



Research Notes

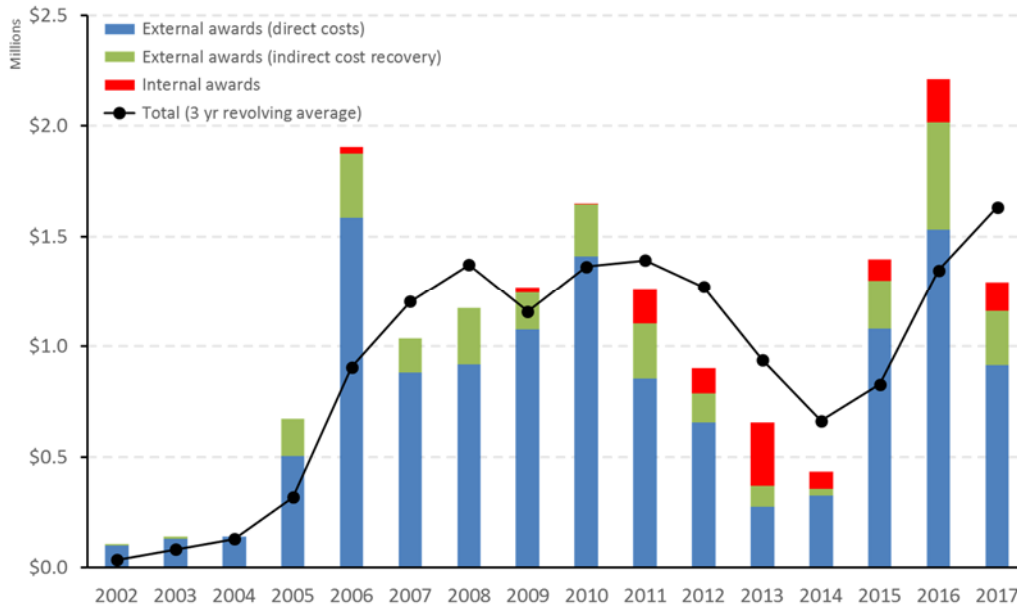
2017 mid-year summary

Overview

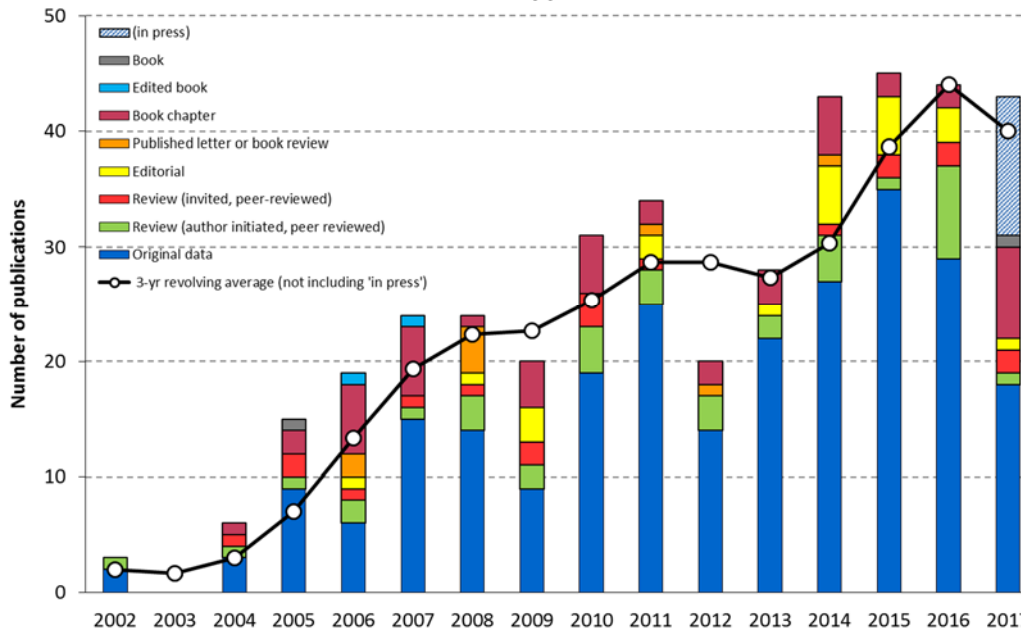
On the following pages are the external and internal grants and contracts submitted by and/or awarded to IU School of Health and Rehabilitation Sciences (SHRS) faculty as Principal Investigator (PI) in the first 6 months of 2017. In addition, grants for which a portion of credit was awarded to IU SHRS faculty are listed, along with the credited dollar amount. The final pages list peer-reviewed publications co/authored by IU SHRS faculty during the first 6 months of 2017.

