Curriculum Vitae
BENSAMOUN SABINE FANNY

Identité

Laboratoire : Université de Technologie de Compiègne (UTC)
UMR CNRS 7338 – Biomécanique et Bioingénierie
BP 20529 - 60205 Compiègne cedex, France
E-Mail : sabine.bensamoun@utc.fr
www.researchgate.net/profile/Sabine_Bensamoun
Téléphone : +33 (0)3 44 23 43 90
Date de naissance : 10 juillet 1976
Lieu de naissance : Paris 13ème, France

Déroulement de carrière

2016-2019: Chercheur associé à la Mayo Clinic Foundation (Rochester, MN, USA)
2010: Chargée de recherche CNRS (CR1), section 9/28, à l'UTC
2006-2009 : Chercheur associé à la Mayo Clinic foundation (Rochester, MN, USA)
2006: Chargée de recherche CNRS (CR2), section 9/28, à l'UTC
2004-2006: Post doc au laboratoire d'Orthopédie et Biomécanique (Directeur : An KN) ainsi qu'au laboratoire de radiologie (Directeur : Ehman R), Mayo Clinic foundation, Rochester, USA.

Formation

2010: Habilitation à Diriger des Recherches « caractérisation du système musculo-squelettique »
2003: Thèse en Biomécanique à l'UTC (mention très honorable avec félicitations du jury)
Sujet: détermination des propriétés mécaniques et morphologiques du tissu musculo-squelettique
Directeurs de thèse : Pr Marie-Christine Ho Ba Tho et Pr Francis Goubel
2000: DEA Biomécanique à l'Université de Technologie de Compiègne (UTC) (mention bien)
1999: Maîtrise de Physique (mention assez bien)
1994: Baccalauréat scientifique (D) au lycée d'Arsonval à Saint Maur des Fossés (94)

Responsabilités administratives et scientifiques

2018-2022: Co-direction de l'équipe C2MUST « Caractérisation et Modélisation personnalisée du Système MUsculo-SqueleTtique » (40 personnes) au Laboratoire Biomécanique et Bioingénierie UMR CNRS 7338.
2014-2018: Membre de l'espace de réflexion éthique régional Picardie (ERER-Pic)
2012-217: Investigateur principal de la clé recherche attribuée par GE pour l'IRM au CIMA et Polyclinique Saint Côme concernant les tests réalisés en élastographie par résonance magnétique.
2012-2015: Co-direction du thème « Prise en compte des incertitudes en modélisation numérique » pour le labex MS2T "Maîtrise des Systèmes de Systèmes Technologiques"
2015-2017: Direction de l'équipe C3M (32 personnes)
2012-2015: Co-direction de l'équipe C3M « Caractérisation Multi-échelles et Modélisation Mécanique » Laboratoire Biomécanique et Bioingénierie (BMBI) UMR CNRS 7338
2007-2009: Membre du conseil d'administration de l'Université de Technologie de Compiègne

Distinctions scientifiques

2017 - 2020 : Prime d'Excellence Scientifique (PES)
2011 - 2014: Prime d'Excellence Scientifique (PES)
2010 : Prix Young Investigator « silver » du 6ème Congrès Mondial de Biomécanique, Singapore
2008 : Couverture du journal Bone pour l'article de Hawse et al. 2008
2006 : Prix de la Société de Biomécanique
2005 : Nominée pour le prix de la Société de Biomécanique
2005 : Financement attribué pour pouvoir participer au congrès de l'ESB

Membre de comités éditoriaux

2018 - 2019: International Journal of Science and Engineering for Healthcare Systems
2018 - 2019: Series of Orthopaedic Research and Rheumatology
2018 - 2019: Archives of Clinical and Medical Imaging
2015 - 2019: Applied Bionics and Biomechanics
2015 - 2019: Journal of Medical and Biological Engineering (JMBE)
2014 - 2019: World Journal of Radiology (WJR)
2008 - 2019: Journal of Musculoskeletal Research (JMR)

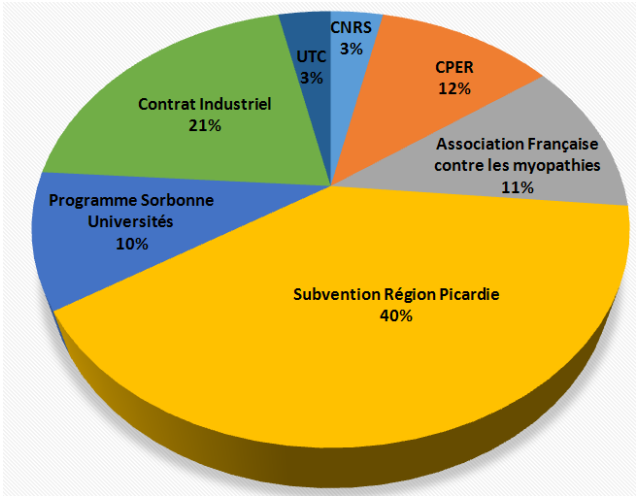
Missions scientifiques

2019: Organisation de la 1ère journée scientifique « RencontreSanté » entre UTC et CHU Amiens
2019: Montage IRN (ex GDRI) : Réseau de Recherche International
2018: Organisation de la session: Biomechanics of Soft Tissue by Elastography (Track: Imaging and Device Biomechanics), 8th World Congress of Biomechanics, Dublin, Ireland.
2018: Membre du comité de pilotage de l'Institut Faire Faces (IFF)
2014:Organisation de la session "Biomechanics of soft tissues characterized with magnetic resonance elastography", 7th World Congress of Biomechanics, Boston, Massachusetts
2013:Membre du comité d'organisation, 1st international workshop labex MS2T "Sytems of Systems in Technology Foundations", Compiègne, France
2013:Membre du comité scientifique "The fifth international conference on knowledge and systems engineering (KSE)", Hanoi, Vietnam. Présidente de la session "Multi-Scales and Multi-physical Modeling and Characterization of Biomechanics Systems".
2013:Présidente de la session "Muscle Biomechanics III", 19th European Society of Biomechanics, Patras, Grèce.
2007 - 2009: Membre du comité de l'European Society of Biomechanics

Financements

2019 : Soutien de l'INSIS pour un IR BAP A (3 mois)
2018-2019 : Fonds Régional d'Aide aux Porteurs de Projets Européens (FRAPPE), attribution de 3 jours de consulting.
2017- 2020: Projet de recherche thématique et structurant – Picardie
« Quantification des tissus cervico-faciaux (muscle, fibrose) avec la technique d'élastographie par résonance magnétique (ERM) » Principal Investigateur (PI), 201 700€
2017-2019: Laboratory of Excellence (LABEX MS2T : Maîtrise de Systèmes de Systèmes Technologiques), Principal Investigateur (PI), 100 000€
2017-2019 : Contrat industriel avec la société Echosens. Prolongation 1 an. « Evaluation de lésions hépatiques par Fibroscan / IRM-ERM » Principal Investigateur (PI), 75 520€

