

## ORIGINALPUBLIKATIONEN

**Hoburg A, Schmidt T, Pruss A, Scheffler S:** High-dose electron beam sterilization of soft-tissue grafts maintains significantly improved biomechanical properties compared to standard gamma treatment, *accepted for publication 07/2014, Cell Tissue Bank.*

**Petersen W, Ellermann A, Rembitzki IV, Scheffler S, Herbort M, Sprenger FS, Achtnich A, Brüggemann GP, Best R, Hoffmann F, Koppenburg AG, Liebau C.** The Patella Pro study -- effect of a knee brace on patellofemoral pain syndrome: design of a randomized clinical trial (DRKS-ID:DRKS00003291). *BMC Musculoskelet Disord.* 2014 Jun 10;15(1):200. [Epub ahead of print]

**Janssen RP, Scheffler SU.** Intra-articular remodelling of hamstring tendon grafts after anterior cruciate ligament reconstruction, *Knee Surg Sports Traumatol Arthrosc.* 2013 Aug 27. [Epub ahead of print]

**Höher J, Offerhaus C, Steenlage E, Weiler A, Scheffler S.** Impact of tendon suturing on the interference fixation strength of quadrupled hamstring tendon grafts. *Arch Orthop Trauma Surg.* 2013 Sep;133(9):1309-14

**Diederichs G, Scheffler S:** MRT nach Patellaluxation: Quantifizierung der Risikofaktoren und Beschreibung der Folgeschäden, *akzeptiert für Publikation in Rofo.* 2013 Mar 14. [Epub ahead of print]

**Boeth H, Duda GN, Heller MO, Ehrig RM, Doyscher R, Jung T, Moewis P, Scheffler S, Taylor WR.:** Anterior Cruciate Ligament-Deficient Patients With Passive Knee Joint Laxity Have a Decreased Range of Anterior-Posterior Motion During Active Movements. *Am J Sports Med.* 2013 Mar 14. [Epub ahead of print]

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**Diederichs G, Köhlitz T, Kornaropoulos E, Heller MO, Vollnberg B, Scheffler S.:** Magnetic resonance imaging analysis of rotational alignment in patients with patellar dislocations. *Am J Sports Med.* 2013 Jan;41(1):51-7. doi: 10.1177/0363546512464691. Epub 2012 Nov 7.

**Vollnberg B, Köhlitz T, Jung T, Scheffler S, Hoburg A, Khandker D, Hamm B, Wiener E, Diederichs G.:** Prevalence of cartilage lesions and early osteoarthritis in

patients with patellar dislocation. *Eur Radiol.* 2012 Nov;22(11):2347-56. doi: 10.1007/s00330-012-2493-3. Epub 2012 May 30.

**Schmidt T, Hoburg AT, Gohs U, Schumann W, Sim-Brandenburg JW, Nitsche A, Scheffler S, Pruss A.** Inactivation Effect of Standard and Fractionated Electron Beam Irradiation on Enveloped and Non-Enveloped Viruses in a Tendon Transplant Model. *Transfus Med Hemother.* 2012 Feb;39(1):29-35. Epub 2012 Jan 20.

**Beaufils P, Thaunat M, Pujol N, Scheffler S, Rossi R, Carmont M.** Trochleoplasty in major trochlear dysplasia: current concepts., *Sports Med Arthrosc Rehabil Ther Technol.* 2012 Feb 21;4:7.

