

# STEFAN WILHELM

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## BACKGROUND AND HONORS

### EDUCATION

Ph.D. Chemistry (2014) University of Regensburg, Germany  
M.S. Chemistry (2010) University of Regensburg, Germany

### POSITONS

08/2017-present Assistant Professor, Stephenson School of Biomedical Engineering, The University of Oklahoma  
08/2014-07/2017 Postdoctoral Fellow, Institute of Biomaterials & Biomedical Engineering, University of Toronto, ON, Canada

### AFFILIATIONS

- a) Stephenson School of Biomedical Engineering, The University of Oklahoma, Norman, OK, 73019, USA
- b) Institute for Biomedical Engineering, Science, and Technology (IBEST), Norman, OK, 73019, USA
- c) Stephenson Cancer Center, The University of Oklahoma, Oklahoma City, OK, 73104, USA

### HONORS AND AWARDS

2019 NIH Early Career Reviewer Program Participant, Washington, DC, USA  
2019 Junior Faculty Fellowship Program Award, The University of Oklahoma, Norman, OK, USA  
2018 Junior Faculty Fellowship Program Award, The University of Oklahoma, Norman, OK, USA  
2017 Travel Award, Canadian Institutes of Health Research (CIHR), Institute of Cancer Research, Ottawa, ON, Canada  
2013 Travel Award, "Friends of the University e.V.", University of Regensburg, Germany  
2012 Best Poster Award, EUROPT(R)ODE XI, Barcelona, Spain  
2011 Travel Award, European Materials Research Society (E-MRS), Nice, France

**STUDENT/FELLOW AWARDS**

- 2020 Emmy R. Francek<sup>1,\*</sup>, Outstanding Sophomore Award 2020, Stephenson School of Biomedical Engineering, University of Oklahoma, Norman, OK, USA
- 2020 Joanne Lee<sup>1,\*</sup>, NSF GRFP, Former undergraduate research student in Wilhelm Lab; now BME PhD student at Vanderbilt University, Nashville, TN, USA
- 2020 Nathan Donahue, Oral Presentation Award, Oklahoma Microscopy Society Annual Meeting, Norman, OK, USA
- 2018 Joanne Lee<sup>1,\*</sup>, Thomas I. Brown Jr. Endowed Scholarship, University of Oklahoma, Norman, OK, USA
- 2018 Joanne Lee<sup>1,\*</sup>, Honors Research Assistant Program Fellowship, University of Oklahoma, Norman, OK, USA
- 2018 Joanne Lee<sup>1,\*</sup>, OU Mentored Research Fellowship, University of Oklahoma, Norman, OK, USA

<sup>1</sup> Undergraduate Research Student

\* Denotes Female Student

**PROFESSIONAL MEMBERSHIPS**

- American Chemical Society (ACS); member since 2016
- Biomedical Engineering Society (BMES); member since 2017
- American Association for Cancer Research (AACR); member since 2019
- American Institute of Chemical Engineers (AIChE); member since 2019

**RESEARCH**

Google Scholar Research Profile:

<https://scholar.google.com/citations?user=SQK2G8gAAAAJ&hl=en>

ORCID:

