

Gwenllian Tawy

Qualifications

Doctor of Philosophy, University of Strathclyde
1 Sep 2014 → 25 Jun 2018
Award Date: 25 Jun 2018

Master of Research, University of Strathclyde
1 Sep 2013 → 11 Nov 2014
Award Date: 11 Nov 2014

Bachelor of Science, University of Glasgow
1 Sep 2009 → 24 Jun 2013
Award Date: 24 Jun 2013

Employment

Research Associate

Research Only
Division of Cell Matrix Biology & Regenerative Medicine (L5)
The University of Manchester
1 Mar 2018 → present

Patient Registry Manager

International Cartilage Regeneration & Joint Preservation Society
1 May 2022 → present

Research outputs

The Relationships between Coronal Plane Alignments and Patient Reported Outcomes Following High Tibial Osteotomy: A Systematic Review

Tawy, G., Shahbaz, H., McNicholas, M. & Biant, L., 15 Mar 2021, (Accepted/In press) In: *Cartilage*.

Custom Implants in TKA Provide No Substantial Benefit in Terms of Outcome Scores, Reoperation Risk, or Mean Alignment: A Systematic Review

Ner, E. B., Dosani, S., Biant, L. & Tawy, G., 5 Feb 2021, (E-pub ahead of print) In: *Clinical Orthopaedics and Related Research*.

DOI: 10.1097/CORR.0000000000001651

Biomarkers in Articular Cartilage Injury and Osteoarthritis

Lambert, L. A., Convill, J., Tawy, G. & Biant, L., 2021, *Cartilage Injury of the Knee : State-of-the-Art Treatment and Controversies*. 1 ed. Springer Nature, p. 11-23 12 p.

Improving Intra-Operative Efficiency of Total Knee Arthroplasty with Patient-specific and Single-use Instrumentation

Tawy, G. & Biant, L., 25 Sep 2020, (E-pub ahead of print) In: *Journal of Orthopaedic Experience and Innovation* .

Clinically Relevant Molecular Biomarkers for use in Human Knee Osteoarthritis: A Systematic Review

Convill, J. G., Tawy, G., Freemont, T. & Biant, L., 17 Jul 2020, (E-pub ahead of print) In: *Cartilage*. p. 1947603520941239
DOI: 10.1177/1947603520941239

Advanced functional biomechanical analysis of medial rotation knee arthroplasty

Tawy, G., Rowe, P. & Biant, L., 2020, In: *The Knee*.

DOI: 10.1016/j.knee.2020.01.003

Health Costs and Efficiencies of Patient-specific and Single-use Instrumentation in Total Knee Arthroplasty: A Randomised Controlled Trial

Attard, A., Tawy, G., Simons, M., Riches, P., Rowe, P. & Biant, L., 29 May 2019, In: *BMJ Open Quality*. 8, 2, p. e000493

DOI: 10.1136/bmjoc-2018-000493 10.1136/bmjoc-2018-000493

162 Molecular biomarkers for intervention and management of early knee/hip osteoarthritis

Convill, J. G., Biant, L., Tawy, G. & Freemont, T., 13 Apr 2019, In: *Rheumatology*. 58, Supplement_3
DOI: 10.1093/rheumatology/kez108.070

Early restoration of gait kinematics following Medacta-GMK Sphere total knee arthroplasty

Tawy, G. & Biant, L., 26 Mar 2019, *British Association for Surgery of the Knee 2019 Conference Proceedings: 2019 Annual Spring Meeting*. p. 19 19 p.

Molecular biomarkers for use in diagnosing early stage knee osteoarthritis

Convill, J., Freemont, T., Tawy, G. & Biant, L., 26 Mar 2019, p. 29. 29 p.

Functional outcome of the Medacta GMK-Sphere total knee arthroplasty as quantified by a clinical motion capture system

Tawy, G., Simons, M., Rowe, P. & Biant, L., 2018, *The BioMedEng18 Conference Book*. Imperial College London, p. 105 1 p.

Health Economics Of Patient-Specific And Single-Use Instrumentation In Total Knee Arthroplasty

Attard, A., Simons, M., Tawy, G., Rowe, P., Riches, P. & Biant, L., 2018.

The efficiency of a clinical motion capture system for quantifying knee function

Tawy, G., Simons, M., Rowe, P. & Biant, L., 2018, *The BioMedEng18 Conference Book*. Imperial College London, p. 3 1 p.

0062 - CORRELATION OF MUSCLE STRENGTH AND GAIT STABILITY IN PATIENTS WITH END STAGE OSTEOARTHRITIS

Simons, M. R., Tawy, G., Rowe, P., Gleeson, N. & Biant, L. C., Dec 2017, In: *The Knee*. 24, 6, p. VII
DOI: 10.1016/j.knee.2017.08.024

Is the instrumented-pointer method of calibrating anatomical landmarks in 3D motion analysis reliable?

