

Peter M. Tessier

Albert M. Mattocks Professor

Departments of Pharmaceutical Sciences, Chemical Engineering and Biomedical Engineering
Chemical Biology Program, Biointerfaces Institute, University of Michigan, Ann Arbor, MI 48109
P: 734.763.1486, ptessier@umich.edu, tessier.lab.medicine.umich.edu

EDUCATION

- 2003 **Ph.D., Chemical Engineering** University of Delaware
Dissertation: *“Fundamentals and applications of nanoparticle interactions and self-assembly”*
Advisors: Abraham M. Lenhoff and Stanley I. Sandler
- 1998 **B.S., Chemical Engineering** University of Maine
Co-Valedictorian

PROFESSIONAL EXPERIENCE

- 2017-present **Albert M. Mattocks (Endowed) Professor**
University of Michigan, Departments of Pharmaceutical Sciences, Chemical Engineering and Biomedical Engineering, Biointerfaces Institute
- 2016-2017 **Richard Baruch M.D. Career Development (Endowed) Professor**
Rensselaer Polytechnic Institute, Department of Chemical & Biological Engineering, Center for Biotechnology & Interdisciplinary Studies
- 2014-2016 **Richard Baruch M.D. Career Development (Endowed) Associate Professor**
Rensselaer Polytechnic Institute, Department of Chemical & Biological Engineering, Center for Biotechnology & Interdisciplinary Studies
- 2014-2015 **Alexander von Humboldt Fellow**
Max Planck Institute of Biochemistry (Martinsried, Germany)
Host: F. Ulrich Hartl
- 2013-2016 **Associate Professor**
Rensselaer Polytechnic Institute, Department of Chemical & Biological Engineering, Center for Biotechnology & Interdisciplinary Studies
*granted early tenure (December 2012, promotion effective July 2013)
- 2007-2013 **Assistant Professor**
Rensselaer Polytechnic Institute, Department of Chemical & Biological Engineering, Center for Biotechnology & Interdisciplinary Studies
- 2003-2007 **American Cancer Society Postdoctoral Fellow**
Whitehead Institute for Biomedical Research (MIT)
Advisor: Susan Lindquist

ACADEMIC HONORS

- 2018 Fellow, American Institute for Medical and Biological Engineering
- 2016 Young Investigator Award, Biochemical Engineering Journal (Dublin, Ireland)
- 2015 Invited participant, USA National Academy of Engineering Frontiers of Engineering Symposium
- 2015 Young Investigator Award, Division of Biochemical Technology, American Chemical Society
- 2014 Young Scientist Award, World Economic Forum (Tianjin, China)
- 2014-2015 Alexander von Humboldt Fellowship for Experienced Researchers
- 2010-2015 National Science Foundation CAREER Award
- 2010-2014 Pew Scholar Award in Biomedical Sciences
- 2014 Rensselaer Dept. of Chemical & Biological Engineering Teaching Award
- 2013 Rensselaer School of Engineering Teaching Excellence Award

2012	Rensselaer Early Career Award
2012	Rensselaer School of Engineering Research Excellence Award
2012	Allan P. Colburn Lectureship, Univ. of Delaware
2004-2007	American Cancer Society Postdoctoral Fellowship
2004	National Institutes of Health Postdoctoral Fellowship (declined)
2002	W.H. Peterson Award, Best Student Presentation (BIOT), ACS National Meeting
2002	First Place, Colorado Protein Stability Conference Poster Session
2001	Teaching Fellow, Dept. of Chemical Eng., Univ. of Delaware
2001	Pigford Teaching Assistant Award, Dept. of Chemical Eng., Univ. of Delaware
2000	Semi-Finalist, Discover Magazine Award for Technological Innovation
1999-2002	NASA Graduate Fellowship
1998	Co-Valedictorian, Univ. of Maine