<https://orcid.org/0000-0003-2167-6221>

**PUBLICATIONS**

33. N. D. Donahue, E. R. Francek<sup>1,2</sup>, E. Kiyotake<sup>2</sup>, E. E. Thomas<sup>1,2</sup>, W. Yang<sup>2</sup>, L. Wang, M. S. Detamore, **S. Wilhelm**<sup>†</sup>, “Assessing nanoparticle colloidal stability with Single-Particle Inductively Coupled Plasma Mass Spectrometry (SP-ICP-MS).” *Analytical and Bioanalytical Chemistry*, 2020, 412, 5205-5216.  
DOI: 10.1007/s00216-020-02783-6  
Highlighted on journal cover page (*Analytical and Bioanalytical Chemistry*; Volume: 412; Issue: 22; September 2020).
32. M. N. Hossen, L. Wang, H. R. Chinthalapally, J. D. Robertson, K. M. Fung, **S. Wilhelm**, M. Bieniasz, R. Bhattacharya, P. Mukherjee, “Switching intracellular pathway and enhancing therapeutic efficacy of small interfering RNA by auroliposome.” *Science Advances*, 2020, 6, 30, eaba5379.  
DOI: 10.1126/sciadv.aba5379
31. W. Yang<sup>2</sup>, L. Wang, E. Mettenbrink<sup>1</sup>, **S. Wilhelm**<sup>†</sup>, “Nanoparticle toxicology.” *Annual Review of Pharmacology and Toxicology*, 2020, 61, in press.  
DOI: 10.1146/annurev-pharmtox-032320-110338
30. J. C. Lee<sup>1,2,\*</sup>, N. D. Donahue<sup>\*</sup>, A. S. Mao<sup>3</sup>, A. Karim<sup>1,2</sup>, M. Komarneni, E. E. Thomas<sup>1,2</sup>, E. R. Francek<sup>1,2</sup>, W. Yang<sup>2</sup>, **S. Wilhelm**<sup>†</sup>, “Exploring maleimide-based nanoparticle surface engineering to control cellular interactions.” *ACS Applied Nano Materials*, 2020, 3, 3, 2421-2429.  
DOI: 10.1021/acsanm.9b02541  
J.C. Lee: undergraduate senior in SBME.  
A.S. Mao: high school junior student at Norman North High School.
29. A. M. Syed, P. MacMillan, J. Ngai, **S. Wilhelm**, S. Sindhvani, B. R. Kingston, J. L. Y. Wu, P. Llano-Suárez, Z. P. Lin, B. Ouyang, Z. Kahiel, S. Gadde, W. C. W. Chan, “Liposome imaging in optically cleared tissues.” *Nano Letters*, 2020, 2, 1362-1369.  
DOI: 10.1021/acs.nanolett.9b04853
28. S. Sindhvani, A. M. Syed, J. Ngai, B. R. Kingston, L. Maiorino, J. Rothschild, P. MacMillan, Y. Zhang, N. U. Rajesh, T. Hoang, J. L. Y. Wu, **S. Wilhelm**, A. Zilman, S. Gadde, A. Sulaiman, B. Ouyang, Z. Lin, L. Wang, M. Egeblad, W. C. W. Chan, “The entry of nanoparticles into tumours.” *Nature Materials*, 2020, 19, 566-575.  
DOI: 10.1038/s41563-019-0566-2  
Highlighted on journal cover page (*Nature Materials*; Volume: 19; Issue: 5; May 1, 2020).