2017- 2019: France Life Imaging (FLi). « Conditions de validité de l'élastographie par ultrasons et par résonance magnétique - Calibration multicentrique», Partenaire, 25 000€
2017: CPER. Achat d'un échographe avec module d'élastographie. PI, 110 000€
2015-2017: Projet Blanc Europeen / International de RDI (Recherche-Développement-Innovation). « Caractérisation multi-échelles du tissu musculaire chez la souris TIEG1 », Principal Investigateur (PI), 194 000€
2015-2017: Contrat industriel avec la société Echosens. « Evaluation de lésions hépatiques par Fibroscan / IRM-ERM », Principal Investigateur (PI), 193 240€
2015-2016: Programme Sorbonne Universités : Appel à Projets IUIS (Institut Universitaire d'Ingénierie pour la Santé). « Development of a diagnostic and follow-up non-invasive tool to characterize the muscle stiffness of the Duchenne muscular dystrophy patients » PI, 43 000€
2015-2016: Programme Convergence de Sorbonne Universités : Appel à Projets Cycles de la Vie. "Mechanobiology in *LMNA*-mutated muscle precursors", Partenaire, 88 608 €
2008-2012: Subvention par la Région Picardie: section mécanique. "Application of the MRE technique to the liver and muscle tissues". Principal Investigateur (PI), 40 000€
2008-2010: Association Française contre les myopathies (AFM). "Non invasive assessment of the muscle stiffness with the magnetic resonance elastography technique : Duchenne myopathy". Principal Investigateur (PI), 132 000 €
2008-2010: Centre National de la Recherche Scientifique (CNRS) : Contract France / USA, Principal Investigateur (PI), 18 000€
2008-2009: Centre National de la Recherche Scientifique (CNRS): projet exploratoire. "Analysis of the biochemical and morphological properties of TIEG1-KO osteocytes", Principal Investigateur (PI), 15 000€
2008-2009: Contrats Projets Etat-Région (CPER, axe santé), Principal Investigateur, 42 000€
2007-2009: Fondation motrice. "Non invasive characterization of the muscle stiffness for the CP patients using the MRE technique". Principal Investigateur (PI), 12 000€
2007-2008: Abondement Carnot. "Development of a mechanical device to stretch biological tissues", Principal Investigateur (PI), 15 000€
2007-2008: Subvention par la Région Picardie: section transfert de technologie."Equipment for the magnetic resonance elastography technique", Principal Investigateur (PI), 83 000€
2007: Université de Technologie de Compiègne: Axes Prospectifs. "Development of the magnetic resonance elastography technique", Principal Investigateur (PI), 30 000€
2007: European Synchrotron Radiation Facility (ESRF). "Diffraction studies to investigate the collagenous architecture of TIEG1 null mice tendon" Principal Investigateur, 48h d'utilisation.



Répartition des 21 contrats obtenus de 2006 à 2019
(Responsable (ou PI) de 19 contrats et Partenaire de 2 contrats)

Expertises
Expert pour l'AERES (agence d'évaluation de la recherche et de l'enseignement supérieur)
ANR : Membre du comité scientifique (2015, 2016), Défi 4 - Vie, Santé et Bien-être
Rapporteur pour des journaux scientifiques :
- Nature Scientific Reports
- Journal of Biomechanics
- Bone
- Journal of Magnetic Resonance Imaging
- PlosOne
- ...

Expert pour les commissions de titularisation du CNRS
Expert pour les concours ITRF BAP C
Expert pour des appels d'offres internationaux
Rapporteur HDR / Thèses (nationales et internationales)

Activités d'encadrement (le détail des sujets est donné P.33)
5 masters PFE encadré à 100%
5 doctorants (2 encadrés à 50% et 3 encadrés à 100% : prix de thèse UTC 2011, 2012 et 2013)
9 post-doctorants

Membres de Sociétés Savantes
2017-2019: Membre French Society of Magnetic Resonance in Biology and Medicine
2014-2019: Membre IEEE Engineering in Medicine and Biology Society
2014-2019: Membre GDR 3570 "MECABIO" Mécanique des matériaux et fluides biologiques"
2010-2019: Membre Société Française de Génie Biologique et Médicale (SFGBM)
2006-2019: Membre ESB European Society of Biomechanics
2002-2019: Membre SB (Société de Biomécanique)
2004-2016: Membre ISMRM (International Society of Magnetic Resonance in Medicine)
2004-2014: Membre ASBMR (American Society for Bone and Mineral Research)

Activités d'enseignement
Moyenne annuelle de 143 UTP
Responsable de deux unités d'enseignement à l'UTC

Productions scientifiques
***h* Index = 18**
42 articles publiés dans des revues à comité de lecture
4 articles en révision
5 articles courts (IEEE) indexés dans des revues à comité de lecture
1 article invité: « invited review »
4 chapitres d'ouvrages
14 conférences internationales invitées
8 conférences nationales invitées
Communications à des congrès internationaux avec comité de lecture :
- **43 présentations orales et 24 posters**

Communications à des congrès nationaux avec comité de lecture :
- **17 présentations orales et 8 posters**

Loisirs : Pratique du tennis (Classement 1/6 en 2000, Représentation de la région Picardie à Roland Garros (catégorie 35 - 40 ans) en 2012 et 2013).

LISTE DE PUBLICATIONS

BENSAMOUN SABINE FANNY, PhD

***h*-index: 18**

ARTICLES

1. **Bensamoun S.**, Ho Ba Tho M.C., Luu S., Gherbezza J.M., De Belleval J.F. 2004
   Spatial distribution of acoustic and elastic properties of human femoral cortical bone.
   J of biomechanics. 37:503-510.

2. **Bensamoun S.**, Gherbezza J.M., De Belleval J.F., Ho Ba Tho M.C. 2004
   Transmission scanning acoustic imaging of human cortical bone and relation with the microstructure.
   Clin Biomech. 19:639-647.

3. **Bensamoun S.**, Ringleb S., Chen Q., Ehman R., An K.N. 2005
   Mechanical Properties of Relaxed and Contracted Thigh Muscles using Magnetic Resonance Elastography.
   Comput Methods Biomech Biomed Engin. Sep;Supp 1:31-2.

4. Ho Ba Tho M.C., **Bensamoun S**., Vanleene M, Treutenaere J.M., Rey C 2005
   Caractérisation et modélisation multi-échelle du tissu osseux.
   La fragilité osseuse et ses déterminants-Appareil Locomoteur, p 9-12.

5. **Bensamoun S.F.**, Ringleb S.I., Littrell L., Chen Q., Brennan M., Ehman R.L., An K.N. 2006
   Determination of thigh muscle stiffness using magnetic resonance elastography.
   J Magn Reson Imaging. 22:242-247.

6. **Bensamoun S.**, Stevens L., Fleury M.J, Bellon G., Goubel F., Ho Ba Tho M.C. 2006
   Macroscopic-microscopic characterization of the passive mechanical properties in rat soleus muscle.
   J of Biomech. 39(6):568-578.

7. **Bensamoun S.F**., Subramaniam M., Hawse J.R., Ilharreborde B., Bassillais A., Benhamou C.L., Fraser D.G., Oursler M.J., Amadio P.C., An K.N., Spelsberg T.C. 2006
   TGF-Beta Inducible Early Gene-1 Knockout Mice Display Defects in Bone Strength and Microarchitecture.
   Bone. 39:1244-1251.

8. **Bensamoun S.F**., Tsubone T., Subramaniam M., Hawse J.R., Boumediene E., Spelsberg T.C., An K.N., Amadio P.C. 2006
   Age-dependent changes in the mechanical properties of tail tendons in TGFβ inducible early gene-1 (TIEG) knockout mice.
   J Appl Physiol. 101(5):1419-1424.

9. Basillais A., **Bensamoun S**., Chappard C., Brunet-Imbault B., Lemineur G., Ilharreborde B., Ho Ba Tho M.C., Benhamou C.L. 2007
   Three dimensional characterization of cortical bone microstructure by micro-computed tomography : validation with ultrasound and microscopic measurements.
   J Orthop Science. 12(2):141-8.