PATENTS AND PATENT APPLICATIONS

1. **Tessier, P.M.**, Starr, C., Kingsbury, J.S., Gokarn, Y.R., “Systems and methods for antibody characterization”, U.S. Patent Application 63/134,050 (2021)
2. Desai, A.A., Smith, M.D., Zhang, Y., **Tessier, P.M.**, “Amyloid-specific antibodies and uses thereof”, U.S. Patent Application 63/129,318 (2020).
3. **Tessier P.M.**, Stimple, S.D., Staby, A., “Antibodies and use thereof”, U.S. Patent 11,208,477 B2 (2021).
<https://patents.google.com/patent/US11208477B2/en>
4. Lindquist S.L., **Tessier P.M.**, “Protein aggregation domains and methods of use thereof”, U.S. Patent 0183860 A1 (2011).
<https://patents.google.com/patent/US20110183860>

BOOK CHAPTERS

Tessier P.M., Lindquist S.L., “Unraveling molecular mechanisms and structures of self-perpetuating prions”, in *Protein Misfolding Diseases: Current and Emerging Principles and Therapies*, John Wiley & Sons. Dobson, C.M., Kelly, J.W. and Ramirez-Alvarado, M. Eds., (2010).
<https://doi.org/10.1002/9780470572702.ch8>

JOURNAL PUBLICATIONS

[82 published papers or papers in press, *=corresponding author, †=undergraduate student, 5419 citations total, average of 66 citations per paper, h-index=37 (= h-index paper), i10-index=63 (**= i10-index paper), Google Scholar, ****= >100 citations paper]**

1. Makowski, E.K., Kinnunen, P.C., Huang, J.H., Wu, L., Smith, M.D., Wang, T., Desai, A.A., Streu, C.N., Zhang, Y., Zupancic, J.M., Schardt, J.S., Linderman, J.J., **Tessier, P.M.**,* “Co-optimization of therapeutic antibody affinity and specificity using machine learning models that generalize to novel mutational space”, *in review* (2022).
2. Makowski, E.W., Schardt, J.S., **Tessier, P.M.**,* “Mutational analysis of SARS-CoV-2 Variants of Concern reveals key tradeoffs between receptor affinity and antibody escape”, *in review* (2022).
3. Desai, A.A., Zupancic, J.M., Smith, M.D., **Tessier, P.M.**,* “Isolating anti-amyloid antibodies from yeast-displayed libraries”, *Methods Mol Biol*, in press (2022).
4. Weishu, W., Tan, X., Zupancic, J., Schardt, J., Desai, A., Smith, M., Zhang, J., Xie, L. Khaing Oo, M., **Tessier, P.M.**,* Fan, X.,* “Rapid and quantitative in-vitro evaluation of SARS-CoV-2 neutralizing antibodies and nanobodies”, *Anal Chem*, in press (2022).
5. Gupta, P., Kumar, S., Zhang, Y., Scheer, J.M., **Tessier, P.M.**,* “Antibodies with weakly basic isoelectric points minimize trade-offs between formulation and physiological colloidal properties”, *Mol Pharm*, in press (2022).
<https://doi.org/10.1021/acs.molpharmaceut.1c00373>
6. Zupancic, J.M., Desai, A.A., **Tessier, P.M.**,* “Facile isolation of high-affinity nanobodies from synthetic libraries using CDR-swapping mutagenesis”, *STAR Protoc*, **3**, 101101 (2022).
<https://doi.org/10.1016/j.xpro.2021.101101>
7. Makowski, E.W., Schardt, J.S., **Tessier, P.M.**,* “Improving antibody drug development using bionanotechnology”, *Curr Opin Biotech*, **74**, 137 (2022).
<https://doi.org/10.1016/j.copbio.2021.10.027>