Putting these data into perspective against historical data (see graphs below), we are expected to raise our 3 year revolving averages for both funding and publications by years end.

Total (External + Internal) Awards



Scholarly publications



External grants and contracts

Awards

Project Director	Sponsor	Title	Start	End	Proposal Total Amt
Warden, Stuart	NIH/NIAMS	Localizing the skeletal effects of serotonin transporter inhibition [R15 mechanism]	7/1/2017	6/30/2020	\$472,500
Warden, Stuart	NBA/GE	Activities and factors influencing the magnitude and distribution of tibial bone strains in basketballers	9/1/2017	8/31/2020	\$299,922
Massie, Crystal	IND STATE DEPT HLTH	Improving functional ability in chronic TBI with intensive rehabilitation robotic gait training	7/1/2017	6/30/2019	\$158,698
Avin, Keith	NIH/NIDDK	Mechanisms of interventions to ameliorate sarcopenia in chronic kidney disease [K08 non-competing renewal]	6/1/2017	5/31/2018	\$130,627
Altenburger, Peter	MULTIPLE SCLEROSIS	G-EO gait rehabilitation training in progressive multiple sclerosis	9/1/2016	8/31/2017	\$33,000
Munk, Niki	US VETERANS AFFAIRS	Intergovernmental IPA between IU and VA for Niki Munk	2/1/2017	1/31/2018	\$29,820
Rebman, Rebecca	HRSA	Indiana University Health Careers Opportunity Program	9/1/2016	8/31/2017	\$18,823
Kelton, Gaylen	SANOFI PASTEUR, INC	Expanded access IND Program (EAP) to provide stamaryl vaccine to persons in the United States for vaccination against yellow fever	5/22/2017	5/22/2019	\$11,168
Thompson, William	MARIAN UNIVERSITY	Role of the auxiliary $\alpha 2\delta 1$ voltage sensitive calcium channel in skeletal development and mechanoregulation	2/1/2017	5/14/2017	\$4,044
Thompson, William	MARIAN UNIVERSITY	Association of perlecan in voltage sensitive calcium channels in osteocytes	2/1/2017	5/14/2017	\$3,064

Submissions

Project Director	Sponsor	Title	Start	End	Proposal Total Amt
Altenburger, Peter	PURDUE UNIVERSITY	Combined cognitive and balance training to improve mobility in everyday activities	9/1/2017	8/31/2022	\$1,278,929
Munk, Niki	NIH	Preparing pragmatic massage therapy trials for medically underserved chronic low back pain populations [R34 mechanism]	4/1/2018	3/31/2021	\$697,923
Brown, Mary Beth	NIH	Exercise to prevent clot recurrence after venous thromboembolism: feasibility of a home walking program [R34 mechanism]	10/1/2017	9/30/2020	\$693,068
Comer, Amber	NIH	The quest to diminish suffering: developing an intervention to improve communication and medical decision making for older adults with severe stroke [K01 mechanism]	4/1/2018	3/31/2023	\$648,634
Munk, Niki	NIH	Massage and mirror therapy for phantom limb pain: a pilot study [R15 mechanism]	9/1/2017	8/31/2020	\$457,608
Massie, Crystal	NIH	Improving clinical practice with structured neurorehabilitation home activity programs [R03 mechanism]	12/1/2017	11/30/2019	\$314,148
Warden, Stuart	NBA/GE	Activities and factors influencing the magnitude and distribution of tibial bone strains in basketballers	9/1/2017	8/31/2020	\$299,922
Crabtree, Jeffrey	UNIV OF WISCONSIN	The TransFACT assessment mobile app: optimizing personal community transit	10/1/2017	9/30/2022	\$195,256
Loghmani, M. Terry	HEALTH SMART TECH/NIH	A device for quantifiable soft tissue manipulation: a new frontier in manual therapy	9/1/2017	8/31/2018	\$69,944