**Schmidt T, Hoburg A, Broziat C, Smith MD, Gohs U, Pruss A, Scheffler S.** Sterilization with electron beam irradiation influences the biomechanical properties and the early remodeling of tendon allografts for reconstruction of the anterior cruciate ligament (ACL).; *Cell Tissue Bank.* 2012 Feb 5. [Epub ahead of print]

**Tanja Schmidt; Arnd T. Hoburg; Uwe Gohs; Wolfgang Schumann; Jung-Won Sim-Brandenburg; Andreas Nitsche; Sven Scheffler; Axel Pruss;** Inactivation Effect of Standard and Fractionated Electron Beam Irradiation on Enveloped and Non-Enveloped Viruses in a Tendon Transplant Model, *Transfus Med Hemother* 2012;39:29–35

**Scheffler S:** Management ligamentärer Verletzungen des Kniegelenkes, *Trauma Berufskrankh* 2012 – 14(Suppl 1): 40-47

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**Carmont MR, Scheffler S, Spalding T, Brown J, Sutton PM.** Anatomical single bundle anterior cruciate ligament reconstruction. *Curr Rev Musculoskelet Med.* 2011 Jun;4(2):65-72.

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**Janssen R, vn der Wijk J, Fiedler A, Schmidt T, Sala H, Scheffler SU:** Remodeling of human hamstring autografts after anterior cruciate ligament reconstruction: a histological analysis. *Knee Surg Sports Traumatol Arthrosc.* 2011 Aug;19(8):1299-306. Epub 2011 Feb 4.

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**Diederichs G, Issever A, Scheffler SU:** MR Findings in Patellar Instability: Injury Patterns and Assessment of Risk Factors: *Radiographics*. 2010 Jul-Aug;30(4):961-81

**Hoburg A, Keshlaf S, Smith M, Schmidt T, Gohs, Pruss A, Scheffler SU:** Effect of electron beam irradiation on biomechanical properties of patellar tendon allografts in anterior cruciate ligament reconstruction: *American Journal of Sports Medicine*, Vol. 38, No.6, 2010; pp 1134-1140

**Katthagen BD, Scheffler S, Becker R, Willkomm D, Mayr HO, Pruss A:** Gewinnung, Prozessierung und Transplantation allogener muskuloskelettaler Gewebe: *Transfus Med Hemother* 2008; 35: 438-445

**Poellinger A, Scheffler S, Hamm B, Asbach P:** Magnetic resonance imaging of double-bundle anterior cruciate ligament reconstruction: *Skeletal Radiol*. 2009 Apr;38(4):309-15. Epub 2008 Jul 12

**Greiner S, Braunsdorf J, Perka C, Herrmann S, Scheffler SU:** Mid to long-term results of open acromioclavicular-joint reconstruction using polydioxansulfate cerclage augmentation: *Arch Orthop Trauma Surg*. 2009 Jun;129(6):735-40. Epub 2008 Jul 4

**Scheffler SU, Unterhauser FN, Weiler A:** Graft remodeling and ligamentization after cruciate ligament reconstruction: *Knee Surg Sports Traumatol Arthrosc*. 2008 Sep; 16(9):834-42. Epub 2008 May 31

**Scheffler SU, Gonnermann, Kamp J, Pryzbilla M, Pruss A:** Peracetic-acid ethanol sterilization inhibits the remodeling of soft-tissue allografts for reconstruction of the anterior cruciate ligament in an in-vivo sheep model, *Clin Orthop Relat Res*. 2008 Aug;466(8):1810-8. Epub 2008 May 20

**Scheffler SU, Schmidt T, Gangéy I, Dustmann M, Unterhauser FN, Weiler A:** Fresh-Frozen Allografts versus Autografts in ACL Reconstruction: Delayed Remodeling and Inferior Mechanical Function in Sheep-: *Arthroscopy*. 2008 Apr;24(4):448-58 (Winner of the Richard O'Conner award 2007)

**Dustmann M, Schmidt T, Gangéy I, Unterhauser FN, Weiler A, Scheffler SU:** The extracellular remodelling of free-soft-tissue autografts and allografts for reconstruction of the anterior cruciate ligament - a comparison study in a sheep model -: *Knee Surg Sports Traumatol Arthrosc*. 2008 Apr;16(4):360-9. Epub 2008 Jan 9