8. Schardt, J.S., Jhajj, H.S., O'Meara, R.L.,[†] Lwo, T.S.,[†] Smith, M.D., **Tessier, P.M.**,* “Agonist antibody discovery: experimental, computational and rational engineering approaches”, *Drug Discov Today*, **27**, 31 (2022).
<https://doi.org/10.1016/j.drudis.2021.09.008>
9. Pornnoppadol, G., Zhang, B., Desai, A.A., Berardi, A., Remmer, H.A., **Tessier, P.M.**, Greineder, C.F.,* “A hybridoma-derived monoclonal antibody with high homology to the aberrant myeloma light chain”, *PLoS One*, **16**, e0252558 (2021).
<https://doi.org/10.1371/journal.pone.0252558>
10. Schardt, J.S., Pornnoppadol, G., Desai, A.A., Park, K.S., Zupancic, J.M., Makowski, E.K., Smith, M.D., Chen, H., Barbosa, M.G.M., Cascalho, M., Lanigan, T.M., Smith, J.L., Stuckey, J.A., Moon, J.J., **Tessier, P.M.**,* “Discovery and characterization of high-affinity, potent SARS-CoV-2 neutralizing antibodies via single B cell screening”, *Sci Rep*, **11**, 20738 (2021).
<https://doi.org/10.1038/s41598-021-99401-x>
11. Nilvebrant, J., Ereño-Orbea, J., Gorelik, M., Julian, M.C., **Tessier, P.M.**, Julien, J.-P., Sidhu, S.,* “Systematic engineering of optimized autonomous heavy-chain variable domains”, *J Mol Biol*, **433**, 167241 (2021).
<https://doi.org/10.1016/j.jmb.2021.167241>
12. Zupancic, J.M., Schardt, J.S., Desai, A.A., Makowski, E.M., Smith, M.D., Pornnoppadol, G., Barbosa, M.G.M., Cascalho, M., Lanigan, T.M., **Tessier, P.M.**,* “Engineered multivalent nanobodies potently and broadly neutralize SARS-CoV-2 variants”, *Adv Ther*, **4**, 2100099 (2021).
<https://doi.org/10.1002/adtp.202100099>
13. Makowski, E.W., Wu, L., Desai, A.A., **Tessier, P.M.**,* “Highly sensitive detection of antibody non-specific interactions using flow cytometry”, *mAbs*, **13**, 1951426 (2021).
<https://doi.org/10.1080/19420862.2021.1951426>
14. Starr, C.G., Makowski, E.K., Wu, L., Berg, B.,[†] Kingsbury, J.S.,* Gokarn, Y.R.,* **Tessier, P.M.**,* “Ultra-dilute measurements of self-association for the identification of antibodies with favorable high concentration solution properties”, *Mol Pharm*, **18**, 2744 (2021).
<https://doi.org/10.1021/acs.molpharmaceut.1c00280>
15. Zupancic, J.M., Desai, A.A., Schardt, J.S., Pornnoppadol, G., Makowski, E.M., Smith, M.D., Kennedy, A.A., Barbosa, M.G.M., Cascalho, M., Lanigan, T.M., Tai, A.W., **Tessier, P.M.**,* “Directed evolution of potent neutralizing nanobodies against SARS-CoV-2 using CDR-swapping mutagenesis”, *Cell Chem Biol*, **28**, 1379 (2021).**
<https://doi.org/10.1016/j.chembiol.2021.05.019>
16. Makowski, E.K., Wu, L., Gupta, P., **Tessier, P.M.**,* “Discovery-stage identification of drug-like antibodies using emerging experimental and computational methods”, *mAbs*, **13**, 1895540 (2021).
<https://doi.org/10.1080/19420862.2021.1895540>
17. Desai, A.A., Smith, M.D., Zheng, Y., Makowski, E.K., Gerson, J.E., Ionescu, E.,[†] Starr, C.G., Zupancic, J.M., Moore, S.J., Sutter, A.B., Ivanova, M.I., Murphy, G.G., Paulson, H.L., **Tessier, P.M.**,* “Rational affinity maturation of anti-amyloid antibodies with high conformational and sequence specificity”, *J Biol Chem*, **296**, 100508 (2021).
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18. Lou, W., Stimple, S.D., Desai, A.A., Makowski, E.K., Kalyoncu, S., Mogensen, J.E., Spang, L.T., Asgreen, D.J., Staby, A., Duus, K., Amstrup, J., **Tessier, P.M.**,* “Directed evolution of conformation-specific antibodies for sensitive detection of polypeptide aggregates in therapeutic drug formulations”, *Biotech Bioeng*, **118**, 797 (2021).
<https://doi.org/10.1002/bit.27610>
19. Roush, D.,* Asthagiri, D., Babi, D.K., Benner, S., Bilodeau, C., Carta, G., Ernst, P., Fedesco, M., Fitzgibbon, S., Flamm, M., Griesbach, J., Grosskopf, T., Hansen, E.B., Hahn, T., Hunt, S., Insaidoo, F., Lenhoff, A., Lin, J., Marke, H., Marques, B., Papadakis, E., Schlegel, F., Staby, A., Stenvang, M., Sun, L., **Tessier, P.M.**, Todd, R., von Lieres, E., Welsh, J., Willson, R., Wang, G., Wucherpennig, T., Zavalov, O., “Toward in silico CMC: An industrial collaborative approach to model-based process development”, *Biotech Bioeng*, **117**, 3986 (2020).**
<https://doi.org/10.1002/bit.27520>
20. Sawant, M.S., Streu, C.N., Wu, L., **Tessier, P.M.**,* “Toward drug-like multispecific antibodies by design”, *Int J Mol Sci*, **21**, 7496 (2020).**
<https://doi.org/10.3390/ijms21207496>