Submissions (cont'd)

Project Director	Sponsor	Title	Start	End	Proposal Total Amt
Brown, Mary Beth	AM HEART ASSN	The use of dietary nitrate and exercise training to improve muscle function and exercise responses in PAH	7/1/2017	6/30/2019	\$53,688
Li, Wei	UNIV OF WASHINGTON	Comparing the Overall Risk and Age at Onset of Cognitive Impairments between Diabetic and non-diabetic Cohorts	7/1/2017	6/30/2018	\$50,000
Munk, Niki	US VETERANS AFFAIRS	Intergovernmental IPA between IU and VA for Niki Munk	2/1/2017	1/31/2018	\$29,820
Kelton, Gaylen	SANOFI PASTEUR, INC	Expanded access IND Program (EAP) to provide stamaril vaccine to persons in the United States for vaccination against yellow fever	5/22/2017	5/22/2019	\$11,168
Brown, Mary Beth	AM COLL SPORTS MED	Dietary nitrate and exercise training to ameliorate skeletal muscle dysfunction in pulmonary arterial hypertension	4/1/2017	3/31/2018	\$5,000
Thompson, William	MARIAN UNIVERSITY	Role of the Auxiliary $\alpha 2\delta 1$ Voltage Sensitive Calcium Channel in Skeletal Development and Mechanoregulation	2/1/2017	5/14/2017	\$4,044
Thompson, William	MARIAN UNIVERSITY	Association of perlecan in voltage sensitive calcium channels in osteocytes	2/1/2017	5/14/2017	\$3,064

Submissions with credit split to SHRS faculty

SHRS faculty (Role)	Sponsor	Title	Start	End	Proposal Credit Amt
Thompson, William (co-PI; 48% credit)	NIH	Effect of low magnitude mechanical signals on bone and muscle loss due to androgen deprivation therapy for prostate cancer [R01 mechanism]	4/1/2018	3/31/2023	\$1,841,692
Warden, Stuart (Resource core director; 20% credit)	NIH	Indiana Core Center for Clinical Research in Musculoskeletal Health [P30 mechanism]	9/1/2017	8/31/2022	\$782,495
Loghmani, M. Terry (co-I; 10% credit)	NSF	Data enabled smart biomechatronic device and instrumentation system traineeship [National Science Foundation Research Traineeship]	9/1/2017	8/31/2022	\$374,830

Internal grants and contracts

Awards

Project Director	Sponsor	Title	Start	End	Proposal Total Amt
Massie, Crystal	IUPUI Office of the V.C. for Research	Clinical implementation and outcomes of upper-extremity rehabilitation robotics (Research Support Funds Grant)	7/1/2016	6/30/2017	\$35,000
Thompson, William	IUPUI Office of the V.C. for Research	Matrix regulation of osteocytes via auxiliary calcium channel subunits (Research Support Funds Grant)	7/1/2017	6/30/2018	\$35,000
Li, Wei	Indiana Diabetes Res. Center	Altered cerebral glucose and lipid metabolism in diabetes in the pathogenesis of Alzheimer's disease	7/1/2017	6/30/2018	\$30,000
Loghmani, M. Terry	IUPUI Office of the V.C. for Research	The effects of soft tissue manipulation on mesenchymal stem cell mobilization and homing, inflammation, pain and behavior in rodents with chemically-induced low back pain (Release Time for Research application)	4/1/2017	3/31/2018	\$10,000

Awards (Cont'd)

Project Director	Sponsor	Title	Start	End	Proposal Total Amt
Fuchs, Robyn	IU SHRS	Long term benefit to the proximal femur of exercise completed when young [PEAR grant]	6/1/2017	6/30/2017	\$10,317
Weaver, Kathy	IUPUI Degree Completion Office	Mini-grant proposal to support degree completion efforts at IUPUI	8/1/2017	5/30/2018	\$10,000