Tawy, G. & Rowe, P., 19 Jan 2017, In: *Journal of biomechanics*. 53, p. 205-209 5 p.
DOI: 10.1016/j.jbiomech.2017.01.019

). Health economics of patient-specific and single-use instrumentation in total knee arthroplasty

Attard, A., Simons, M., Tawy, G., Rowe, P., Riches, P. & Biant, L., 2017.

Advanced functional biomechanics in valgus and varus knees

Tawy, G., Simons, M., Rowe, P. & Biant, L., 2017.

Change in mechanical properties and cross-sectional area (CSA) of thigh muscles following total knee replacement (TKR) surgery

Simons, M., Perrins, M., Tawy, G., Marshall, H., Brown, C., Van Beek, E., Roberts, N. & Biant, L., 2017.

Correlation of muscle strength and gait stability in patients with end stage osteoarthritis

Simons, M., Tawy, G., Rowe, P., Gleeson, N. & Biant, L., 2017.

Gait variability and motor control in patients with knee osteoarthritis as measured by the uncontrolled manifold technique

Tawy, G., Rowe, P. & Biant, L., 2017, In: *Gait and Posture*.
DOI: 10.1016/j.gaitpost.2017.08.015

Investigating gait variability and motor control in knee osteoarthritis

Tawy, G., Simons, M., Biant, L. & Rowe, P., 2017, *XXVI Congress of the International Society of Biomechanics*. p. 303 1 p.

Patient reported outcome measures correlate with walking ability after knee arthroplasty

Tawy, G., Simons, M., Rowe, P. & Biant, L., 2017.

Patient specific instrumentation results in reproducible and accurate bone resection in total knee replacement surgery.

Simons, M., Attard, A., Tawy, G., Insinna, Y., Moran, M. & Biant, L., 2017.

Quantifying gait stability in patients with knee osteoarthritis

Tawy, G., 2017.

Stability and advanced kinematics of gait in patients with knee osteoarthritis

Tawy, G., Simons, M., Rowe, P. & Biant, L., 2017, In: *The Knee*. 24, 6, p. VIII 1 p.

DOI: 10.1016/j.knee.2017.08.026

The correlation between muscle strength and variability of gait in knee osteoarthritis

Simons, M., Tawy, G., Rowe, P. & Biant, L., 2017, In: *The Knee*. 24, 6, p. VII 1 p.

The correlation between patient reported outcome measures and advanced biomechanics in knee osteoarthritis

Tawy, G., Simons, M., Rowe, P. & Biant, L., 2017, In: *The Knee*. 24, 6, p. VI-VII 2 p.

The correlation between patient reported outcome measures and advanced biomechanics in knee osteoarthritis

Tawy, G., Simons, M., Biant, L. & Rowe, P., 2017.

Use of a novel hospital-based motion analysis system to quantify functional outcome in total knee arthroplasty

Tawy, G., Simons, M., Biant, L. & Rowe, P., 2017, *XXVI Congress of the International Society of Biomechanics*. p. 892 1 p.

Development of a hospital-based gait laboratory to encourage the use of gait analyses in treatment and rehabilitation programmes

Tawy, G., 2016.

Thermal damage done to bone by burring and sawing with and without irrigation in knee arthroplasty

Tawy, G., Riches, P. & Rowe, P., 10 Nov 2015, In: *Journal of Arthroplasty*. 31, 5, p. 1102-1108 7 p.

DOI: 10.1016/j.arth.2015.11.002

Thermal damage done to bone by burring and sawing with and without irrigation in knee joint replacement

Tawy, G., Rowe, P. & Riches, P., 2015.

Activities

BMJ Open Quality (Journal)

Gwenllian Tawy (Assistant editor)

2019 → ...

European Researchers' Night

Gwenllian Tawy (Discussant)

28 Sep 2018

Computer Methods in Biomechanics and Biomedical Engineering (Journal)

Gwenllian Tawy (Assistant editor)

2018 → ...

International Journal for Numerical Methods in Biomedical Engineering (Journal)

Gwenllian Tawy (Assistant editor)

2018 → ...

PeerJ (Journal)

Gwenllian Tawy (Assistant editor)

2018 → ...

STEM Learning Ltd (External organisation)

Gwenllian Tawy (Member)

2018 → ...

Clinical Biomechanics (Journal)

Gwenllian Tawy (Assistant editor)

2017 → ...

OATechNetwork+ (External organisation)

Gwenllian Tawy (Academic expert member)

2017 → ...

25th congress of International Society of Biomechanics (ISB)

Gwenllian Tawy (Other)

Jan 2015 → Jul 2015

Prizes**BioMedEng18 Travel Award**

Tawy, Gwenllian (Recipient), 7 Sep 2018

Motor Control Student Award

Tawy, Gwenllian (Recipient), 2017

ON Foundation/ICRS Orthoregeneration Research Fellowship

Tawy, Gwenllian (Recipient), Mar 2022

Outstanding Reviewer

Tawy, Gwenllian (Recipient), 2018

Outstanding Reviewer

Tawy, Gwenllian (Recipient), 2017

Awards**Projects**