21. Zhang, Y., Wu, L., Gupta, P., Desai, A.A., Smith, M.D., Rabia, L.A., Ludwig, S.D.,[†] **Tessier, P.M.**,* “Physicochemical rules for identifying monoclonal antibodies with drug-like specificity”, *Mol Pharm*, **17**, 7 (2020).**
<https://doi.org/10.1021/acs.molpharmaceut.0c00257>
22. Alam, M.E., Slaney, T.R., Wu, L., Das, T.K., Kar, S., Barnett, G.V., Leone, A., **Tessier, P.M.**,* “Unique impacts of methionine oxidation, tryptophan oxidation and asparagine deamidation on antibody stability and aggregation”, *J Pharm Sci*, **109**, 656 (2020).**
<https://doi.org/10.1016/j.xphs.2019.10.051>
23. Stimple, S.D., Smith, M.S, **Tessier, P.M.**,* “Directed evolution methods for overcoming trade-offs between protein activity and stability”, *AIChE J*, **66**, e16814 (2020).[†] **
[†]Special Issue in honor of Frances Arnold’s Nobel Prize
<https://doi.org/10.1002/aic.16814>
24. Lee, C.-H., Kang, T.H., Godon, O., Watanabe, M., Delidakis, G., Gillis, C.M., Sterlin, D., Hardy, D., Cogné, M., Macdonald, L.E., Murphy, A.J., Tu, N., Lee, J., McDaniel, J.R., Makowski, E.K., **Tessier, P.M.**, Meyer, A.S., Bruhns, P.,* Georgiou, G.,* “An engineered, pH-toggle switch, human Fc domain for ultra-long circulation persistence”, *Nat. Commun.*, **10**, 5031 (2019).**
<https://doi.org/10.1038/s41467-019-13108-2>
25. Stimple, S.D., Kalyoncu, S., Desai, A.D., Mogensen, J.E., Spang, L.T., Asgreen, D.J., Staby, A., **Tessier, P.M.**,* “Sensitive detection of glucagon aggregation using amyloid fibril-specific antibodies”, *Biotech Bioeng*, **116**, 1868 (2019).
<https://doi.org/10.1002/bit.26994>
26. Julian, M.C., Rabia, L.A., Desai, A.A., Arsiwala, A., Gerson, J.E., Paulson, H.L., Kane, R.S., **Tessier, P.M.**,* “Nature-inspired design and evolution of anti-amyloid antibodies”, *J Biol Chem*, **294**, 8438 (2019).**
<https://doi.org/10.1074/jbc.RA118.004731>
27. Alam, M.E., Barnett, G.V., Slaney, T.R., Starr, C.G., Das, T.K., **Tessier, P.M.**,* “Deamidation can compromise antibody colloidal stability and enhance aggregation in a pH-dependent manner”, *Mol Pharm*, **16**, 1939 (2019).**
<https://doi.org/10.1021/acs.molpharmaceut.8b01311>
28. Starr, C.G., **Tessier, P.M.**,* “Selecting and engineering monoclonal antibodies with drug-like specificity”, *Current Opin Biotech*, **60**, 119 (2019).**
<https://doi.org/10.1016/j.copbio.2019.01.008>
29. Rabia, L.A. Zhang, Y., Ludwig, S.D., Julian, M.C., **Tessier, P.M.**,* “Net charge of the complementarity-determining regions is a key predictor of antibody specificity”, *Protein Eng Des Sel*, **31**, 409 (2018).**
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30. Rabia, L.A., Desai, A.A., Jhajj, H.S., **Tessier, P.M.**,* “Understanding and overcoming trade-offs between antibody affinity, specificity, stability and solubility”, *Biochem. Eng. J.*, **137**, 365 (2018).**
<https://doi.org/10.1016/j.bej.2018.06.003>
31. Alam, M.E., Geng, S.B., Bender, C., Ludwig,[†] S.D., Linden, L., Hoet, R., **Tessier, P.M.**,* “Biophysical and sequence-based methods for identifying monovalent and bivalent antibodies with high colloidal stability”, *Mol Pharm*, **15**, 150 (2018).**
<https://doi.org/10.1021/acs.molpharmaceut.7b00779>
32. Tiller, K.E., Li, L., Kumar, S., Julian, M.C., Garde, S., **Tessier, P.M.**,* “Arginine mutations in antibody complementarity-determining regions display context-dependent affinity/specificity trade-offs”, *J Biol Chem*, **292**, 16638 (2017).**
<https://doi.org/10.1074/jbc.M117.783837>
33. Tiller, K.E., Chowdhury, R., Li, T., Ludwig, S.,[†] Sen, S.,[†] Maranas, C., **Tessier, P.M.**,* “Facile affinity maturation of antibody variable domains using natural diversity mutagenesis”, *Front Immunol*, **8**, 986 (2017).**
<https://doi.org/10.3389/fimmu.2017.00986>
34. Julian, M.C., Li, L., Garde, S., Wilen, R.,[†] **Tessier, P.M.**,* “Efficient affinity maturation of antibody variable domains requires co-selection of compensatory mutations to maintain thermodynamic stability”, *Sci Rep*, **7**, 45259 (2017).**
<https://doi.org/10.1038/srep45259>
35. Zhao, J., Huvent, I., Lippens, G., Eliezer, D., Zhang, A., Li, Q., **Tessier, P.M.**, Linhardt, R.J., Zhang, F., Wang, C.,* “Glycan determinants of heparin-tau interaction,” *Biophys J*, **112**, 921 (2017).**
<https://doi.org/10.1016/j.bpj.2017.01.024>

