

CURRICULUM VITAE

Betina Bremer Hinckel, MD, PhD

Personal information

Born: Troy, NY, USA

Citizenship: United States, Brazil and Germany

Languages: English and Portuguese

Education

December 1998	Graduation in High School in the School Instituto Sao Jose in São José dos Campos, SP, Brazil
January 2001 to November 2006	Graduation in Medicine in the Medicine School of Sao Paulo University, Sao Paulo, SP, Brazil

Post Graduate Education and Training

January 2005 to November 2006	Internship at University of Sao Paulo Faculty of Medicine
February 2008 to January 2010	Residency Orthopaedics and Traumatology in the Institute of Orthopaedics and Traumatology of the Hospital of Clinics of the Medicine School of São Paulo University, Sao Paulo, SP, Brazil
February 2011 to January 2012	Fellowship Knee Surgery Institute of Orthopaedics and Traumatology in Hospital of Clinics of the Medicine School of Sao Paulo University, Sao Paulo, SP, Brazil
February 2011 and January 2013	Preceptor at Institute of Orthopaedics and Traumatology in Hospital of Clinics of the Medicine School of Sao Paulo University, Sao Paulo, SP, Brazil – Teaching residents and medicine graduate students
November 2013 to July 2016	Doctorate degree (PhD). Anatomic, radiographic and biomechanical study of the medial patellar stabilizers: medial patellofemoral ligament, medial patellotibial ligament and medial patellomeniscal ligament - Sao Paulo University, Sao Paulo, SP, Brazil
August 2016 to July 2017	Fellowship Orthopaedic Sports Medicine at University of Missouri – Fellowship director: Patrick Smith; James Stannard
August 2017 to July 2018	Fellowship Orthopaedic Sports Medicine at Kaiser Permanente San Diego Knee and Sports Medicine – Fellowship director: Najeeb Khan
August 2018 to present	Fellowship Orthopaedic Sports Medicine combined program at Brigham and Woman's Hospital and Massachusetts General Hospital - Boston – Fellowship director: Elizabeth Matzkin

International Fellowships/Observations

- Lyon Ortho Clinic, Lyon, FR – September 23rd to October 20th, 2013 – Dr. David Dejour
- University of Minnesota, Minneapolis, MN, USA – 4th November to 30th November, 2014 – Dr. Elizabeth A. Arendt
- OrthoIndy, Indianapolis, IN, USA – 1st December to 21st December 2014 – Dr. Jack Farr
- Rush University Medical Center, Chicago, IL, USA – 4th May, 2015 – Dr. Craig Della Valle
- Rush University Medical Center, Chicago, IL, USA – 5th May and 12th May, 2015 – Dr. Brian Cole
- Brigham and Woman's Hospital, Boston, MA, USA – 15th May and 18th May, 2015 – Dr. Andreas H. Gomoll
- Children's Hospital, Boston, MA, USA – 11th January, 2019 – Dr Young-jo Kim

Certificates

- Medical License from the Medical School of Sao Paulo University - 2006
- Orthopaedic Surgeon License from the Brazilian Society of Orthopaedic Surgeons - 2011 - **Ranked #3** on the National Orthopaedic Board Test
- Knee Surgeon License from the Brazilian Society of Knee Surgeons – 2012

Professional Society Memberships and Committee participations

- American Academy of Orthopaedic Surgeons - international affiliate - 2012 to present
- Brazilian Society of Orthopaedic Surgeons - member - 2011 to present
- Brazilian Society of Knee Surgeons - member - 2012 to present
- International Cartilage Repair Society – member
- Regulatory and Industry Liaison Committee, *International Cartilage Repair Society* - committee member - 2013 to 2017
- American Orthopaedic Society of Sports Medicine - 2016 to present
- International Patellofemoral Study Group - member - 2017 to present