**Scheffler SU, Petersen W, Weiler A:** Fixation von Kreuzbandtransplantaten: *Arthroscopie* 2007 20: 105-114

**Scheffler SU, Trautmann S, Smith M, Kalus U, von Versen R, Pauli G, Pruss A:** Influence of collagenous proteins of Achilles tendon, skin and cartilage on the virus inactivating efficacy of peracetic acid-ethanol: *Biologicals*. 2007 Oct;35(4):355-9. Epub 2007 Jul 19

**Wagner M, Scheffler SU, Weiler A:** Revisionsersatz des vorderen Kreuzbandes: *Arthroskopie* 20(2), 2007

**Schöttle PB, Scheffler SU, Schwarck A, Weiler A:** Arthroscopic medial retinacular repair after patellar dislocation with and without underlying trochlear dysplasia: A preliminary report: *Arthroscopy*, 2006 Nov; 22(11):1192-1198

**Jung TM, Reinhardt C, Scheffler SU, Weiler A:** Stress radiography to measure posterior cruciate ligament insufficiency: a comparison of five different techniques: *Knee Surg Sports Traumatol Arthrosc.* 2006 Nov;14(11):1116-21

**Scheffler SU, Chwastek H, Schönfelder V, Unterhauser F, Hunt P, Weiler A:** The impact of thermal radio-frequency (RF) shrinkage on the mechanical and histological properties of the chronically relaxed anterior cruciate ligament: *Arthroscopy*, 2005 Aug; 21(8):923-9

**Wagner M, Scheffler SU, Weiler A:** Vorderer Kreuzbandersatz: Verankerung des Transplantats: *Arthroskopie* 2005, 18: 27-35

**Scheffler SU, Scherler J, Pruss A, von Versen R, Weiler A:** Biomechanical properties of human bone-patellar tendon-bone autografts and allografts after sterilization with peracetic acid-ethanol, *Cell and Tissue Banking* 2005, 6: 109-115

**Hunt P, Scheffler SU, Unterhauser FN, Weiler A:** A model of soft tissue graft anterior cruciate ligament reconstruction in sheep. *Arch Orthop Trauma Surg*, 124: 2004

**Höher J, Scheffler SU, Weiler A:** Graft choice and graft fixation in PCL reconstruction, *Knee Surg Sports Traumatol Arthrosc.*, 2003 11: 297-306

**Weiler A, Scheffler SU, Höher J,** Transplantatauswahl für den primären Ersatz des vorderen Kreuzbandes, *Orthopäde* 2002 8(31): 731-740

**Scheffler SU, Südkamp NP, Göckenjan A, Hoffmann RFG, Weiler A:** The impact of fixation level and fixation method on anterior cruciate ligament reconstructions: a biomechanical comparison of four hamstring and one patellar tendon graft reconstruction techniques, *Arthroscopy*, 2002 Mar;18(3):304-315

**Scheffler SU, Clineff TD, Ma CB, Papageorgiou CD, Debski ED, Woo SL-Y:** A biomechanical and histological evaluation of the healing goat medial collateral ligament (MCL), *Annals of Biomedical Engineering*, 2001 Feb; 29(2):173-180

**Weiler A, Scheffler SU, Südkamp, SP:** Aktuelle Aspekte in der Verankerung von Hamstring-Sehnentransplantaten in der Kreuzbandchirurgie, *Chirurg*, 2000 Sep;71(9): 1034-1044

**Höher J, Scheffler SU, Withrow JD, Livesay GA, Debski RE, Fu FH, Woo SL-Y:** Mechanical behavior of two hamstring graft constructs for reconstruction of the anterior cruciate ligament, *Journal of Orthopaedic Research*, 2000 May;18(3): 456-461

*62. Jahrestagung der Deutschen Gesellschaft für Unfallchirurgie, Berlin 1998*

**Scheffler SU, Weiler A, Göckenjan A, Südkamp NP, Hoffmann RF:** Different hamstring tendon graft fixation techniques under incremental cyclic loading conditions, *Arthroscopy*, 14: 456-457, 1998, 17<sup>th</sup> Annual Meeting, Arthroscopy Association of North America, Orlando 1998