27. H. Yanyan, M. Nazir Hossen, **S. Wilhelm**, R. Bhattacharya, P. Mukherjee, "Nanoparticle interactions with the tumor microenvironment." *Bioconjugate Chemistry*, 2019, 30, 9, 2247-2263.  
DOI: 10.1021/acs.bioconjchem.9b00448
26. R. Childers and **S. Wilhelm**<sup>†</sup>, "A gold nanoparticle-based lab experiment sequence to enhance learning in biomedical nanotechnology at the undergraduate level." *American Society for Engineering Education (ASEE)*, 2019, ASEE Annual Conference & Exposition, Tampa, Florida.  
DOI: <https://peer.asee.org/31959>
25. N. D. Donahue, H. Acar<sup>†</sup>, **S. Wilhelm**<sup>†</sup>, "Concepts of nanoparticle cellular uptake, intracellular trafficking, and kinetics in nanomedicine." *Advanced Drug Delivery Reviews*, 2019, 143, 68-96.  
DOI: 10.1016/j.addr.2019.04.008
24. H. S. Leong, ..., **S. Wilhelm**, et al. "On the issue of transparency and reproducibility in nanomedicine." *Nature Nanotechnology*, 2019, 14, 629-635.  
DOI: 10.1038/s41565-019-0496-9
23. W. Poon, Y.N. Zhang, B. Ouyang, B. R. Kingston, J. L. Y. Wu, **S. Wilhelm**, W. C. W. Chan, "Elimination pathways of nanoparticles." *ACS Nano*, 2019, 13, 5, 5785-5798.  
DOI: 10.1021/acsnano.9b01383
22. J. Lazarovits, Y. Y. Chen, F. Song, W. Ngo, A. J. Tavares, Y.-N. Zhang, J. Audet, B. Tang, Q. Lin, M. Cruz Tleugabulova, **S. Wilhelm**, J. R. Krieger, T. Mallavaey, W. C. W. Chan, "Synthesis of patient-specific nanomaterials." *Nano Letters*, 2019, 19, 1, 116-123.  
DOI: 10.1021/acs.nanolett.8b03434
21. **S. Wilhelm**<sup>†</sup>, R. C. Bensen, N. R. Kothapalli, A. W. G. Burgett, R. Merrifield, C. Stephan<sup>†</sup>, "Quantification of gold nanoparticle uptake into cancer cells using single cell ICP-MS." *PerkinElmer Application Note*, 2018, 1-4.
20. Q. Dai, **S. Wilhelm**, D. Ding, A. M. Syed, S. Sindhvani, Y. Zhang, Y. Y. Chen, P. MacMillan, W. C. W. Chan, "Quantifying the ligand-coated nanoparticle delivery to cancer cells in solid tumors." *ACS Nano*, 2018, 12, 8, 8423-8435.  
DOI: 10.1021/acsnano.8b03900
19. **S. Wilhelm**<sup>†</sup>, "Perspectives for upconverting nanoparticles." *ACS Nano*, 2017, 11, 10644-10653.  
DOI: 10.1021/acsnano.7b07120  
[First article from my group at the University of Oklahoma \(SBME\) as corresponding author.](#)

*Publications prior to start at University of Oklahoma as Assistant Professor – 8/2017*

18. A. M. Syed\*, S. Sindhvani\*, **S. Wilhelm**, B. R. Kingston, D. S. W. Lee, J. L. Gommerman, W. C. W. Chan, "Three-dimensional imaging of transparent tissues *via* metal nanoparticle labeling." *JACS*, 2017, 139, 9961-9971.  
DOI: 10.1021/jacs.7b04022  
[Highlighted on journal cover page \(Journal of the American Chemical Society \(JACS\); Volume: 139; Issue: 29; July 26, 2017\).](#)

