATION

Assessment of theses: PhD evaluation committee member, Auckland University of Technology, Auckland, New Zealand (Kristian Thorborg).

Editorial board work: British Journal of Sports Medicine, World Journal of Orthopedics, Journal of Science and Medicine in Football, Scandinavian Journal of Medicine and Science in Sports, Journal of Orthopedic and Sports Physical Therapy (JOSPT) and PLoS One (Kristian Thorborg, Morten Tange Kristensen, Thomas Bandholm).

12. ADVISORY OR OTHER BOARD-WORK

Board member, Board for the PhD-graduate program: Basic and Clinical Research in Musculoskeletal and Oral Sciences (MUSCOS), University of Copenhagen (Thomas Bandholm).

Board member, Board of research, Amager-Hvidovre Hospital (Thomas Bandholm).

Executive committee member, Board of research, Amager-Hvidovre Hospital (Thomas Bandholm).

Board Member, Research committee for the International Federation in Sports Physical Therapy (Kristian Thorborg).

Evaluation committee member, the Johannes Lindhart Prize and the Ove Bøje Prize. Danish Societies for Sports Medicine and Danish Sports Physiotherapists (Kristian Thorborg).

Advisory board member, IOC Diploma in Sports Physical Therapies (Kristian Thorborg).

Steering committee member, IOC Sports Medicine Copenhagen: Center for Injury Prevention and Protection of Athlete Health (Thomas Bandholm and Kristian Thorborg).

Steering committee member, Clinical evidence and guidance in sports physiotherapy-catalogues. Danish Society for Sports Physiotherapists (Thomas Bandholm, Kristian Thorborg and Rasmus Skov Husted).

Board member, Board for education and courses offered under the Danish Society for Sports Physiotherapists. Responsible for implementation of new educational structure for Danish Sports Physiotherapists from 2013 (40 ECTS) (Kristian Thorborg and Thomas Bandholm).

Working group member, working group for the development of Clinical Practice Guidelines for the physical therapy-management of persons with fragility fracture of the hip. A collaboration between the Academy of Geriatric Physical Therapy and the Orthopaedic Section of the American Physical Therapy Association, US (Morten Tange Kristensen and Jan Arnholtz Overgaard).

Working group member, Working group for the development of a National Clinical Guideline for nutrition and training initiatives aimed at elderly people with geriatric issues. The Danish Health Authority, Copenhagen, Denmark (Mette Merete Pedersen).

Secretariat member, Secretariat for the development of a National Clinical Guideline for nutrition and training initiatives aimed at elderly people with geriatric issues. The Danish Health Authority, Copenhagen, Denmark (Ann Christine Bodilsen).

Evaluation committee member, The MSc-project prize for the Danish Physical Therapy Association, Denmark (Morten Tange Kristensen).

Board member, application and assessment committee for MSc-education in Health Sciences (Cand.Scient.San), University of Copenhagen (Kristian Thorborg).

Board Member, Research Committee, International Federation in Sport Physical Therapy (Kristian Thorborg).