36. Nilvebrant, J.,* **Tessier, P.M.**, Sidhu, S.S., “Engineered autonomous human variable domains”, *Curr Pharm Des*, **22**, 1 (2016).**
<https://doi.org/10.2174/1381612822666160921143011>
37. Geng, S.B., Wu, J., Alam, M.E., Schultz, J.S., Dickinson, C.D., Seminar, C.R.,† **Tessier, P.M.**,* “Facile preparation of stable antibody-gold conjugates and application to affinity-capture self-interaction nanoparticle spectroscopy”, *Bioconjug Chem*, **27**, 2287 (2016).**
<https://doi.org/10.1021/acs.bioconjchem.6b00207>
38. Geng, S.B., Wittekind, M., Vigil, A., **Tessier, P.M.**,* “Measurements of monoclonal antibody self-association are correlated with complex biophysical properties”, *Mol Pharm*, **13**, 1636 (2016).**
<https://doi.org/10.1021/acs.molpharmaceut.6b00071>
39. Osborne, D.M., Fitzgerald, D.P., O’Leary, K.E., Anderson, B.M., Lee, C.C., **Tessier, P.M.**, McNay, E.C.,* “Intrahippocampal administration of a domain antibody that binds aggregated amyloid- β reverses cognitive deficits produced by diet-induced obesity”, *Biochim Biophys Acta*, **1860**, 1291 (2016).**
<https://doi.org/10.1016/j.bbagen.2016.03.005>
40. Lee, C.C., Julian, M.C., Tiller, K.E., Meng, F., DuConge, S.E.,† Akter, R., Raleigh, D.P., **Tessier, P.M.**,* “Design and optimization of anti-amyloid domain antibodies specific for A β and IAPP”, *J Biol Chem*, **291**, 2858 (2016).***
<https://doi.org/10.1074/jbc.M115.682336>
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42. Julian, M.C., Lee, C.L., Tiller, K.E., Rabia, L.A., Day, E.K.,† Schick III, A.J.,† **Tessier, P.M.**,* “Co-evolution of affinity and stability of grafted amyloid-motif domain antibodies”, *Protein Eng Des Sel*, **28**, 339 (2015).**
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44. McBride, S.A., Tilger, C.F., Sanford, S.P., **Tessier, P.M.**, Hirsra, A.H.,* “Comparison of human and bovine insulin amyloidogenesis under uniform shear”, *J Phys Chem B*, **119**, 10426 (2015).**
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45. Estep, P., Caffry, I., Yu, Y., Sun, T., Cao, Y., Leanaugh, H., Jain, T., Vásquez, M., **Tessier, P.M.**, Xu, Y.,* “An alternative assay to hydrophobic interaction chromatography for high-throughput characterization of monoclonal antibodies”, *mAbs*, **4**, 553 (2015).***
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46. Li, X., Geng, S.B., Chiu, M.L., Saro, D., **Tessier, P.M.**,* “High-throughput assay for measuring monoclonal antibody self-association and aggregation in serum”, *Bioconjug Chem*, **26**, 520 (2015).**
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47. Geng, S.B., Cheung, J.K., Narasimhan, C., Shameem, M., **Tessier, P.M.**,* “Improving monoclonal antibody selection and engineering using measurements of colloidal protein interactions”, *J Pharm Sci*, **103**, 3356 (2014).***
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48. Jayaraman, J., Wu, J., Brunelle,† M.C., Cruz, A.M., Goldberg, D.S., Lobo, B., Shah, A., **Tessier, P.M.**,* “Plasmonic measurements of monoclonal antibody self-association using self-interaction nanoparticle spectroscopy”, *Biotech Bioeng*, **11**, 1513 (2014).**
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49. **Tessier, P.M.**,* Wu, J., Dickinson, C.G., “Emerging methods for identifying monoclonal antibodies with low propensity to self-associate during the early discovery process”, *Expert Opin Drug Deliv*, **11**, 461 (2014).**
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50. Perchiaica, J.M., Lee, C.C., **Tessier, P.M.**,* “Optimal charged mutations in the complementarity-determining regions that prevent domain antibody aggregation are dependent on the antibody scaffold”, *Protein Eng Des Sel*, **27**, 29 (2014).***
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51. Liu, Y., Caffry, I., Wu, J., Geng, S.B., Jain, T., Sun, T., Reid, F., Cao, Y., Estep, P., Yu, Y., Vásquez, M., **Tessier, P.M.**, Xu, Y.,* “High-throughput screening for developability during early-stage antibody discovery using self-interaction nanoparticle spectroscopy”, *mAbs*, **6**, 483 (2014).****