17. C. Würth, M. Kaiser, **S. Wilhelm**, B. Grauel, T. Hirsch, U. Resch-Genger, "Excitation power dependent population pathways and absolute quantum yields of upconversion nanoparticles in different solvents." *Nanoscale*, 2017, 9, 4283-4294.  
DOI: 10.1039/C7NR00092H
16. S. Sindhvani\*, A. M. Syed\*, **S. Wilhelm**, W. C. W. Chan, "Exploring passive clearing for 3D optical imaging of nanoparticles in intact tissues." *Bioconjugate Chemistry*, 2017, 28, 253-259.  
DOI: 10.1021/acs.bioconjchem.6b00500  
[Highlighted on journal cover page \(\*Bioconjugate Chemistry\*; Volume: 28; Issue: 1; January 18, 2017\).](#)
15. **S. Wilhelm**, A. J. Tavares, W. C. W. Chan, "Reply to 'Evaluation of nanomedicines: stick to the basics.'" *Nature Reviews Materials*, 2016, 1, 16074.  
DOI:10.1038/natrevmats.2016.74
14. M. Del Barrio, R. Cases, V. Cebolla, T. Hirsch, S. De Marcos, **S. Wilhelm**, J. Galbán, "A reagentless enzymatic fluorescent biosensor for glucose based on upconverting glasses, as excitation source, and chemically modified glucose oxidase." *Talanta*, 2016, 160, 586-591.  
DOI: 10.1016/j.talanta.2016.07.062
13. S. Sindhvani\*, A. M. Syed\*, **S. Wilhelm**, D. R. Glancy, Y. Y. Chen, M. Dobosz, W. C. W. Chan, "Three-dimensional optical mapping of nanoparticle distribution in intact tissues." 2016, *ACS Nano*, 10, 5468-5478.  
DOI: 10.1021/acs.nano.6b01879  
[Highlighted on journal cover page \(\*ACS Nano\*; Volume: 10; Issue: 5; May 24, 2016\).](#)
12. **S. Wilhelm**, A. J. Tavares, Q. Dai, S. Ohta, J. Audet, H. F. Dvorak, W. C. W. Chan, "Analysis of nanoparticle delivery to tumours." *Nature Reviews Materials*, 2016, 1, 16014.  
DOI: 10.1038/natrevmats.2016.14  
[Highlighted on journal cover page \(\*Nature Reviews Materials\*; Volume: 1; Issue: 5; May 5, 2016\).](#)
11. E. Scheucher, **S. Wilhelm**, O. S. Wolfbeis, T. Hirsch, T. Mayr, "Composite particles with magnetic properties, near-infrared excitation, and far-red emission for luminescence-based oxygen sensing." *Microsystems & Nanoengineering*, 2015, 1, 15026.  
DOI: 10.1038/micronano.2015.26
10. **S. Wilhelm**, M. Kaiser, C. Würth, J. Heiland, C. Carrillo-Carrion, V. Muhr, W. J. Parak, O. S. Wolfbeis, U. Resch-Genger, T. Hirsch, "Water dispersible upconverting nanoparticles: effects of surface modification on their luminescence and colloidal stability." *Nanoscale*, 2015, 7, 1403-1410.  
DOI: 10.1039/C4NR05954A
9. V. Muhr, **S. Wilhelm**, T. Hirsch, O. S. Wolfbeis, "Upconversion nanoparticles: from hydrophobic to hydrophilic surfaces." *Accounts of Chemical Research*, 2014, 47, 3481-3493.  
DOI: 10.1021/ar500253g
8. M. Del Barrio, S. De Marcos, V. Cebolla, J. Heiland, **S. Wilhelm**, T. Hirsch, J. Galbán, "Enzyme-induced modulation of the emission of upconverting nanoparticles: towards a new sensing scheme for glucose." *Biosensors and Bioelectronics*, 2014, 59, 14-20.  
DOI: 10.1016/j.bios.2014.02.076

7. **S. Wilhelm**, M. Del Barrio, J. Heiland, S. F. Himmelstoß, J. Galbán, O. S. Wolfbeis, T. Hirsch, “Spectrally matched upconverting luminescent nanoparticles for monitoring enzymatic reactions.” *ACS Applied Materials & Interfaces*, 2014, 6, 15427-15433.  
DOI: 10.1021/am5038643
6. **S. Wilhelm**, T. Hirsch, W. M. Patterson, E. Scheucher, T. Mayr, O. S. Wolfbeis, “Multicolor upconversion nanoparticles for protein conjugation.” *Theranostics*, 2013, 3, 239-248.  
DOI: 10.7150/thno.5113
5. C. Röhrer, M. Dollinger, **S. Wilhelm**, T. Hirsch, O. S. Wolfbeis. C. Fellner, C. Stroszczyński, P. Wiggerman, “Gd<sup>3+</sup> dotierte lumineszierende Nanokristalle als Kontrastmittel in der MRT (Gd<sup>3+</sup> doped luminescent nanocrystals as contrast agents for MRT.” *RöFo-Fortschritte auf dem Gebiet der Röntgenstrahlen und der bildgebenden Verfahren*, 2013, 105, S01, VO309\_5.  
DOI: 10.1055/s-0033-1346405
4. C. Fenzl, **S. Wilhelm**, T. Hirsch, O. S. Wolfbeis, “Optical sensing of the ionic strength using photonic crystals in a hydrogel matrix.” *ACS Applied Materials & Interfaces*, 2012, 5, 173-178.  
DOI: 10.1021/am302355g
3. **S. Wilhelm**, T. Hirsch. E. Scheucher, T. Mayr, O. S. Wolfbeis, “Magnetic nanosensor particles with luminescence upconversion capability.“ *Angewandte Chemie International Edition*, 2011, 50, 37, A59-64.  
DOI: 10.1002/anie.201105813
2. **S. Wilhelm**, O. S. Wolfbeis, “Irreversible sensing of oxygen ingress.” *Sensors and Actuators B: Chemical*, 2011, 153, 199-204.  
DOI: 10.1016/j.snb.2010.10.037
1. **S. Wilhelm**, O. S. Wolfbeis, “Opto-chemical micro-capillary clocks.” *Microchimica Acta*, 2010, 171, 211-216.  
DOI: 10.1007/s00604-010-0456-4