10. **Bensamoun S.F.,** Ringleb S., Chen Q., Ehman R.L., An K.N., Brennan M. 2007
Thigh muscle stiffness assessed with magnetic resonance elastography in hyperthyroid patients before and after medical treatment.
J Magn Reson Imaging. 26(3):708-713.

11. Chen Q., **Bensamoun S.F**., Basford J.R., Thompson J.M., An K.N. 2007
Identification and quantification of myofascial taut bands with magnetic resonance elastography.
Arch Phys Med Rehabil. 88(12):1658-1661.

12. Bensamoun S.F., Glaser K.J., Ringleb S.I., Chen Q., Ehman R.L., An K.N. 2008
Rapid magnetic resonance elastography of skeletal muscle using one dimensional projection.
J Magn Reson Imaging. 27:1083–1088.

13. Subramaniam M., Hawse J.R., Iwaniec U.T, **Bensamoun S.**, Monroe D.G., Peters K.D., Rajamannan N.M., Oursler M.J., Turner R.T., Spelsberg T.C. 2008
TIEG-Null mice display a severe osteopenic gender-specific phenotype characterized by normal cancellous bone microarchitecture.
Bone. 42:1025-1031. **(Coverage for « Bone Journal »)**

14. Bensamoun S.F., Wang L., Robert L., Charleux F., Latrive J.P., Ho Ba Tho M.C. 2008
Measurement of the liver stiffness with two imaging techniques: magnetic resonance elastography and fibroscan.
J Magn Reson Imaging. 28:1287-1292.

15. Bensamoun S.F., Fan Z., Ilharreborde B., Rho J.Y., Ho Ba Tho M.C. 2008
Assessment of mechanical properties of human osteon lamellae exhibiting various degrees of mineralization by nanoindentation.
J Muscoskel Res. 11(3): 1-9.

16. Haddad O., Hawse J.R., Subramaniam M., Spelsberg T.C., **Bensamoun S.F.** 2009
TIEG1 osteocytes display defects in morphology, density and surrounding bone matrix.
J Muscoskel Res. 12(3): 127-136.

17. Suwalski A., Dabboue H., Delalande A., **Bensamoun S.F**., Canon F., Midoux P., Saillant G., Klatzmann D., Salvetat J.P., Pichon C. 2010
Accelerated Achilles tendon healing by PDGF gene delivery with mesoporous silica nanoparticles.
Biomaterials. 31(19):5237-5245.

18. Gumez L., **Bensamoun S.F**., Doucet J., Haddad O., Hawse J.R., Subramaniam M., Spelsberg T.C., Pichon C. 2010
Molecular structure of tail tendon fiber in TIEG1 knockout mice structure using synchrotron diffraction technology.
J Appl Physiol. 108:1706-1710.

19. Bensamoun S.F., Robert L., Leclerc G., Debernard L., Charleux F., 2011
Stiffness imaging of the kidney and adjacent abdominal tissues measured simultaneously using magnetic resonance elastography (MRE). Clin Imaging. 35(4):284-287.

20. Doucet J., Briki F., Gourrier A., Pichon C., Gumez L., **Bensamoun S.F**., Sadoc J.F. 2011
Modelling the lateral organization of collagen molecules in fibrils using the paracrystal Concept.
J Struct Biol. 173(2):197-201.

21. Debernard L., Robert L., Charleux F., **Bensamoun S.** 2011
Characterization of muscle architecture in children and adults using magnetic resonance elastography and ultrasound techniques.
J Biomech. 44:397-401.

22. Debernard L., Robert L., Charleux F., **Bensamoun S.** 2011
Analysis of thigh muscle stiffness from childhood to adulthood using Magnetic Resonance Elastography (MRE) technique.
Clin Biomech. 26:836-840.

23. Haddad O., Gumez L., Hawse J.R., Subramaniam M., Spelsberg T.C., **Bensamoun S.F**. 2011
TIEG1-null fibroblasts display age-dependent differences in their adhesion, spreading and proliferation.
Exp Cell Res. 317:1726-1735.

24. Leclerc G.E., Debernard L., Foucart F., Robert L., Pelletier K.M., Charleux F., Ehman R., Ho Ba Tho M.C., **Bensamoun S.F.** 2012
Characterization of a hyper-viscoelastic phantom mimicking biological soft tissue using an abdominal pneumatic driver with magnetic resonance elastography (MRE).
J Biomech. 45:952-957.

25. Debernard L., Robert L., Charleux F., **Bensamoun S.F.** 2013
A possible clinical tool to depict muscle elasticity mapping using magnetic resonance elastography (MRE). Muscle & Nerve. 47(6):903-908.

26. Bensamoun S.F., Leclerc G.E., Debernard L., Cheng X., Robert L., Charleux F., Rhein C., Latrive J.P. 2013
Cutoff values for alcoholic liver fibrosis using magnetic resonance elastography technique.
Alcohol Clin Exp Res. 37(5):811-817.

27. Ho Ba Tho M.C., Mazeran P.E., El Kirat K., **Bensamoun S.F**. 2013
Multiscale Characterization of Human Cortical Bone.
Comp Model Eng & Sciences. 87(6):557-577.

28. Leclerc G.E., Charleux F., Robert L., Ho Ba Tho M.C., Rhein C., Latrive J.P., **Bensamoun S.F**. 2013
Analysis of the liver viscosity behavior as a function of the Multifrequency Magnetic Resonance Elastography (MMRE) post-processing.
J Magn Reson Imaging. 38(2):422-428.

29. Debernard L., Leclerc G.E., Robert L., Charleux F., **Bensamoun S.F.** 2013
In vivo characterization of the muscle viscoelasticity using mutifrequency MR elastography (MMRE).
J Musculoskelet Res. 16(2):1350008-1 - 1350008-10.

30. Bensamoun S.F., Dao T.T., Charleux F., Ho Ba Tho M.C. 2013
Estimation of in vivo muscle force derived from MR elastography: a preliminary study.
J Musculoskelet Res. 16(3):1350015-1350025.

31. Affagard J.S., **Bensamoun S.F.**, Feissel P. 2014
Development of an inverse approach for the characterization of in vivo mechanical properties of the lower limb muscles.
J Biomech Engin. 136:111012-1 - 111012-8.

32. Leclerc G.E., Charleux F., Ho Ba Tho M.C., **Bensamoun S.F.** 2015
Identification process based on shear wave propagation within a phantom using finite element modelling (FEM) and magnetic resonance elastography (MRE).
Comput Methods Biomech Biomed Engin (CMBBE). 18(5):485-491.

33. Bensamoun S.F., Charleux F., Debernard L., Themar-Noel C., Voit T. 2015
Elastic properties of skeletal muscle and subcutaneous tissues in Duchenne muscular dystrophy by magnetic resonance elastography (MRE): a feasibility study.
Innovation and Research in BioMedical engineering (IRBM). 36(1): 4-9.

34. Affagard J.S., Feissel P., **Bensamoun S.F.** 2015
Measurement of the quadriceps muscles displacement and strain fields with ultrasound and Digital Image Correlation (DIC) techniques.
Innovation and Research in BioMedical engineering (IRBM). 36(3): 170-177.

35. Chakouch M.K., Charleux F., **Bensamoun S.F.** 2015.
New magnetic resonance elastography (MRE) protocol for quantifying elastic properties of nine thigh muscles. PlosOne. 10(9):e0138873. doi: 10.1371

36. Affagard J.S., Feissel P., **Bensamoun S.F.** 2015
Identification of hyperelastic properties of passive thigh muscle under compression with an inverse method from a displacement field measurement.
Journal of Biomechanics. 48(15):4081-4086.