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52. Li, X., Zhang, X., Ladiwala, A.R.A., Du, D., Yadav, J.K., **Tessier, P.M.**, Wright, P.E., Kelly, J.W., Buxbaum, J.N.,* “Mechanisms of transthyretin inhibition of A β aggregation in vitro”, *J Neurosci*, **33**, 19423 (2013).****
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 53. Andersson, E.K., Bengtsson, C., Evans, M.L., Chorell, E., Sellstedt, M., Lindgren, A.E.G., Hufnagel, D.A., Bhattacharya, M., **Tessier, P.M.**, Wittung-Stafshede, P., Almqvist, F.,* Chapman, M.R.,* “Modulation of curli assembly and pellicle biofilm formation by chemical and protein chaperones”, *Chem Biol*, **20**, 1245 (2013).***
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 54. Lee, C., Perchiacca, J.M., **Tessier, P.M.**,* “Toward aggregation-resistant antibodies by design”, *Trends Biotechnol*, **31**, 612 (2013).***
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 55. Tiller, K.E., **Tessier, P.M.**,* “Lifting the veil on amyloid drug design”, *eLife*, **2**, e00857 (2013).
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 56. Sule, S.V., Dickinson, C.G., Lu, J., Chow, C.-K., **Tessier, P.M.**,* “Rapid analysis of antibody self-association in complex mixtures using immunogold conjugates”, *Mol Pharm*, **10**, 1322 (2013).***
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 57. Ladiwala, A.R.A., Bhattacharya, M., Perchiacca, J.M., Cao, P., Raleigh, D.P., Abedini, A., Schmidt, A.M., Varkey, J., Langen, R., **Tessier, P.M.**,* “Rational design of potent domain antibody inhibitors of amyloid fibril assembly”, *P Natl Acad Sci U S A*, **109**, 19965 (2012).***
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Nature, **447**, 541(2007): <https://doi.org/10.1038/447541b>
Nat Methods, **4**, 538 (2007): <https://www.nature.com/articles/nmeth0707-538a.pdf?proof=t%3B>
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INVITED SEMINARS (109 since 2007)