#### *Book Chapter*

1. S. M. Narum<sup>1,\*</sup>, T. Le<sup>1,2,\*</sup>, D. P. Le<sup>1,2</sup>, J. C. Lee<sup>1,2</sup>, N. D Donahue, W. Yang<sup>2</sup>, **S. Wilhelm**<sup>†</sup>, “Passive targeting in nanomedicine: fundamental concepts, body interactions, and clinical potential.” 2020, *In Nanoparticles for Biomedical Applications*, pp. 37-53. Elsevier, 2020.  
DOI: 10.1016/B978-0-12-816662-8.00004-7

<sup>†</sup> Corresponding Author

\* Authors Contributed Equally

<sup>1</sup> Undergraduate Research Student

<sup>2</sup> Female Student

<sup>3</sup> High School Student

**ORAL PRESENTATIONS**

18. 2019 “Quantifying nanoparticle delivery to solid tumors at the cellular level”, American Institute of Chemical Engineers (AIChE), Annual Meeting, Session: Nanomaterials for Biological Applications, Orlando, FL, USA  
[Invited Keynote Presentation](#)
17. 2019 “BE4NANO – Bionanotechnology Engagement for Native Americans in Oklahoma”, *Caddo-Kiowa Technology Center Business Meeting 2019*, Fort Cobb, OK, USA  
[Invited Talk](#)
16. 2019 “BE4NANO – Bionanotechnology Engagement for Native Americans in Oklahoma”, *Southwest Oklahoma STEM Alliance (SOSA) Meeting*, Wichita Tribe Economic Development Authority Office, Anadarko, OK, USA  
[Invited Talk](#)
15. 2019 “Cancer nanomedicine – challenges and future directions”, *IEEE Lecture Series at IIT Kharagpur Section*, Indian Institute of Technology (IIT) Kharagpur, **Kharagpur, West Bengal, India**  
[Invited Talk \(international\)](#)
14. 2019 “Quantitative analysis of nano-bio interactions with single-cell resolution”, *Seminar Presentation*, School of Medical Science & Technology, Indian Institute of Technology (IIT) Kharagpur, **Kharagpur, West Bengal, India**  
[Invited Talk \(international\)](#)
13. 2019 “Quantifying nano-bio interactions at the single-cell level”, *Nanolytica 2019 Meeting*, Simon Fraser University, **Vancouver, BC, Canada**  
[Invited Talk \(international\)](#)
12. 2018 “Three-dimensional optical imaging of nanoparticles in intact tissues”, *END2CANCER Conference*, Oklahoma City, OK, USA  
[Invited Talk](#)
11. 2018 “Quantitative analysis of nanoparticle delivery to solid tumors”, *World Preclinical Congress*, Boston, MA, USA  
[Invited Talk](#)
10. 2018 “Challenges and opportunities for translational nanomedicine”, *2<sup>nd</sup> Annual OU-OUHSC Biomedical Engineering Symposium*, Oklahoma City, OK, USA  
[Invited Talk](#)
9. 2018 “Targeting nanoparticles to solid tumors for therapy and diagnosis”, *Stephenson Cancer Center (SCC), Frontiers in Translational Cancer Research*, Oklahoma City, OK, USA  
[Invited Talk](#)
8. 2018 “Analysis of nanoparticle delivery to solid tumors”, *Stephenson Cancer Center (SCC) Annual Cancer Research Symposium*, Oklahoma City, OK, USA  
[Invited Talk](#)
7. 2017 “Quantifying nanoparticle delivery to solid tumors”, *END2CANCER Conference*, Oklahoma City, OK, USA  
[Invited Talk](#)