37. Gennari J.M., Themar-Noel C., Panuel M., **Bensamoun S.**, Deslandre C., Linglart A., Sokolowski M., Ferrari A. 2015. Adolescent spinal pain: The pediatric orthopedist's point of view. French Society of Spine Surgery (SFCR). Orthop Traumatol Surg Res. 101(6 Suppl):S247-250.

38. Chakouch M.K., Pouletaut P., Charleux F., **Bensamoun S.F.** 2016.
Viscoelastic shear properties of *in vivo* thigh muscles measured by magnetic resonance elastography.
J Magn Reson Imaging. 43(6):1423-1433.

39. Kammoun M., Même S., Même W., Subramaniam M., Hawse J.R., Canon F., **Bensamoun S.F.** 2016. Impact of TIEG1 on the structural properties of fast and slow twitch skeletal muscle. Muscle Nerve. 55(3):410-416

40. Kammoun M., Pouletaut P., Canon F., Subramaniam M., Hawse J.R., Vayssade M., Bensamoun S.F. 2016.
Impact of TIEG1 deletion on the passive mechanical properties of fast and slow twitch

skeletal muscles in female mice.
PlosOne. Oct 13;11(10):e0164566. doi: 10.1371/journal.pone.0164566.s

41. Lamouille J., Müller C., Aubry S., **Bensamoun S.F.**, Raffoul W., Durand S. 2017. Extensor indicis proprius tendinous transfer using shear wave elastography. Hand Surgery & Rehabilitation. Hand Surg Rehabil. 36(3):173-180.

42. Ternifi R., Pouletaut P., Sasso M., Miette V., Charleux F., **Bensamoun S.F.** 2018. Improvements of liver MR imaging clinical protocols to simultaneously quantify steatosis and iron overload. Innovation and Research in BioMedical engineering (IRBM). 39(3): 219-225.

SUBMITTED PAPERS AND STATUS OF THE REVISION

1. Kammoun M., Veksler V., Piquereau G., Nadal-Desbarats L., Subramaniam M., Hawse J.R., **Bensamoun S.F**. 2018. Novel role of TIEG1 in muscle development, mitochondrial biogenesis and metabolism. Acta physiologica. "Minor corrections"

2. Kammoun M., Dupres V., Même S., Landoulsi J., Subramaniam M., Hawse J.R., **Bensamoun S.F**. 2018. Development of novel multiphysical methods for the characterization of mechanical properties of musculotendinous tissues. Nature Scientific Reports. "Minor corrections"

3. Ternifi R., Pouletaut P., Boussida S., Kammoun M., Dakpé S., Testelin S., Devauchelle B., Charleux F., Constans J.M., **Bensamoun S.F**. 2018. First evaluation of the elastic properties of the zygomaticus major muscle using US elastography technique. Ultrasound in medicine and biology. Submitted.

4. Ternifi R., Kammoun M., Pouletaut P., Même S., Meme W., Szeremeta F., Subramaniam M. Hawse J.R., **Bensamoun S.F.** 2018. Ultrasound imaging of mice hindlimb: Local texture anisotropy and elasticity processing. Biomedical signal processing and control. Submitted.

INVITED REVIEW

1. Ringleb S.I., **Bensamoun S.F**., Chen Q., Manduca A., Ehman R.L., An K.N. 2007
Applications of Magnetic Resonance Elastography to Healthy and Pathologic Skeletal Muscle.
J Magn Reson Imaging. Invited Review. 25(2):301-309.

INDEXED SHORT ARTICLES

1. Dao T.T., Pouletaut P., Charleux F., Ho Ba Tho M.C., **Bensamoun S.** 2014
Analysis of Shear Wave Propagation derived from MR Elastography in 3D Thigh Skeletal Muscle using Subject Specific Finite Element Model.
36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS), Chicago, USA. P. 4026-9

2. **Bensamoun S.** 2015
In vivo characterization of soft tissues using medical imaging.
11th IEEE-RIVF International Conference on Computing and Communication Technologies,

Can Tho, Vietnam.

3. Chakouch M., Leclerc G., Charleux F., **Bensamoun S.F.** 2015
Phantoms mimicking the viscoelastic behavior of healthy and fibrotic livers with Magnetic Resonance Elastography technique.
IEEE-ICABM 3rd International Conference on Advances In Biomedical Engineering, Beyrouth

4. Chakouch M.K., Charleux F., **Bensamoun S.F.** 2015.
Development of a phantom mimicking the functional and structural behaviors of the thigh muscles characterized with magnetic resonance elastography technique
IEEE: 37th Engineering in Medicine and Biology Society, Milan, Italy. P.6736-9

5. Affagard J.S., Feissel P., **Bensamoun S.F.** 2015
Use of digital image correlation and ultrasound: analysis of thigh muscle displacement fields
IEEE: 37th Engineering in Medicine and Biology Society, Milan, Italy. P. 3827-30

INTERNATIONAL CONGRESS

- **Oral sessions**

1. Bensamoun S., Ho Ba Tho M.C. 2002
Mechanical and acoustic properties of human femoral cortical bone. P.369
13th Conference of the European Society of Biomechanics, Poland.

2. Bensamoun S., Ho Ba Tho M.C., Fan Z., Rho J.Y. 2002
Determination of elastic properties of lamellae from human femur by nanoindentation.
11th International congress on biological and medical engineering, Singapore.

3. Ho Ba Tho M.C., **Bensamoun S.**, Rho J.Y. 2002
Macro – Micro characterization of mechanical properties of human bone
11th International congress on biological and medical engineering, Singapore

4. Bensamoun S., Ho Ba Tho M.C., Gherbezza J.M., De Belleval J.F. 2003
Variation of acoustic and elastic properties of human cortical in relation with porosity.
P.1183-1184
5th World Congress on Ultrasonics, France

5. Ho Ba Tho, M.C., **Bensamoun** , S., Rho, J.Y. 2003
Macro-Micro characterization of human cortical bone using ultrasound and nanoindentation
P.1177-1178
World Congress on Ultrasonic, France

6. Rey, C., Treutenaere, J.M., **Bensamoun** , S., Ho Ba Tho, M.C. 2004
Mechanical, morphological and physico-chemical multi-scale characterization of human cortical bone tissue.
14th Conference of the European Society of Biomechanics, the Nethelands.

7. Bensamoun S., Basillais A., Brunet-Imbault B., Benhamou C.L., Ho Ba Tho M.C. 2004
Relationship between the micro structural properties and mechanical-acoustic properties of

human cortical bone. P.135
16th International Bone Densitometry workshop, Annecy, France.

8. Ringleb S.I., Littrell L., Chen Q., **Bensamoun S.**, Brennan M.D., Ehman R.L., An K.N.2004
Magnetic resonance elastography for the assessment of muscles in hyperthyroidism.
American Society of Biomechanics, Portland.

9. Bensamoun S., Ringleb S., Chen Q., Hulshizer T., Rossman P., Ehman R., An KN. 2005
Preliminary Database of Thigh Muscle Stiffness using Magnetic Resonance Elastography
13th International Society for Magnetic Resonance in Imaging, Florida.