## **BUCHKAPITEL**

**Scheffler S:** Anatomy and Biomechanics, pages 7-16 in *“Knee Ligament Injuries – Extraarticular Surgical Techniques”*, edited by Roberto Rossi, Fabrizio Margheritini, Springer-Verlag, New York, Berlin, 2014

**Scheffler SU:** Remodeling of Hamstring Tendon Grafts After ACL Reconstruction, Chapter 25 in *“Anterior Cruciate Ligament Reconstruction – A Practical Surgical Guide”*, edited by Siebold, Dejour, Zaffagnini, Springer-Verlag New York, Berlin, 2014

**Scheffler SU:** Graft Harvest and Preparation – Anterior Half Peroneus Longus Tendon Graft, Chapter 17 in *“Anterior Cruciate Ligament Reconstruction – A Practical Surgical Guide”*, edited by Siebold, Dejour, Zaffagnini, Springer-Verlag New York, Berlin, 2014

**Scheffler SU:** Tensioning of Grafts: Any Evidence?, Chapter 23 in *“Anterior Cruciate Ligament Reconstruction – A Practical Surgical Guide”*, edited by Siebold, Dejour, Zaffagnini, Springer-Verlag New York, Berlin, 2014

**Scheffler S:** The cruciate ligaments: Anatomy, biology and biomechanics, pages 11-21 in *“The Knee Joint – Surgical Techniques and Strategies”*, Springer-Verlag, New York, Berlin, 2012

**Scheffler S:** Anatomy – Biomechanics – Novel Imaging of the Native PCL, pages 65-86 in *“ESSKA Instructional Course Lecture Book”*, Springer-Verlag, New York, Berlin, 2012

**Scheffler SU:** The cruciate ligaments: anatomy, biology and biomechanics in *“Basic sciences: The cruciate ligaments”*, Springer-Verlag New York, Berlin, 2009

**Scheffler SU, Unterhauser FN, Weiler A:** “Graft remodeling and ligamentization in ACL reconstruction, in Anterior Cruciate Reconstruction” in *The anterior cruciate ligament reconstruction and basic science*, Editor: C. Prodromos et al., Saunders 2007

Weiler A, **Scheffler SU**, Apreleva M: Chapter: Healing of ligament and tendon to bone in Repair and regeneration of ligaments, tendons, and joint capsule; edited by William R. Walsh, published by Totowa, N.J.: Springer-Verlag New York, LLC, Humana Press, 2005, pp 201-232.

## **PROMOTIONSARBEIT**

Der Einfluss des Verankerungsniveaus und der Verankerungsmethodik von  
Rekonstruktionstechniken des vorderen Kreuzbandes mit „Hamstring“-Sehnen

- Eine biomechanische Studie unter zyklischer Belastung -

promoviert am 07. Februar 2003 mit *magna cum laude*

## **HABILITATIONSSCHRIFT**

Der Einfluss allogenen Spendergewebes und deren Sterilisationsverfahren auf die  
biologischen Umbauprozesse und biomechanischen Eigenschaften von Ersatzplastiken  
des vorderen Kreuzbandes