- 2022 Eli Lilly (Mar 10)
- 2021 Boehringer Ingelheim (Nov 12)
 Adimab (Sept 20)
 University of Cincinnati, College of Medicine (Sept 9)
 Genentech (Sept 3)
 Eli Lilly (Aug 11)
 Bristol Myers Squibb (Aug 2)
 Novo Nordisk (Apr 15)
 Johns Hopkins University, Dept. of Chemical & Biomolecular Eng. (Apr 8)
 Genentech, Antibody Engineering (Jan 13-14)
- 2020 Michigan State University, Dept. of Chemical Engineering & Materials Science (Sept 3)
 American Association of Pharmaceutical Scientists (AAPS) Webinar (Aug 13)
 Patheon (ThermoFisher), Princeton, NJ (Feb 13)
- 2019 McGill University, Depart. of Pharmacology & Therapeutics, Montreal, Canada (Oct 25)
 University of Kansas, Dept. of Pharmaceutical Chemistry (Oct 15)
 Amgen, Thousand Oaks, CA (May 9)
 New York University, Dept. of Chemical & Biomolecular Engineering (Apr 26)
 Pfizer, Cambridge, MA (Feb 28)
- 2018 Boehringer Ingelheim, Ridgefield, CT (Dec 7)
 University of Colorado, Boulder (Oct 18)
 Iowa State University, Department of Chemical & Biological Engineering (Sept 6)
 Roche Diagnostics, Penzberg, Germany (Aug 22)
 University of Natural Resources and Life Sciences, Vienna, Austria (Aug 20)
 Bayer HealthCare, Wuppertal, Germany (Aug 15)
 Adimab, Lebanon, NH (Jul 16)
 University of Washington, Dept. of Bioengineering (Apr 19)
 Texas A&M, Department of Biochemistry & Biophysics (Feb 28)
- 2017 University of California, Santa Barbara, Dept. of Chemical Engineering (Apr 20)
 Sanofi, Framingham, MA (Apr 11)
 Univ. of Michigan, Dept. of Chemical Engineering (Jan 31)
- 2016 Univ. of Michigan, Dept. of Department of Pharmaceutical Sciences (Nov 2)
 Univ. of North Carolina, Charlotte, Dept. of Chemistry (Oct 27)
 Imperial College, Department of Chemical Engineering, London, England (Oct 21)
 Bayer HealthCare, Wuppertal, Germany (Jul 11)
 University of Zurich, Dept. of Biochemistry, Switzerland (Jul 6)
 University of Pennsylvania, Dept. of Chemical & Biomolecular Engineering (Apr 20)
 Genor BioPharma, Shanghai, China (Apr 13)
 Pfizer, Cambridge, MA (Feb 25)
 Regeneron Pharmaceuticals, Tarrytown, NY (Jan 29)