10. Bensamoun S., Ringleb S., Chen Q., Ehman R., An K.N. 2005
Mechanical Properties of Relaxed and Contracted Thigh Muscles using Magnetic Resonance Elastography
XXth Congress of the International Society of Biomechanics, Cleveland, Ohio

11. Winzenrieth R., **Bensamoun S**., Gherbezza J.M., DE Belleval A., Treutenaere JM., Ho Ba Tho M.C. 2006
Distribution of elasticity tensor of human cortical bone derived from multimodal imaging
P.46 1st European Symposium on Ultrasonic Characterization of Bone, Paris, France

12. Hobatho MC., Stolz C., Vanleene M., **Bensamoun S**., Treutenaere JM., Rey C. 2006
Multi-scale characterization and modelling of human cortical bone P. 44
1st European Symposium on Ultrasonic Characterization of Bone, Paris, France

13. Bensamoun S., Glaser K., Chen Q., Ringleb S., Ehman R., An K.N. 2006
Rapid magnetic resonance elastography of skeletal muscle using one dimensional Projection. P.37 (#4631)
5th world congress of biomechanics, Munich, Germany

14. Bensamoun S., Ringleb S., Chen Q., Brennan M., Ehman R., An K.N. 2006
Thigh muscle stiffness in hyperthyroid patients before and after medical treatment using magnetic resonance elastography. P.37 (#4605)
5th world congress of biomechanics, Munich, Germany

15. Bensamoun S., Hawse J., Subramaniam S., Spelsberg TC., An KN., Amadio PC. 2007
Tendons isolated from TIEG knockout mice display defects in mechanical strength, micro-architecture and gene expression.
53rd Annual Meeting of the Orthopaedic Research Society, San Diego, California.

16. Subramaniam S., Hawse J., Iwaniec UT., **Bensamoun SF**., Peters KD., Rajamannan NM., Oursler MJ., Turner RT., Spelsberg TC. 2007
Female, but not male, TIEG-Null mice display severe osteopenia and abnormal cancellous bone microarchitecture.
29th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR , Honolulu, Hawaii,USA.

17. Haddad O., Hawse JR., Subramaniam S., Spelsberg TC., **Bensamoun SF**. 2009
Morphological properties of TIEG1 osteocytes using transmission electron microscopy
The XIth Congress of the International Society of Bone Morphometry, Zell am See, Austria.

18. Debernard L, Robert L, Charleux F, **Bensamoun S.F** 2010
Mechanical properties of thigh muscle from childhood to adulthood with Magnetic Resonance Elastography (MRE) technique
19th International Society for Magnetic Resonance in Medicine, Stockholm, Sweden

19. Debernard L, Robert L, Charleux F, **Bensamoun S.F** 2010
Effect of age on muscle stiffness with Magnetic Resonance Elastography (MRE) technique
17th Congress of the European Society of Biomechanics, Edinburgh, UK.

20. Bensamoun S.F, Debernard L, Robert L, Charleux F, Ho Ba Tho M.C 2010
Mechanical and morphological properties of children and adults thigh muscle with magnetic resonance imaging (MRE) and ultrasound techniques. IFMBE Proceedings 31, p. 1663 6th World congress of biomechanics, Singapore

21. Bensamoun S.F, Robert L, Charleux F. 2010.
Development of a New Protocol to Simultaneously Measured the Stiffness of Kidney, Liver, Spleen and Psoas Muscle with Magnetic Resonance Elastography (MRE).
96th Radiology Society of North America, Chicago, USA.

22. Affagard J.S., **Bensamoun S.F.**, Feissel P. 2012
Inverse method to identify the muscle mechanical properties.
Euromech Colloquium on "advanced experimental approaches and inverse problems in tissue biomechanics", Saint-Etienne, France.

23. Bensamoun S.F, Tien T. Dao, Charleux F, Ho Ba Tho M.C. 2012.
Calculation of in vivo muscle forces derived from MR elastography
18th Congress of the European Society of Biomechanics, Journal of Biomechanics, Proceedings 45, S1 p. S489, Lisbon, Portugal.

24. Leclerc G, Charleux F, Rhein C, Latrive J.P, Ho Ba Tho M.C., **Bensamoun S.F.** 2012.
Viscoelastic properties of healthy and fibrotic liver with Magnetic Resonance Elastography.
18th Congress of the European Society of Biomechanics, Journal of Biomechanics, Proceedings 45, S1 p. S489, Lisbon, Portugal.

25. Affagard JS, Feissel P, **Bensamoun S.F.** 2013
Characterization of muscle displacement field using ultrasound technique.
Chair of the session Muscle Biomechanics III
19th Congress of the European Society of Biomechanics, Patras, Greece.

26. Affagard J.S., **Bensamoun S.F.**, Feissel P. 2013
Identification of the mechanical properties of the thigh muscles using a numerical example.
19th Congress of the European Society of Biomechanics, Patras, Greece.

27. Affagard J.S., Feissel P., **Bensamoun S.F.** 2013
Experimental and numerical approaches to identify the mechanical properties of the thigh muscles under compression. 1st international workshop MS2T "Sytems of Systems in Technology Foundations", Compiègne, France

28. Ho Ba Tho M.C., Dao T.T., **Bensamoun S.F.**, Dakpe S., Devauchelle B., Rachik M. 2013
Subject specific modeling of the muscle activation: application to the facial mimics.

The Fifth International Conference on Knowledge and Systems Engineering (KSE), Hanoi, Vietnam

29. Bensamoun S.F., Robert L., Charleux F., 2014
What are the future challenges of the MRE technique for the characterization of the skeletal muscle tissue?
7th World congress of biomechanics, Boston, USA.

30. Chakouch M., Charleux F., **Bensamoun S.F**. 2015
Quantification of the elastic properties for all the thigh muscles using magnetic resonance elastography (MRE). MORAA (Mayo Orthopedic Research Alumni Association) International Symposium. Rochester, MN, USA

31. Dao T.T., Fan A., Pouletaut P., Ho Ba Tho M.C., **Bensamoun SF.** 2015
Towards a reliable numerical tool for simulating shear wave propagation within human skeletal muscle derived from magnetic resonance elastography (MRE).
International Mechanical Engineering Congress & Exposition (IMECE), Advances in Biomedical Elastography, Houston, Texas, USA.

32. Kammoun M., Subramaniam M., Hawse J.R., **Bensamoun S.F.** 2016. Important role for KLF10 in skeletal muscle development and its biomechanical properties.
FACEB: KLF and SP transcription factors in disease and regenerative medicine, Snowmass, Colorado, USA.

33. Kammoun M., Pouletaut P., Subramaniam M., Hawse J.R., **Bensamoun S.F.** 2016. Effect of TIEG1 gene on the mechanical properties of soleus fiber
3èmes Journées scientifiques Franco-Maghrébines : Caractérisation des Matériaux Complexes. Thiais, France

34. Chakouch M., Pouletaut P., Charleux F., **Bensamoun S.F.** 2016 Study of the effect of aging on shear modulus of skeletal muscle using magnetic resonance elastography.
3èmes Journées scientifiques Franco-Maghrébines : Caractérisation des Matériaux Complexes. Thiais, France

35. **Kammoun M**, Veksler V, Piquereau G, Bonne G, Nelson I, Pouletaut P, Nelson Holte M, Subramaniam M, SF Bensamoun, Hawse JR. 2017. Loss of TIEG expression results in defective skeletal muscle structure and function with associated impairment of mitochondrial biogenesis. 40th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR Denver, Colorado, USA. **Young Investigator Award.**

36. Beddok A, Dakpé S, Charleux F, Devauchelle B, Constans JM, Krzisch C, **Bensamoun SF.** 2017. Development of MR Elastography technique for the quantification of cervico-facial tissues. 6th Triennial Congress of ADT "advanced digital technology in head & neck reconstruction". Amiens, France. **Invited lecture.**

37. Bensamoun SF, Ternifi R, Pouletaut P. 2017. Dynamic imaging : MRI and US elastography techniques. 2017. 7th International Conference on Computational Bioengineering (ICCB), Compiègne, France.