Team Coverage Experience

- University of Missouri - Assistant team physician, Woman's Basketball and Men Baseball, August 2016 to August 2017
- Olympian High School, Chula Vista, CA - Team doctor football in the 2017 season
- Stonehill College, Easton, MA. Assistant team physician football and ice hockey season 2018
- Catholic Memorial High School, Boston, MA. Assistant team physician football season 2018

Journal Reviewer

- Reviewer, *European Radiology*, 2014 - present
- Reviewer, *Journal of Orthopaedic Research*, 2014 - present
- Reviewer, *Cartilage*, 2015 - present
- Reviewer, *ICRS World Congress*, 2016 - present
- Reviewer, *American Journal of Sports Medicine* - 2017 to present

- Reviewer, *Journal of Musculoskeletal Disorders and Treatment* - 2017 to present

Publications

Peer reviewed research

1. Pécora JR, **Hinckel BB**, Demange MK, Gobbi RG, Tirico LEP, Iamaguchi MM. "Interobserver correlation in classification of bone loss in total knee arthroplasty." *Acta Ortop Bras*. 2011;19(6):368-72.
2. Helito CP, Gobbi RG, Castrillon LM, **Hinckel BB**, Pécora JR, Camanho GL. "Comparison of floseal and eletrocautery in hemostasis after total knee arthroplasty" *Acta Ortop Bras*. 2013;21(6):320-22
3. **Hinckel BB**, Gobbi RG, Filho EN, Pecora JR, Camanho GL, Rodrigues MB, Demange MK. "Are the osseous and tendinous-cartilaginous tibial tuberosity-trochlear groove distances the same on CT and MRI?" *Skeletal Radiol*. 2015;44(8):1085-93.
4. **Hinckel BB**, Gobbi RG, Kihara Filho EN, Demange MK, Pecora JR, Camanho GL. "Patellar Tendon-Trochlear Groove Angle Measurement: A New Method for Patellofemoral Rotational Analyses" *Orthop J Sports Med*. 2015;3(9):2325967115601031.
5. Daynes J, **Hinckel BB**, Farr J. Tibial Tuberosity-Posterior Cruciate Ligament Distance. *J Knee Surg*. 2016;29(6):471-7.
6. **Hinckel BB**, Gobbi RG, Demange MK, Bonadio MB, Pecora JR, Camanho GL. "Combined Reconstruction of the Medial Patellofemoral Ligament With Quadricipital Tendon and the Medial Patellotibial Ligament With Patellar Tendon" *Arthrosc Tech*. 2016;5(1):e79-84.
7. **Hinckel BB**, Demange MK, Gobbi RG, Pecora JR, Camanho GL. "The Effect of Mechanical Varus on Anterior Cruciate Ligament and Lateral Collateral Ligament Stress: Finite Element Analyses" *Orthopedics*. 2016;39(4):e729-36.
8. **Hinckel BB**, Gobbi RG, Bonadio MB, Demange MK, Pecora JR, Camanho GL. "Reconstruction of medial patellofemoral ligament using quadriceps tendon combined with reconstruction of medial patellotibial ligament using patellar tendon: initial experience" *Rev Bras Ortop*. 2016;51(1):75-82.
9. Ridley TJ, **Hinckel BB**, Kruckeberg BM, Agel J, Arendt EA. "Anatomical patella instability risk factors on MRI show sensitivity without specificity in patients with patellofemoral instability: a systematic review." *J ISAKOS*. 2016;1(3):141-52.
10. **Hinckel BB**, Gobbi RG, Kaleka CC, Camanho GL, Arendt EA. "Medial patellotibial ligament and medial patellomeniscal ligament: anatomy, imaging, biomechanics and clinical review" *Knee Surg Sports Traumatol Arthrosc*. 2017;33(10):1862-73
11. **Hinckel BB**, Gobbi RG, Kihara Filho EN, Demange MK, Pecora JR, Rodrigues MB, Camanho GL. "Why are bone and soft tissue measurements of the TT-TG distance on MRI different in patients with patellar instability?" *Knee Surg Sports Traumatol Arthrosc*. 2017;25(10): 3053-60
12. **Hinckel BB**, Gobbi RG, Demange MK, Pereira CAM, Pecora JR, Natalino RJM, Miyahira L, Kubota BS, Camanho GL. "Medial Patellofemoral Ligament, Medial Patellotibial Ligament, and Medial Patellomeniscal Ligament: Anatomic, Histologic, Radiographic, and Biomechanical Study" *Arthroscopy*. 2017;33(10):1862-73.
13. Silva ALPe, Croci AT, Gobbi RG, **Hinckel BB**, Pecora JR, Demange MK. "Translation and validation of the new version of the Knee Society Score - The 2011 KS Score - into Brazilian Portuguese" *Rev Bras Ortop*. 2017;52(4):506-10.
- Cavalheiro CM, Gobbi RG, **Hinckel BB**, Demange MK, Pécora JR, Camanho GL. "Femoral condyle osteochondral fracture treated with bone suture combined with patellar dislocation: a case report" *Rev Bras Ortop*. 2018;53(5):636-42.
14. Baumann CA, Pratte EL, Sherman SL, Arendt EA, **Hinckel BB**. "Reconstruction of the