- 2015 Brooklyn College, Dept. of Biology (Dec 10)
 DuPont, Palo Alto, CA (Dec 2)
 University of Maryland, Dept. of Bioengineering (Nov 20)
 Boehringer Ingelheim, Ridgeway, CT (Oct 9)
 Amgen, Thousand Oaks, CA (Aug 27)
 Morphosys, Martinsried, Germany (Jul 16)
 Technische Universität München, Freising-Weihenstephan, Germany (Jul 14)
 Technische Universität München, Garching, Germany (Jul 1)
 Novo Nordisk, Måløv, Denmark (Jun 15)
 Ludwig-Maximilians-Universität München, Dept. of Pharmacy, Germany (May 21)
 KULeuven, Department of Cellular and Molecular Medicine, Leuven, Belgium (Apr 29)
 Schrödinger, New York, NY (Jan 15)
 Bristol-Myers Squibb, New Brunswick, NJ (Jan 9)
- 2014 Boehringer Ingelheim, Biberach, Germany (Nov 13)
 Max Planck Institute of Biochemistry, Martinsried, Germany (Sept 24)
 University of California, Riverside, Dept of Chemical & Environmental Eng. (Jun 6)
 Johns Hopkins University, Dept. of Chemical & Biomolecular Eng. (Apr 24)
 Roche Diagnostics, Penzberg, Germany (Apr 2)
 Bayer HealthCare, Wuppertal, Germany (Mar 28)
 University of Michigan, Dept of Molecular, Cellular, & Developmental Biology (Mar 21)

AWARDS RECEIVED BY LAB MEMBERS

Postdoctoral associates

- NIH F32 Postdoctoral Fellowship, Charles Starr, 2018
- NIH F32 Postdoctoral Fellowship, John Schardt, 2020
- NIH T32 Postdoctoral Fellowship, Michael Lucas, 2021

Graduate students

- NSF Graduate Fellowship, Kathryn Tiller, 2011
- NSF Graduate Fellowship, Mark Julian, 2012
- NSF Graduate Fellowship, Lilia Rabia, 2013
- W.H. Peterson Award for Best Student Oral Presentation, Division of Biochemical Technology, American Chemical Society National Meeting, Joseph Perchiacca, 2013
- W.H. Peterson Award for Best Student Poster Presentation, Division of Biochemical Technology, American Chemical Society National Meeting, Shantanu Sule, 2013
- NSF Graduate Fellowship, Matthew Smith, 2019
- NIH Cellular Biotechnology (T32) Training Fellowship, Lina Wu, 2019
- NIH Pharmacological Sciences (T32) Training Fellowship, Emily Makowski, 2021

Undergraduate students

- NSF Graduate Fellowship, Evan Day (to attend UPenn, now at University of Virginia), 2014
- NSF Graduate Fellowship, Malaney Young (to attend the University of Minnesota), 2017
- NSF Graduate Fellowship, Daniel Wackelin (to attend CalTech), 2018
- NSF Graduate Fellowship, Ryen O'Meara, (to attend CalTech) 2021

SYNERGISTIC ACTIVITIES

- Co-chair, Division of Biochemical Technology Meeting (San Diego), American Chemical Society (Mar 2016)
 Co-chair, 7th International Conference on Biomolecular Engineering, Society of Biological Engineering (Jan 2017)
 Vice-chair, 2nd Gordon Research Conference on Biotherapeutics and Vaccines Development (Mar 2022)
 Co-chair, 3rd Gordon Research Conference on Biotherapeutics and Vaccines Development (expected 2024)
 Session chair, Frontiers in Engineering, US National Academy of Engineering, Irvine, CA, 2016
 Membership Chair, Division of Biochemical Technology, American Chemical Society, 2009-2013

Editorial Board Member, *Journal of Biological Chemistry*, 2013-2018

Review Editor, *Frontiers in Molecular Biosciences*, 2014-present

National Science Foundation Panelist, 2008-present

National Institutes of Health Panelist, 2015-present

New Visions Math, Engineering, Science and Technology Instructor (for high school seniors), 2009-2013