*Start at University of Oklahoma as Assistant Professor – 8/2017*

6. 2017 “Analysis of nanoparticle targeting to solid tumors”, *Gordon Research Conference: Cancer Nanotechnology*, **Mount Snow, VT, USA**  
[Invited Talk \(international\)](#)  
As a temporary resident of Canada
5. 2017 “Engineering nanomaterials for bioanalytical and therapeutic applications”, *University of Oklahoma (OU)*, **Norman, OK, USA**  
[Invited Talk \(international\)](#)  
As a temporary resident of Canada
4. 2016 “Quantification of nanoparticle tumor delivery efficiency”, *252<sup>nd</sup> American Chemical Society (ACS) National Meeting*, **Philadelphia, PA, USA**  
[Invited Talk \(international\)](#)  
As a temporary resident of Canada
3. 2013 “Upconverting luminescent nanoparticles based on lanthanide-doped NaYF<sub>4</sub>: surface engineering for (bio)analytical applications”, *Materials Research Society (MRS) Spring Meeting*, **San Francisco, CA, USA**  
[Invited Talk \(international\)](#)  
As a resident of Germany
2. 2011 “Magnetic and upconverting luminescent core-shell nanoparticles for sensor applications”, *7<sup>th</sup> International Students Conference “Modern Analytical Chemistry”*, **Prague, Czech Republic**  
[Invited Talk \(international\)](#)  
As a resident of Germany
1. 2011 “Fe<sub>3</sub>O<sub>4</sub>@NaYF<sub>4</sub>(Yb<sup>3+</sup>/Er<sup>3+</sup>) core-shell nanoparticles for sensor applications”, *European Materials Research Society (E-MRS) Spring Meeting*, **Nice, France**  
[Invited Talk \(international\)](#)  
As a resident of Germany

Red color denotes international presentation.

## PATENT APPLICATIONS

*Patent Application based on independent work*

1. 2018, M. Pacal, J. M. Sivak, **S. Wilhelm**, D. Fonn, “System and method for quantifying the presence of chemical and/or physical conditions in ocular tissues”, International Application No. CA/2018/051477; published 5/23/2019



**FUNDING***Ongoing*

3. Role: **Principal Investigator**  
Source of Support: Oklahoma Center for the Advancement of Science and Technology (OCAST) Health Research Award  
Total Award Period: October 1<sup>st</sup>, 2020 – September 30<sup>th</sup>, 2023
2. Role: **Consultant**  
Source of Support: U.S. Department of Veterans Affairs - Biomedical Laboratory Research and Development  
Total Award Period Covered: October 1<sup>st</sup>, 2019 – September 30<sup>th</sup>, 2023
1. Role: **Principal Investigator**  
Source of Support: IBEST-OUHSC Interdisciplinary Research Seed Grant – 2019/2020  
Total Award Period Covered: November 1<sup>st</sup>, 2019 – October 31<sup>st</sup>, 2020