medial patellotibial ligament results in favorable clinical outcomes: a systematic review." Knee Surg Sports Traumatol Arthrosc. 2018;26(10):2920-2933.

15. Jones K, Sheppard W, Armin A, **Hinckel BB**, Sherman SL. "Articular Cartilage Lesion Characteristic Reporting is Highly Variable in Clinical Outcomes Studies of the Knee" Cartilage. 2019;10(3):299-304.

Chahla J, Sweet MC, Okoroha KR; Nwachukwu BU, **Hinckel BB**, Farr J, Yanke AB, Bugbee WD, Cole BJ "Osteochondral Allograft Transplantation in the Patellofemoral Joint: a systematic review" Am J Sports Med. 2019; 47(12):3009-3018.

16. Cavinatto LM, **Hinckel BB**, Farr J, Bartolozzi A. "The Role of Bone Marrow Aspirate Concentrate (BMAC) for the Treatment of Focal Chondral Lesions of the Knee: A Systematic Review and Critical Analysis of Translational and Clinical Studies" Arthroscopy. 2019;35(6):1860-77.

17. Sheppard WL, **Hinckel BB**, Arshi A, Sherman SL, Jones KJ. "Accurate Reporting of Concomitant Procedures is Highly Variable in Studies Investigating Knee Cartilage Restoration" Cartilage. DOI: 10.1177/1947603519841673

18. Leal A, Andrade R, **Hinckel BB**, Tompkins M, Flores P, Silva FF, Espregueira-Mendes J, Arendt EA. "A new device for patellofemoral instrumented stress-testing provides good reliability and validity" Knee Surg Sports Traumatol Arthrosc. 2019. DOI: 10.1007/s00167-019-05601-4

19. **Hinckel BB**, Ambra LF, Arendt EA, Farr J, Gomoll AH. "Anatomic risk factors for focal cartilage lesions in the patella and trochlea: a case control study" Am J Sports Med. 2019;47(10):2444-53.

20. **Hinckel BB**, Gobbi RG, Teixeira PRL, Giglio PN, Lucarini BR, Pecora JR, Camanho GL, Demange MK. "Vastus medialis insertion is more proximal and medial in patellar instability patients: a magnetic resonance case-control study" Orthop J Sports Med. DOI:10.1177/2325967119880846

21. **Hinckel BB**, Pratte EL, Baumann CA, Gowd AK, Liu JN, Farr J, Yanke AB, Sherman SS. "Patellofemoral Cartilage Restoration: A Systematic Review and Meta-Analysis" Am J Sports Med. DOI: 10.1177/0363546519886853