Submissions

Project Director	Sponsor	Title	Start	End	Proposal Total Amt
Thompson, William	Indiana CTSI	Real-time in vivo assessment of osteocyte calcium signaling initiated by matrix tethers [Collaboration in Translational Research application]	9/1/2017	8/31/2019	\$75,000
Comer, Amber	IUPUI Center for Service and Learning	Improving Stroke Recovery and Survival in Indianapolis through Community Engagement (Chancellor Bantz Community Fellowship Grant)	6/1/2017	6/31/2018	\$60,000
Thompson, William	Indiana Center Musculoskeletal Health	Use of low magnitude mechanical signals to restrict bone and muscle loss due to androgen deprivation therapy for prostate cancer [Pilot Funding - Multi-investigator Grant]	7/1/2017	6/30/2018	\$50,000
Thompson, William	IUPUI Office of the V.C. for Research	Matrix regulation of osteocytes via auxiliary calcium channel subunits [RSFG application]	7/1/2017	6/30/2018	\$35,000
Munk, Niki	Indiana CTSI	Preliminary efforts to decrease LGBTQ adolescents' mental health inequities with massage [Community Health Partnership (CHeP) Trailblazer Award]	10/1/2017	9/30/2018	\$25,000
Loghmani, M. Terry	IUPUI Office of the V.C. for Research	The effects of soft tissue manipulation on mesenchymal stem cell mobilization and homing, inflammation, pain and behavior in rodents with chemically-induced low back pain (Release Time for Research application)	4/1/2017	3/31/2018	\$10,000
Fuchs, Robyn	IU SHRS	Long term benefit to the proximal femur of exercise completed when young [PEAR grant]	6/1/2017	6/30/2017	\$10,317
Weaver, Kathy	IUPUI Degree Completion Office	Mini-grant proposal to support degree completion efforts at IUPUI	8/1/2017	5/30/2018	\$10,000