38. Ternifi R, Pouletaut P, Heintz A, Dakpé S, Testelin S, Devauchelle B, Charleux F, Constans JM, **Bensamoun SF**. 2018. Elastic properties of the zygomatic muscle using ultrasound

elastography technique. 8th World Congress of Biomechanics, Dublin, Ireland.

39. Kammoun M, Dupres V, Landoulsi J, Subramaniam M, Hawse J, **Bensamoun SF**. 2018 Transversal elasticity of TIEG1 KO muscle fibers probed by atomic force microscopy. 8th World Congress of Biomechanics, Dublin, Ireland.

40. Kammoun M., Même S., Nadal-Desbarats L., Même W., Szeremeta F., Subramaniam M., Hawse J.R, **Bensamoun S.F.** 2018. In vivo and in vitro muscle metabolic profiles of TIEG1 KO muscle mice using spectroscopy techniques (MRS / NMR). 47th European Muscle Conference (EMC), Budapest, Hungary.

- **Electronic Posters presentation**

1. Bensamoun S.F., Leclerc G, Charleux F, Rhein C, Latrive J.P. 2012.
Magnetic resonance elastography (MRE): a non invasive technique to identify the cut-off values for alcoholic liver fibrosis.
47th European Association for the study of the liver (EASL), Barcelona, Spain

2. Debernard L, Robert L, Charleux F. **Bensamoun S.F.** 2012.
MR elastography thigh muscle data base to detect age and gender related changes.
20th International Society for Magnetic Resonance in Medicine, Melbourne, Australia.

3. Kammoun M., Hawse J.R., Subramaniam M., **Bensamoun SF.** 2016.
Characterization of the passive mechanical properties of soleus fibers in TIEG1 mice.
22nd European Society of Biomechanics (ESB), Lyon, France.

- **Posters**

1. Ho Ba Tho M.C., Luu S., **Bensamoun S.**, Klaubunde R. 2001
Anatomical variation of acoustic and mechanical properties of human cortical bone and relation to microstructure. P.103
XVIIIth Congress of the International Society of Biomechanics, Zurich.

2. Bensamoun S., Ho Ba Tho M.C., Gherbezza J.M., De Belleval J.F. 2002
Mapping of ultrasonic velocities on cortical cross section of human femur. P.421
13th Conference of the European Society of Biomechanics, Poland.

3. Bensamoun S., Ho Ba Tho M.C., Gherbezza J.M., De Belleval J.F. 2002
Spatial distribution of acoustic and elastic properties in relation with the microstructure.
11th International congress on biological and medical engineering, Singapore.

4. Bensamoun S., Ho Ba Tho M.C., Fan Z., Rho J.Y. 2003
Intra and inter variation of elastic properties of human osteon lamellae.
49th Annual Meeting, Orthopaedic Research Society, New Orleans

5. Bensamoun S., Stevens L., Goubel F., Mounier Y., Ho Ba Tho M-C. 2004.
Effect of age on passive mechanical properties on isolated fibers and muscles.
14th Conference of the European Society of Biomechanics, the Nethelands.

6. Basillais A., Chappard C., **Bensamoun S.** , Brunet-Imbault B., Ho Ba Tho M.C., Benhamou C.L. 2004.
Three dimensional characterization of cortical bone porosity on microcomputed tomography images : a new method of evaluation.
26th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR, Seattle, Washington.

7. Chappard C., Basillais A., **Bensamoun S.** , Brunet-Imbault B., Ho Ba Tho M.C., Lemineur G., Benhamou C.L. 2004.
Structural characterization of cortical bone microarchitecture on microcomputed tomography images : correlation with mechanical analysis.
26th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR, Seattle

8. Bensamoun S., Ringleb S., Hulshizer T., Rossman P., Qingshan C., An KN. 2005
Comparison between pneumatic and mechanical drivers using magnetic resonance elastography.
51st Annual Meeting of the Orthopaedic Research Society, Washington, D.C.

9. Tsubone T., Moran S., Pederson L., Subramaniam M., **Bensamoun S**., Amadio P., Spelsberg, T., An KN. 2005
The effect of TGF-beta inducible early gene deficiency on flexor tendon healing.
51st Annual Meeting of the Orthopaedic Research Society, Washington, D.C.

10. Bensamoun S., Subramaniam M., Hawse J., Oursler M.J., Ilharreborde B., Amadio P., An K.N., Spelsberg T. 2005
Skeletal defects in the TGF-β inducible early gene-1 knockout mouse
27th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR , Nashville, Tennessee

11. Ho Ba Tho M.C., Stolz C., Vanleene M., **Bensamoun S**., Treteneare J.M., Rey C. 2005.
Multi-scale characterization and modelling of human cortical bone.
Material Research Society Fall Meeting, Boston.

12. Bensamoun S., Wang L., Robert L., Charleux F., Ho Ba Tho MC. 2008.
Determination of in vivo elastic properties of the human liver by Magnetic Resonance Elastography Technique.
8th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, (CMBBE), Porto, Portugal.

13. Bensamoun S., Wang L., Robert L., Charleux F., Latrive JP., Ho Ba Tho MC. 2008.
Cross-Validation of the Magnetic Resonance Elastography Technique to measure the Liver Stiffness.
17th International Society for magnetic resonance in medicine, Toronto, Ontario, Canada.

14. Haddad O., Hawse JR., Subramaniam M., Pichon C., Spelsberg TC., **Bensamoun SF**. 2008.
TIEG1 KO Mice Display Defects in the Bone Matrix Immediately Surrounding

Osteocytes.
30th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR, Montréal, Québec, Canada.

15. Gumez L., Pichon C., Hawse JR., Subramaniam M., Doucet J., Spelsberg TC., **Bensamoun S.** 2008.
TGFβ inducible early gene-1 knockout mice display defects in the molecular structure of tendon fibers.
30th Annual Meeting of the American Society for Bone and Mineral Research - ASBMR, Montréal, Québec, Canada.

16. Debernard L., Hogrel JY., **Bensamoun S**. 2009
Non-invasive assessment of muscle stiffness with magnetic resonance elastography.
14th International World Muscle Society Congress, Geneva, Switzerland.

17. Gumez L., Subramaniam M., Doucet J., Pichon C., **Bensamoun S.F.** 2010
Identification of specific changes in the molecular composition of tendon fibers mediated by TGFβ Inducible Early Gene 1 (TIEG1).
17th Conference of the European Society of Biomechanics, Edinburgh, Scotland, UK

18. Leclerc G, Debernard L, **Bensamoun S**, Ho Ba Tho MC. 2011.Characterization of phantom behavior with magnetic resonance elastography (MRE) and finite element modeling. 23th International Society of Biomechanics, Brussels.

19. Leclerc GE, **Bensamoun SF.** 2013
Development of a set of phantoms mimicking the stiffness of human biological soft tissues using magnetic resonance elastography (MRE).
International Tissue Elasticity Conference (ITEC), Lingfield Park, UK.

20. Chakouch M.K., Charleux F., **Bensamoun S.F.** 2015.
Mechanical behaviours of nine thigh muscles using magnetic resonance elastography
21st Congress of the European Society of Biomechanics, Prague, Czech Republic.