22. Andrade R, Nunes J, **Hinckel BB**, Vasta S, Bastos R, Oliveira JM, Reis RL, Gomoll AH, Gruskay J, Espregueira-Mendes J. "Cartilage restoration of patellofemoral cartilage lesions: a systematic review" Cartilage. DOI: 10.1177/1947603519893076

23. Chahla J, **Hinckel BB**, Yanke A, Farr J and MOCA group. "An Expert Consensus Statement on the Management of Large Chondral and Osteochondral Defects in the Patellofemoral Joint" Orthop J Sports Med. In Press

Current Peer Review Research Submissions

1. dos Santos AA, Saruhashi MB, Lucarini BR, Fernandes RJR, Giglio PN, Pecora JR, Camanho GL, Gobbi RG, **Hinckel BB**. "Anatomic risk factors on MRI: comparison study between patients with patellofemoral instability, anterior cruciate tears and controls after knee injury" J Knee Surg

2. Weber AE, **Hinckel BB** et al "Total Knee Arthroplasty Following Anterior Cruciate Ligament Reconstruction: Data from the OSHPD Database" Arthroscopy

Review articles

1. Gomoll AH, Farr J, **Hinckel BB**. "Patellofemoral Osteochondral Allograft Transplantation" Oper Tech Sports Med. 2015;23(2):150-6.

2. **Hinckel BB** and Arendt EA. "Lateral Retinaculum Lengthening or Release" Oper Tech Sports Med. 2015;23(2):100-6.

3. **Hinckel BB**, Arendt EA, Ntagiopoulos PG, Dejour D. "Trochleoplasty: Historical

Overview and Dejour Technique” Oper Tech Sports Med. 2015;23(2):114-22.

4. **Hinckel BB**, Amendola A, Gomoll AH. “Technical pearls for open wedge high tibial osteotomy” ISAKOS Newsletter Volume II 2016

5. **Hinckel BB**, Gomoll AH. “Autologous Chondrocytes and Next Generation Matrix based Autologous Chondrocyte Implantation” Clin Sports Med. 2017;36(3):525-48.

6. **Hinckel BB**, Gomoll AH and Farr J. “Cartilage Restoration in the Patellofemoral Joint” Am J Orthop. 2017 (September/October 2017):217-22.

7. Unal B, **Hinckel BB**, Sherman SL, Lattermann C. “Comparison of Lateral Retinaculum Release and Lengthening in the Treatment of Patellofemoral Disorders” Am J Orthop. 2017 (September/October 2017):224-8.

8. **Hinckel BB**, Gomoll AH. “Patellofemoral Cartilage Restoration: Indications, Techniques, and Outcomes of autologous chondrocytes implantation (ACI), matrix-induced chondrocyte implantation (MACI) and particulated juvenile allograft cartilage (PJAC)” The J Knee Sur. 2018;31(3):212-26

9. **Hinckel BB**, Yanke AB, Lattermann C. “When to add lateral soft tissue balancing” Sports Med Arthrosc Rev. 2019;27(4):e25-e31.

10. **Hinckel BB**, Lipinski L, Arendt EA. “Concept of Distal Medial Patellar Restrains: MPR (MPTL, MPML)” Sports Med Arthrosc Rev. 2019;27(4):143-149

11. Bauman CA, **Hinckel BB**, Tanaka MJ. “An Update on Patellofemoral Anatomy and Biomechanics” Operative Techniques in Sports Medicine. 2019;27(4):150683.

Book Chapters

1. Farr J, **Hinckel BB**. “Osteochondral cylinder transfer” Cartilage-book: CIC Edizioni Internazionali; 2015. p. 130-44.