*Completed*

2. Role: **Principal Investigator**  
Source of Support: The University of Oklahoma Research Council – Junior Faculty Fellowship  
Total Award Period Covered: April 1<sup>st</sup>, 2019 – March 31<sup>st</sup>, 2020
1. Role: **Principal Investigator**  
Source of Support: The University of Oklahoma Research Council – Junior Faculty Fellowship  
Total Award Period Covered: April 1<sup>st</sup>, 2018 – March 31<sup>st</sup>, 2019

<b>TEACHING AND ADVISING</b>
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**TEACHING ACTIVITIES**Spring 2020

*BME 3163 – Biomedical Micro-/Nano-Technology (undergraduate level)*

Fall 2019

*BME 2333 – Biomedical Engineering Fundamentals (undergraduate level)*

- **New preparation**

Spring 2019

*BME 3440 – Mentored Research Experience (undergraduate level)*

*BME 3980 – Honors Research (HONORS; undergraduate level)*

*BME 5413\* – Nanomedicine (graduate level)*

- **New course developed**

Fall 2018

*BME 3440 – Mentored Research Experience (undergraduate level)*

*BME 3980 – Honors Research (HONORS; undergraduate level)*

*BME 3163 – Biomedical Micro-/Nano-Technology (undergraduate level)*

Summer 2018

*BME 3440 – Mentored Research Experience (undergraduate level)*

Spring 2018

*BME 3980 – Honors Research (HONORS; undergraduate level)*

*BME 3163\* – Biomedical Micro-/Nano-Technology (undergraduate level)*

- **New course developed**

\*New course developed

**ADVISEES – POSTDOCORAL FELLOWS**

1. Dr. Lin Wang, 03/2020 – present

**ADVISEES – GRADUATE RESEARCH STUDENTS***Ph.D. Graduate Research Students*

3. Vinit Sheth, 08/2019 – present
2. Wen Yang, 07/2019 – present
1. Nathan Donahue, 08/2018 – present

*M.S. Graduate Research Students*

2. Evan Mettenbrink, 08/2020 – present (accelerated BS/MS program)
1. Skyler Quine, 01/2019 – 05/2020 (accelerated BS/MS program)  
Graduated on 5/1/2020  
MS Thesis Title: “Quantification of nanoparticle interactions with the nanoparticle clearance system”

**ADVISEES – UNDERGRADUATE RESEARCH STUDENTS***Senior Thesis: Completed*

2. Katherine Haddad (Advisor: Dr. Handan Acar, SBME)  
Senior Undergraduate Student, Biomedical Engineering, University of Oklahoma  
May 2019
1. Joanne Lee (Advisor: Dr. Stefan Wilhelm, SBME)  
Senior Undergraduate Student, Biomedical Engineering, University of Oklahoma  
May 2019

**S E R V I C E****GRANT PROPOSAL REVIEW ACTIVITIES***International*

- 2019 Deutsche Forschungsgemeinschaft (German Research Foundation), Bonn, Germany
- 2019 Alberta Cancer Foundation, Calgary, AB, Canada
- 2019 Prostate Cancer Research Centre, London, United Kingdom
- 2019 India Alliance, The Wellcome Trust, DBT, New Delhi, India
- 2018 Dutch Cancer Society
- 2018 LabEx MiChem – Comité Scientifique, Sorbonne Universités, 75252 Paris, France
- 2018 Irish Research Council
- 2017 Dutch Cancer Society

*Domestic*

- 2019 National Institutes of Health (NIH), Developmental Therapeutics (DT) Study Section, Early Career Reviewer (ECR) Program, Washington, DC, USA
- 2019 National Science Foundation (NSF), CEBT, Alexandria, VA, USA
- 2018 University of Nebraska, Lincoln, NE, USA
- 2018 American Institutes of Biological Sciences (AIBS), McLean, VA, USA
- 2018 National Science Foundation (NSF), CBET, Alexandria, VA, USA
- 2017 National Science Foundation (NSF), CEBT, Alexandria, VA, USA