21. Kammoun M., Hawse J., Subramaniam M., Canon F., Vayssade M., **Bensamoun SF.** 2016.
Effects of TIEG1 on the structural and functional properties of skeletal muscle.
45th European Muscle Conference (EMC), Montpellier, France.

22.Kammoun M, Veksler V, Piquereau J, Bonne G, Beuvin M, Nelson I, Pouletaut P, Subramaniam M, Hawse J, **Bensamoun SF.** 2017. TIEG1 is a novel regulator of muscle mitochondrial biogenesis. 22nd International congress of the world muscle society.

23. Ternifi R, Pouletaut P, Sasso M, Miette V, Charleux F, **Bensamoun SF**. 2017. Quantification of iron liver with clinical MRI protocols. 25th International Society for Magnetic Resonance in Medicine (ISMRM), Honolulu, Hawaii, USA

24. Kammoun M., Veksler V., Piquereau, Bonne G., Nelson I, Pouletaut P, Nelson Holte M.H., Subramaniam M., **Bensamoun S.F.,** Hawse J.H. 2018. KLF10 regulates skeletal muscle metabolism in mice. 41th Annual Meeting of the American Society for Bone and Mineral Research (ASBMR), Montreal, Canada

NATIONAL CONGRESS

- **Oral sessions**

1. **Bensamoun S.**, Ho Ba Tho M.C. 2002
   Propriétés mécaniques et acoustiques de l'os cortical fémoral humain.
   Journée Os – Ultrasons, Compiègne.

2. **Bensamoun S.**, Ho Ba Tho M.C., Gherbezza J.M., De Belleval J.F. 2002
   Cartographie des vitesses ultrasonores sur sections corticales fémorales humaines.
   Journée Os – Ultrasons, Compiègne.

3. **Bensamoun S.**, Goubel F., Ho Ba Tho M.C. 2004
   Mechanical properties of bone and muscle depend on their morphological characteristics.
   29ème Congrès de la Société de Biomécanique, Paris.

4. **Bensamoun S.,** Ringleb S., Chen Q., Ehman R., An K.N. 2005
   Mechanical Properties of Relaxed and Contracted Thigh Muscles using Magnetic Resonance Elastography
   Nominated for : 30ème Congrès de la Société de Biomécanique, Belgium

5. **Bensamoun S.**, Glaser K., Chen Q., Ringleb S., Ehman R., An KN. 2006
   Rapid magnetic resonance elastography of skeletal muscle using one dimensional projection
   Nominated for : 31ème Congrès de la Société de Biomécanique, World Congress of Biomechanics, Munich

6. **Bensamoun S.,** Wang L., Robert L., Charleux F., Latrive J.P., Ho Ba Tho M.C. 2008
   Measurement of the liver stiffness with 2 imaging techniques: Magnetic Resonance Elastography and Fibroscan.
   33ème Congrès de la Société de Biomécanique, Compiègne.

7. **Bensamoun S.,** Gumez L., Hawse J., Subramaniam M., Briki F., Gourrier A., Doucet J., Spelsberg T.C., Pichon C. 2008.
   Characterization of the tendon fiber structure of TIEG knockout mice using synchrotron diffraction technology.
   33ème Congrès de la Société de Biomécanique, Compiègne

8. Haddad O., Hawse JR., Subramaniam M., Spelsberg TC., **Bensamoun SF.** 2009
   Morphological Properties of Osteocytes Derived from TIEG1 Knockout Mice: Defects in the Surrounding Hypomineralized Bone Matrix.
   34ème Congrès de la Société de Biomécanique, Toulon

9. Gumez L., Guillot S., Benoit R., Beny JM., Hawse JR, Subramaniam M., Spelsberg TC, Christensen T, Pichon C., **Bensamoun SF**. 2009
   Internal structure analysis of tendon fibers with Fourier transform infrared spectroscopy, microspectroscopy and X-ray photoelectron spectroscopy.
   34ème Congrès de la Société de Biomécanique, Toulon.
10. **Bensamoun S**., Robert L., Charleux F., Latrive JP., Ho Ba Tho MC. 2009
    Mesure de la raideur hépatique avec 2 techniques d'imagerie : ERM et Fibroscan
    Journées Françaises de Radiologie, Paris. (Journal de Radiologie, P.1296)

11. **Bensamoun S.F**., Robert L, Debernard L., Latrive JP., Rhein C., Charleux F. 2010
Raideurs du foie, du rein, de la rate et du psoas mesurées simultanément avec l'ERM
Journées Françaises de Radiologie, Paris. (Journal de Radiologie)

12. Affagard JS, **Bensamoun SF**, Feissel P. 2013
Identification des propriétés mécaniques des muscles de la cuisse
11ème colloque national en calcul des structures (CSMA), Giens

13. Chakouch M., Charleux F., **Bensamoun S.F**. 2014
New magnetic Resonance elastography protocols to characterize deep back and thigh muscles.
39ème Congrès de la Société de Biomécanique, Valenciennes.

14. Gennari J.M., Themar-Noel C., Panuel M., **Bensamoun S.F.**, Deslandre C., Linglart A., Sokolowski M., Ferrari A. 2015
Adolescent spinal pain: The pediatric orthopedist's point of view. French Society of Spine Surgery (SFCR).

15. Beddok A., Dakpé S., Charleux F., Devauchelle B., Constans J.M., Krzisch C., **Bensamoun SF.** 2016. Développement de la technique d'élastographie par résonance magnétique pour la quantification des propriétés élastiques du muscle sterno-cleido-mastoidien.
Journées Francophones de radiologie (JFR), Paris.

16. Chakouch M., Pouletaut P., Charleux F., **Bensamoun S.F.** 2016.
Study of the effect of aging on the muscle mechanical properties using magnetic resonance elastography. Journées Francophones de radiologie (JFR), Paris.

17. Nadal-Desbarats L., Kammoun M., Même S., Même W., Szeremeta F., Subramaniam M., Hawse J.R., **Bensamoun S.F.** 2018. 1H-NMR metabolomics of TIEG1 KO muscle mice.
11èmes journées scientifiques du réseau francophone de métabolique et fluxomique (RFMF), Liège, Belgium.

- **Posters**

1. Bensamoun S., Luu S., Fleury M.J., Vanhoutte C., Ho Ba Tho M.C. 2001
Variation des propriétés mécaniques de l'os cortical en relation avec la microstructure. P.52-53
11ème Forum des Jeunes Chercheurs GBM, Compiègne.

2. Bensamoun S., Ho Ba Tho M.C., Fan Z., Rho J.Y 2003
Determination of mechanical properties of osteon lamellae of human femoral bone by nanoindentation . P28-29
12ème Forum des Jeunes Chercheurs GBM, Nantes.

3. Bensamoun S., Ho Ba Tho M.C., Stevens L., Goubel F. 2003
Effects of age on the mechanical properties of passive rat muscles fibers. P26-27
12ème Forum des Jeunes Chercheurs GBM, Nantes.

4. Bensamoun S., Gherbezza J-M., De Belleval J-F., Ho Ba Tho M.C. 2003
Cartography of acoustic velocities of human cortical bone and relation with the Microstructure. P30-31 12ème Forum des Jeunes Chercheurs GBM, Nantes.

5. Tran V, **Bensamoun S**, Glaser K, Rachik M, Ho Ba Tho MC. 2009.
Modelisation de la propagation des ondes avec la MEF couplée à la technique d'elastographie par IRM.
9ème colloque national en calcul des structures, Giens, France.