2. Burrus MT, Tompkins M, **Hinckel BB**, Diduch DR, Arendt EA. “Repair and reconstruction of medial patellofemoral ligament for the treatment of lateral patellar dislocations: Surgical techniques and clinical results” Insall & Scott Surgery of the Knee 6th edition. Chapter 68, p. 939-953

3. **Hinckel BB**, Sherman SL, Cook JL, Farr J. “Current Clinical Applications for Biologic Augmentation of Cartilage Surgery” Let's Discuss Biologics in Orthopedics (AAOS). 2017

4. Baumann CA, **Hinckel BB**, Bozynski CC, Farr J. Articular Cartilage: Structure and Restoration. In: Springer, editor. Joint Preservation of the Knee - A Clinical Case Book. 2019. Chapter 1, p. 3-24. ISBN:978-3-030-01491-9

5. Sherman SL, **Hinckel BB**, Farr J. “Patellar instability” DeLee & Drez's Orthopaedic Sports Medicine: Principles and Practice, 5th edition. 2019, Chapter 105, ISBN: 978-0-323-54474-0

6. Arendt EA, **Hinckel BB**, Gomoll AH. “Open proximal trochleoplasty (Grooveplasty)” In: Parikh SN, ed. *Patellar Instability and Dislocation: Classification and Operative Techniques*. First ed: Lippincott Williams and Wilkins; 2019: Chapter 23. ISBN: 978-1496380821.

7. **Hinckel BB**, Garrone AJ, Gobbi RG, Sherman SL. “Proximal Realignment: Lateral Retinaculum Lengthening” - Knee Surgery: Tricks of the Trade. Thieme. In Press

8. Sherman SL, Rund J, **Hinckel BB**, Farr J. “Patellar instability” Lower Extremity Joint Preservation - Techniques for Treating the Hip, Knee, and Ankle. Springer. In Press

9. Merkely G, **Hinckel BB**, Lattermann C. “MRI of the Patellofemoral Articular Cartilage” Patellofemoral Pain, Instability, and Arthritis book 2nd edition. Springer. In Press

10. Baumann CA, **Hinckel BB**, Farr J, Gomoll AH. “Isolated patellofemoral unipolar PFA cartilage lesions: When to intervene” Patellofemoral Pain, Instability, and Arthritis book 2nd edition. Springer. In Press

11. **Hinckel BB**, Zaffagnini S, Arendt EA. “Medial patellotibial ligament: clinical application and surgical reconstruction for patellar stabilization” Patellofemoral Pain, Instability, and Arthritis book 2nd edition. Springer. In Press

12. **Hinckel BB**, Baumann CA, Fulkerson J. *"Distal realignment of the patellofemoral joint"* Section Patellofemoral Disorders. The Complex Knee Management Guide: Restoring the Anatomy to Achieve Best Outcomes Book. In Press

13. Tanaka MJ, **Hinckel BB**, Arendt EA *"Anatomy and Biomechanics"* Section Patellofemoral Disorders. The Complex Knee Management Guide: Restoring the Anatomy to Achieve Best Outcomes Book. In Press

Abstracts and/or Proceedings

1. Brazilian Congress of Knee Surgery - Praia do Forte, Brazil - March 2012

Paper presentation - **Hinckel BB**, Gobbi RG, Demange MK, Pécora JR, Tírico LEP, Angelini FJ, E Albuquerque RFM, Rezende MU, Camanho GL. *"Predictability of the use of offset in knee arthroplasty"*

2. Brazilian Congress of Knee Surgery - April 2014

Podium presentation - **Hinckel BB**, Gobbi RG, Demange MK, Pécora JR, Tírico LEP, Angelini FJ, E Albuquerque RFM, Rezende MU, Camanho GL. *"Why are bony and soft tissue measurements of the TT-TG distance different in patients with patellar instability?"*

Poster - **Hinckel BB**, Gobbi RG, Demange MK, Pécora JR, Tírico LEP, Angelini FJ, E Albuquerque RFM, Rezende MU, Camanho GL. *"Are the osseous and tendinous-cartilaginous tibial tuberosity-trochlear groove distance the same on CT and MRI?"*