**JOURNAL MANUSCRIPT REVIEW ACTIVITIES (2015 – Present)**

## Journal Name (Publisher)

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ACS Applied Nano Materials (American Chemical Society, ACS)  
 ACS Nano (American Chemical Society, ACS)  
 Acta Biomaterialia (Elsevier)  
 Advanced Healthcare Materials (Wiley)  
 Advanced Materials (Wiley)  
 Advanced Optical Materials (Wiley)  
 Advanced Science (Wiley)  
 Analytical and Bioanalytical Chemistry (SpringerNature)  
 Angewandte Chemie International Edition (Wiley)  
 Beilstein Journal of Nanotechnology (Beilstein)  
 Biomaterials Science (Royal Society of Chemistry, RSC)  
 Chemistry of Materials (American Chemical Society, ACS)  
 ChemMedChem (Wiley)  
 Drug Delivery and Translational Research (Springer)  
 Drug Discovery Today (Elsevier)  
 European Journal of Pharmaceutics and Biopharmaceutics (Elsevier)  
 International Journal of Molecular Sciences (MDPI)  
 Journal of Alloys and Compounds (Elsevier)  
 Journal of Materials Chemistry B (Royal Society of Chemistry, RSC)  
 Journal of the American Chemical Society (JACS)  
 Journal of Nanobiotechnology (SpringerNature)  
 Materials (MDPI)  
 Microchimica Acta (SpringerNature)  
 Molecules (MDPI)  
 Nanomaterials (MDPI)  
 Nanoscale (Royal Society of Chemistry, RSC)  
 Nano Today (Elsevier)  
 Nature Biomedical Engineering (SpringerNature)  
 Nature Communications (SpringerNature)  
 Nature Photonics (SpringerNature)  
 Nature Protocols (SpringerNature)  
 PNAS (US National Academy of Science)  
 Polymers (MDPI)  
 Scientific Reports (SpringerNature)  
 Sensors (MDPI)  
 Small (Wiley)  
 Trends in Analytical Chemistry. (Elsevier)  
 Wiley Interdisciplinary Reviews: Nanomedicine

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Year	Number of manuscripts reviewed
2015:	16
2016:	17
2017:	41
2018:	35

Year	Number of manuscripts reviewed
2019:	31
2020:	11

**EXTERNAL SERVICE TO THE PROFESSION**

- 11/2019      Session Co-Chair  
END2CANCER Conference, Oklahoma City, OK, USA, “Session III: Protein and Nucleic Acid Delivery Systems”
- 10/2019      Session Co-Chair  
BMES 2019 Annual Meeting Biomedical Engineering Society, Philadelphia, PA, USA, “Nano Delivery Systems” – Nano and Micro Technologies Track
- Since 06/2019  
Editorial board member of the “European Journal of Pharmaceutics and Biopharmaceutics”, Elsevier  
Discipline: Pharmaceutics
- 05/2019      Abstract reviewer  
BMES 2019, Biomedical Engineering Society Annual Meeting, Philadelphia, PA, USA
- 05/2019      Poster judge  
Nanolytica 2019 Meeting, Simon Fraser University, Vancouver, BC, Canada
- 04/2019      Poster judge  
National American Indian Science & Engineering Fair 2019, Oklahoma State University, Stillwater, OK
- 08/2018      Symposium Co-Chair and Co-Organizer  
256<sup>th</sup> American Chemical Society (ACS) National Meeting, Boston, MA, USA, “Understanding Nano-Bio Interactions: Implications for Bio-Imaging, Diagnosis & Treatment”
- 05/2017      Student poster judge  
Institute of Biomaterials & Biomedical Engineering (IBBME), University of Toronto, Canada  
IBBME’s Annual Research Conference (iARC) 2017
- 05/2016      Student poster judge  
Institute of Biomaterials & Biomedical Engineering (IBBME), University of Toronto, Canada  
IBBME Scientific Day 2016
- 09/2011      Session chair (Session 3)  
7<sup>th</sup> International Students Conference “Modern Analytical Chemistry”, Prague, Czech Republic