Abschluss des Habilitationsverfahrens am 14.06.2010

## PREISE / AUSZEICHNUNGEN:

- 08/1997 – 03/1998: Stipendiat des Deutschen Akademischen Austauschdienstes (DAAD) und Biomedical Exchange Programs (BMEP)
- 05/2002 Best Paper at the 2002 Residents & Fellows Arthroscopy Conference, Useppa Island, FL, USA  
**Steenlage ES; Scheffler SU, Weiler A, Caborn DN, Höher J**  
Impact of Tendon Graft Suturing on the Interference Fixation Strength of Quadrupled Hamstring Tendon Grafts
- 11/2002 1st Price winner „Experimentelle Unfallchirurgie“ at the 66th Annual Meeting of the German Society for Traumatology  
**Scheffler SU, Schoenfelder V., Hunt P., Chwastek H., Suedkamp NP, Weiler, A.** Untersuchung des Langzeiteffektes von thermischer Schrumpfung (RF shrinkage) des chronisch relaxierten vorderen Kreuzbandes (VKB) am Schafsmodell,
- 03/2003 Winner of the John Joyce Award of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine, March 10-14, 2003 Auckland, New Zealand  
**Scheffler SU, Schoenfelder V., Hunt P., Chwastek H., Suedkamp NP, Weiler A.** Mechanical and histological analysis of the chronically relaxed ACL after thermal radio-frequency shrinkage in a sheep model,
- 03/2003 Conference stipend of the German Research Society (DFG) for attendance of the Fourth Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS), March 10-14, 2003 Auckland, New Zealand
- 04/2005 2<sup>nd</sup> Price of the John Joyce Award of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine, April 3-7, 2005, Hollywood, Florida, USA  
**Scheffler SU, Schulz T, Unterhauser F, Weiler A:** „Free soft-tissue allografts show delayed revascularization and restoration of their biomechanical properties in comparison to autograft ACL reconstructions“
- 10/2005 Best presentation at the Annual Meeting of the Arbeitsgemeinschaft für Arthroskopie (AGA), Frankfurt, 2005  
**Unterhauser FN, Scheffler SU, Keil J, Haas NP, Weiler A:** Vergleich der Knochen-Band-Heilung nach vorderem Kreuzbandersatz unter Verwendung von freien autologen oder allogenen Sehnentransplantaten im Schafsmodell, *22. Kongress der deutschsprachigen Gesellschaft für Arthroskopie (AGA), 30.09. – 01.10.2005, Frankfurt*



- 04/2007 Winner of the Richard O'Conner Award 2007  
**Scheffler, SU, Schmidt T, Gangey I, Dustmann M, Unterhauser F, Weiler A:** Free-Tendon Allografts vs. Autografts in ACL Reconstruction: Delayed Remodeling and Inferior Mechanical Properties During Long Term Healing in Sheep
- 09/2009 Selection as one of three Traveling fellows for the ESSKA-APOSSM Travelling Fellowship 2010
- 09/2011 Best Paper Presentation, AGA Regensburg 2011  
**Sven Scheffler,** Evgenios Kornaropoulos, Gerd Diederichs, William Taylor, Markus Heller: „Die femorale Malrotation stellt einen dominierenden Einflussfaktor für Patienten mit patellofemoraler Instabilität dar“.

## JOURNAL REVIEWER

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Journal of Cell and Tissue Banking since 2005  
Journal of Knee Surgery, Sports Traumatology & Arthroscopy since 2005  
Journal of Arthroscopy since 2005  
Journal of Biomechanics since 2005  
American Journal of Sports Medicine since 2006  
Journal of Biologicals since 2007  
Journal of Orthopaedic Research since 2007  
Journal of Clinical Orthopaedics and Related Research 2008

## EDITORIAL BOARD

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American Journal of Sports Medicine                      since 05/2007

## MITGLIEDSCHAFTEN

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1997	Deutscher Akademischer Austauschdienst
1998	Gründungsmitglied Pittsburgh Sports Medicine Fellow Society (PSMFS)
2000	“IALS International Academy of Life Sciences e.V.”
2002	Berlin/Brandenburgische Gesellschaft für Chirurgie
2002	Orthopaedic Research Society (ORS)
2005	Deutschsprachigen Arbeitsgemeinschaft für Arthroskopie und Gelenkchirurgie (AGA)
2008	Deutsche Gesellschaft für Unfallchirurgie (DGU)
2008	European Society for Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA)
2010	Magellan Society
2012	Vorstand des Bundesverband für Arthroskopische Chirurgie (BVASK)

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