6. Même S, Kammoun M, Même W, Subramaniam S, Hawse J, **Bensamoun SF**. 2017. Caractérisation du muscle TIEG1 KO par IRM de diffusion. 3ème congrès Société Française de résonance magnétique en biologie & médecine (SFRMBM), Bordeaux.

7. **Bensamoun SF**, Charleux F, Themar-Noël C. 2017. Caractérisation du muscle duchenne avec la technique d'élastographie par resonance magnétique (ERM). 3ème congrès Société Française de résonance magnétique en biologie & médecine (SFRMBM), Bordeaux.

8. Ternifi R, Pouletaut P, Sasso M, Miette V, Charleux F, **Bensamoun SF. 2017**. Protocoles IRM hépatiques pour l'évaluation de l'hémochromatose et de la stéatose. 3ème congrès Société Française de résonance magnétique en biologie & médecine (SFRMBM), Bordeaux.

INVITED CONFERENCES

- **International**

1. Ho Ba Tho M.C., Stolz C., Vanleene M., **Bensamoun S.**, Treutenaere J.M, Rez C. Multi-Scale Characterization and Modelling of Human Cortical Bone. 7th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, (CMBBE), Juan les Pins, Antibes, Mars 2006, plenary lecture.

2. Ho Ba Tho MC., Vanleene M., **Bensamoun S**., Stolz C. 2008.
Micro-macro characterization and modelling of human cortical bone : structural anisotropy versus material anisotropy.
8th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, (CMBBE), Porto, Portugal. - Plenary Conference.

3. Bensamoun S. 2009.
Soft tissue characterization using magnetic resonance elastography technique.
International workshop MediTech, "Identifying The Mechanical Properties Of Biological Materials", Paris, France. Plenary Conference

4. Bensamoun S. 2009
Characterization of muscle stiffness with magnetic resonance elastography technique
International workshop: Quantitative techniques for muscle studies using NMR imaging. Paris, France. Plenary Conference
5. Bensamoun S. 2013
Characterization of the mechanical properties with magnetic resonance elastography (MRE) technique: application to muscle and liver tissues.

MRE inversion workshop in Southampton

6. Bensamoun S.F. 2014
Characterization of muscle tissue via magnetic resonance elastography.
Chair, invited speaker and organization of the session "Biomechanics of soft tissues characterized with magnetic resonance elastography"
7th World Congress of Biomechanics, Boston, Massachusetts

7. Bensamoun S.F. 2014
US and MR elastography of the liver
26th European Congress of Radiology, Austria, Vienna

8. Ho Ba Tho M.C, Dao T.T, **Bensamoun S.F.** 2014
Development of subject-specific models with material properties and boundary conditions derived from medical imaging.
XII International Congress on Numerical Methods in Engineering and Applied Science, Venezuela.

9. **Bensamoun S.F**. 2015
In vivo characterization of soft tissues using medical imaging.
11th IEEE-RIVF International Conference on Computing and Communication Technologies, Can Tho, Vietnam.

10. **Bensamoun SF.** 2016
Important role for KLF10 in skeletal muscle development and its biomechanical properties.
FACEB: KLF and SP transcription factors in disease and regenerative medicine, Snowmass, Colorado, USA.

11. Bensamoun SF. 2016
Dr Amadio's laboratory, Biomechanics and Orthopaedics laboratory, Mayo Clinic Foundation, Rochester, USA. In vivo and in vitro characterization of muscle tissue.

12. Bensamoun S.F. 2016
In vivo and in vitro characterization of the skeletal muscle. 3èmesJournées scientifiques Franco-Maghrébines: Caractérisation des Matériaux Complexes. Thiais, France

13. Bensamoun SF. 2017
Development of MRE protocols for the quantification of cervico-facial tissues. 6th Advanced digital technology in head & neck reconstruction (ADT), Amiens, France.

14. Bensamoun SF, Kammoun M, Ternifi R. 2017. Characterization of the muscle tissue with : in vitro (mechanical test) and in vivo (MR and US elastography) techniques. Musculoskeletal Research Conference, Mayo Clinic, Rochester, Minnesota, USA.

- **National**

1. Bensamoun S. 2009

Caractérisation des tissus mous (muscle, foie) avec la technique d'élastographie par résonance magnétique.
Journées de Recherche en Imagerie et Technologies de la Santé, (RITS), Lille, France.

2. Bensamoun S. 2014
Evaluation des propriétés fonctionnelles des muscles du dos avec la technique d'élastographie par résonance magnétique (ERM). Société Française de Chirurgie Rachidienne.

3. Bensamoun S. 2015
Caractérisation des tissus mous avec la technique d'élastographie par résonance magnétique
Institut Faire Face (IFF). 3ème journée scientifique, Amiens

4. Bensamoun S.F. 2016.
Characterization of the viscoelastic properties with magnetic resonance elastography (MRE) technique: applications to phantoms and livers tissues.
MECAMAT: « Mécanique pour le vivant. Identification et modélisation du comportement des tissus biologiques : avancées et perspectives », Aussois.

5. Bensamoun S.F, Dakpe S., Olivetto M., Sahran F.R., Constans J.M., Bouchet J., Colin E. 2018.
Vers une plateforme innovante multimodale dédiée à l'évaluation faciale : de l'expression faciale aux muscles : Analyse morphologique et fonctionnelle des muscles peauciers. Journée FHU Surface : « Head and Neck Regenerative Surgery », Rouen, France.

6. Bensamoun S.F. 2018
Characterization of the muscle tissue with in vivo elastography (MR and US) techniques GDR MECABIO : « Mécanique des matériaux et fluides biologiques» Montpellier, France.

7. Bensamoun S.F., Ternifi R., Pouletaut P., Heintz A., Dakpé S., Testelin S., Devauchelle B., Charleux F., Constans J.M. 2018.
Propriétés élastiques du muscle zygomatique en utilisant la technique d'élastographie par ultrasons.
6ème Journée Scientifique Institut Faire Faces (IFF), Amiens, France

8. Bensamoun S.F., Ternifi R., Pouletaut P., Charleux F., Constans J.M. 2019. Élastographie : de la recherche à l'application clinique. 1ère Journée : Le Rendez-Vous Biomédical, Compiègne

CHAPTERS

1. Ho Ba Tho MC., Stolz C., Vanleene M., **Bensamoun S**., Treutenaere JM., Ret C. 2006 Chapter : "Multi-Scale Characterization and Modelling of Human Cortical Bone".
Livre: Mechanical Behaviour of Biological and Biomimetic Materials.
Auteurs: Andrew J. Bushby, Virginia L. Ferguson, Ching-Chang Ko, Michelle L. Oyen. Edition: Mater. Res. Soc. Symp. Proc. 98E, Warrendale, PA.

2. Ho Ba Tho MC, **Bensamoun S**, Vanleene M. 2010.
Chapter: "Comportement mécanique du matériau biologique: l'os humain". P77-103.
Livre: Endommagement et rupture des matériaux 2.
Auteurs: M Clavel, P Bompard
Editions Hermès Lavoisier.

3. Bensamoun S.F. 2014
Chapter: “Mechanical and morphological properties of skeletal muscle with magnetic resonance elastography (MRE) technique.” P.81-89
Livre: Magnetic Resonance Elastography.
Auteurs S. Venkatesh, R. Ehman.
Edition: Springer

4. Ho Ba Tho M.C., Dao T.T., **Bensamoun S.F.**, Dakpe S., Devauchelle B., Rachik M. 2014
Chapter: Subject specific modeling of the muscle activation: application to the facial mimics.
Knowledge and Systems Engineering 245: 423-433