Poster- **Hinckel BB**, Gobbi RG, Demange MK, Pécora JR, Tírico LEP, Angelini FJ, E Albuquerque RFM, Rezende MU, Camanho GL. *"Effect of mechanical varus in anterior cruciate ligament and lateral collateral ligament stress: finite element analyses"*

Poster - **Hinckel BB**, Gobbi RG, Demange MK, Pécora JR, Tírico LEP, Angelini FJ, E Albuquerque RFM, Rezende MU, Camanho GL. *"Patellar tendon - trochlear groove angle initial experience"*

3. Brazilian Congress of Orthopaedics and Traumatology - November 2015

Podium presentation - **Hinckel BB**, Gobbi RG, Bonadio MB, Demange MK, Pécora JR, Tírico LEP, Angelini FJ, E Albuquerque RFM, Rezende MU, Helito P, Camanho GL. *"Combined reconstruction of the medial patellofemoral ligament with quadriceps tendon and medial patellotibial ligament with patellar tendon"*

4. 17th ESSKA (European Society for Sports traumatology, Knee surgery and Arthroscopy) Congress - May 2016

Podium presentation - Arendt EA, **Hinckel BB**, Freking W, Wischmeier D, Farr J. *"Assessment of patellofemoral (PF) morphology and cartilage wear location in patients with no known history of PF instability"*

Poster - Arendt EA, Ridley TJ, Kruckeberg B, **Hinckel BB**, Lender P, Agel J. *"Assessment of Anatomic Patellofemoral Instability (PFI) Factors by Magnetic Resonance Imaging (MRI). A Systematic Review with Meta-analysis"*

5. AANA (Arthroscopy Association of North America) Annual Meeting - June 2017

ePoster - **Hinckel BB**, Pfeiffer FM, Stannard JP, Bollier M, Cook JL and Smith PA. *"Effects of medial meniscotibial ligament and peripheral meniscal tears on knee stability"*

6. WOA (Western Orthopaedic Association) Annual Meeting - August 2017

Podium presentation - Sheppard W, Arshi A, Sherman SL, **Hinckel BB**, Jones K. *"High variability in evaluating articular cartilage lesions in clinical studies"*

7. ESSKA (European Society of Sports Traumatology, Knee Surgery and Arthroscopy) May 2018

Podium presentation - Gobbi RG, Teixeira PR, **Hinckel BB**, Demange MK, Pecora JR, Camanho GL. *"Magnetic Resonance Study Of Vastus Medialis: Comparison Between Patellar Instability And Controls"*

8. AANA (Arthroscopy Association of North America) Annual Meeting - June 2018/9?

Poster: Sherman SL, Pashuck T, Voss E, Garrone A, Larry E, **Hinckel BB**, Cook J “Xarelto (Rivaroxaban) Prophylaxis Reduces the Risk of Thromboembolic Events Following Knee Osteotomy Without Increased Bleeding Complications”

Teaching activities

1. Lyon Journey - August 2014
“Medial patellotibial ligament, anatomy and biomechanics.”
2. 19th International Sports Medicine Fellows Course – January 2019
Instructor in the Patellofemoral Surgery Laboratory
3. ISAKOS International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine May 2019
Invited: Live surgical demonstration titled “Combined MPTL and MPFL Reconstruction”
Invited: Soft Tissue and Bony Procedures for Patellofemoral Instability: Indications and Techniques

Published Multimedia

Hinckel BB, Gobbi RG, Camanho GL, Bonadio M, Pecora JR, Demange MK, Tirico LEP
“Combined Reconstruction of the MPFL with Quadricipital Tendon and the Medial Patellotibial Ligament with Patellar Tendon” - Vumedi video, 2015

Hinckel BB, Lea J, Bicos J. “Tibial Tubercle Osteotomy”, in Tanaka MJ, ed *Surgical Insights: Sports Medicine Knee Surgery* [online course]. Rosemont, IL American Academy of Orthopaedic Surgeons, 2020