Publications

1. **Altenburger P**, Wilson AM. A volunteer basketball clinic for children with disabilities: professional development impact on student-athletes and physical therapy students. *J Allied Health* 2017;46:65-71.
2. **Arnold BL**, Schiller B. *Evidence Based Practice in Sport and Exercise: A Guide to Using Research*. Philadelphia: F.A. Davis Company; 2017 (352 page book)
3. Arnold S, **Janson R**. Wrist extension or flexion mobilization orthosis: the dinosaur design. *J Hand Ther* 2017;30:109-12.
4. **Brown MB**, Neves E, Long G, Graber J, Gladish B, Wiseman A, Owens M, Fisher AJ, Presson RG, Petrache I, Kline J, Lahm T. High-intensity interval training, but not continuous training, reverses right ventricular hypertrophy and dysfunction in a rat model of pulmonary hypertension. *Am J Physiol Regul Integr Comp Physiol* 2017;312:R197-R210.
5. **Crabtree JL**, Katz LW. Emerging areas of practice. In: Jacobs K, MacRae N, Sladyk K, editors. *Occupational Therapy Essentials for Clinical Competence*. 3rd ed. Thorofare, NJ: Slack, Inc.; 2017. p. 557-68.
6. **Fisher T**. Role of occupational therapy in preventing work-related musculoskeletal disorders with recycling workers: a pilot study. *Am J Occup Ther* 2017;71:7101190030 (6 pages).
7. **Fisher TF**, Beals C. Roles of occupational therapy practitioners. In: Jacobs K, MacRae N, Sladyk K, editors. *Occupational Therapy Essentials for Clinical Competence*. 3rd ed. Thorofare, NJ: Slack, Inc.; 2017. p. 763-77.
8. Friedrich-Nel H, **Mac Kinnon J**. Assessment central to quality doctoral education. In: Lategan LOK, editor. *Get Ready, Get Set, Go*. Bloemfontein, South Africa: Sun Media; 2017. p. 77-82.
9. **Fuchs RK**, **Bayliss AJ**, **Warden SJ**. Hemangioma in the anterior thigh with corresponding periosteal bone reaction. *J Orthop Sports Phys Ther* 2017;47:218.
10. **Fuchs RK**, Kersh ME, Carballido-Gamio J, **Thompson WR**, Keyak JH, **Warden SJ**. Physical activity for strengthening fracture prone regions of the proximal femur. *Curr Osteoporos Rep* 2017;15:43-52.
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13. Kennedy AB, **Munk N**. Experienced practitioners beliefs utilized to create a conceptual model of a successful massage therapist: a qualitative investigation. *Int J Ther Massage Bodywork* 2017;10:9-19.
14. Kindler JM, Pollock NK, Laing EM, Oshri A, Jenkins NT, Isales CM, Hamrick MW, Ding KH, Hausman DB, McCabe GP, Martin BR, Hill Gallant KM, **Warden SJ**, Weaver CM, Peacock M, Lewis RD. Insulin resistance and the IGF-I-Cortical bone relationship in children ages 9-13 years. *J Bone Miner Res* 2017;32:1537-45.
15. Kramer J, Forsyth K, Lavedure P, **Scott PJ**, Shute R, Maciver D, ten Velden M, Suman M, Nakamura-Thomas H, Yamada T, Keponen R, Pan AW, Kielhofner G. Self reports: eliciting clients' perspectives. In: Taylor RR, editor. *Kielhofner's Model of Human Occupation*. 5th ed. New York: Wolters-Kluwer; 2017. p. 248-74.
16. **Li W**, Huang E, Gao S. Type 1 diabetes mellitus and cognitive impairments: a systematic review. *J Alzheimers Dis* 2017;57:29-36.
17. **Li W**, Risacher SL, McAllister TW, Saykin AJ, Alzheimer's Disease Neuroimaging Initiative. Age at injury is associated with the long-term cognitive outcome of traumatic brain injuries. *Alzheimers Dement* 2017;6:196-200.
18. **Loghmani MT**, Neff B, Alotaibi AM, Chien S, March K. Quantifiable soft tissue manipulation (QSTM): a requisite to advance the field of manual therapy. *J Novel Physiother* 2017;7:326 (3 pages).
19. **Mac Kinnon J**, **Comer A**. The influence of culture, values and faith in end-of-life decisions. In: Lategan LOK, Van Zyl G, editors. *Healthcare Ethics for Healthcare Professionals*. Bloemfontein, South Africa: Sun Media; 2017. p. 54-63.
20. **Massie CL**, White C, Pruit K, Freel A, Staley K, Backes M. Influence of motor cortex stimulation during motor training on neuroplasticity as a potential therapeutic intervention. *J Mot Behav* 2017;49:111-6.
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22. Moorthi RN, **Avin KG**. Clinical relevance of sarcopenia in chronic kidney disease. *Curr Opin Nephrol Hypertens* 2017;26:219-28.
23. Neto-Neves EM, **Brown MB**, Zaretskaia MV, Rezania S, Goodwill AG, McCarthy BP, Persohn SA, Territo PR, Kline JA. Chronic embolic pulmonary hypertension caused by pulmonary embolism and vascular endothelial growth factor inhibition. *Am J Pathol* 2017;187:700-12.
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29. **Warden SJ**. Sports injuries: chronic. In: Brukner P, Clarsen B, Cook J, Cools A, Crossley K, Hutchinson M, McCrory P, Bahr R, Khan K, editors. *Brukner and Khan's Clinical Sports Medicine: Injuries: Vol. 1*. 5th ed. North Ryde, Australia: McGraw-Hill; 2017. p. 29-53.
30. **Warden SJ**, **Thompson WR**. Become one with the force: optimising mechanotherapy through an understanding of mechanobiology. *Br J Sports Med* 2017;51:989-90.
31. **Warden SJ**, Weatherholt AM, Gudeman AS, Mitchell DC, **Thompson WR**, **Fuchs RK**. Progressive skeletal benefits of physical activity when young as assessed at the midshaft humerus in male baseball players. *Osteoporos Int* 2017;28:2155-65.

