CURRICULUM VITAE

PERSONAL INFORMATION

Name: Ecem Saygili
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EDUCATION

- Ege University, Izmir, Turkey
  -Bioengineering **Ph.D.**, January 2018 - April 2022
  GPA 4.00 /4.00
  Thesis: Development of a multifunctional dynamic microfluidic platform for mimicking idiopathic pulmonary fibrosis

- Ege University, Izmir, Turkey
  -Bioengineering **M.Sc.**, September 2016 – January 2018
  GPA 4.00 /4.00
  Thesis: Protein analysis in polymer-based microfludic chips for diagnostic purposes

- Ege University, Izmir, Turkey
  -Bioengineering **B.Sc.**, September 2012 - June 2016
  GPA 3.35 /4.00

WORK EXPERIENCES

- **University of Pittsburgh, Pittsburgh, USA** *(August 2021- February 2022)*
  - 2214-International Research Fellowship Programme for PhD Students
    Subject: Mimicking idiopathic pulmonary fibrosis via small airway-on-chip

Seoul National University, Seoul, South Korea *(June 2019-August 2019)*

- *Project Member*, Department of Materials Science & Engineering, Multi-Functional Soft Materials
  Subject: Functionalized stiff and stretchable double-network hydrogel for cartilage tissue engineering

Harvard Medical School, Boston, MA, USA *(July 2017 – September 2017)*

- *Research Traniee*, Brigham and Women's Hospital, Harvard Medical School
  Subject: Paper-based microfluidic diagnostic platforms

- **KTH Royal Institute of Technology**, **Stockholm, Sweden** *(July 2016 – September 2016)*
  - *Bioengineering Intern*, School of Electrical Technology, Department of Micro and Nanosystems,
    Subject: Protein screening with microfluidics: The integration of OSTE-Biosticker with microarrays
- **Hamburg University of Technology, Hamburg, Germany** *(July 2015 – September 2015)*
  - *Bioengineering Intern*, Institute of Thermal Separation Processes
    Subject: Supercritical fluids,aerogel production: Gelation screening for different technical lignins

PUBLICATIONS

- **E. Saygili**, U. Devamoglu, B. Goker-Bagca, O. Goksel, C. Biray-Avci, T. Goksel, O. Yesil-Celiktas, "A drug-responsive multicellular human spheroid model to recapitulate drug-induced pulmonary fibrosis", Biomed. Mater. 17(4) (2022) 45021. doi:10.1088/1748-605x/ac73cd.
- **E. Saygili**, P. Saglam-Metiner, B. Cakmak, E. Alarcin, G. Beceren, P. Tulum, Y.-W. Kim, K. Gunes, G.G. Eren-Ozcan, D. Akakin, J.-Y. Sun, O. Yesil-Celiktas, "Bilayered laponite/alginate-poly(acrylamide) composite hydrogel for osteochondral injuries enhances macrophage polarization: an in vivo study", Mater. Sci. Eng. C. (2022) 112721. doi:10.1016/j.msec.2022.112721.
- **E. Saygili**, E. Yildiz-Ozturk, M. Green, A. Ghaemmaghami, O. Yesil-Celiktas, "Human lung-on-chips: Advanced systems for respiratory virus models and assessment of immune response", Biomicrofluidics. 15 (2021). doi:10.1063/5.0038924.
- U. Devamoglu, I. Duman, **E. Saygili**, O. Yesil-Celiktas, Development of an Integrated Optical Sensor for Determination of β-Hydroxybutyrate Within the Microplatform, Appl. Biochem. Biotechnol. 193 (2021) 2759–2768. https://doi.org/10.1007/s12010-021-03563-3.
- **E. Saygili**, E. Kaya, E. Ilhan-Ayisigi, P. Saglam-Metiner, E. Alarcin, A. Kazan, E. Girgic, Y.W. Kim, K. Gunes, G.G. Eren-Ozcan, D. Akakin, J. Yun-Sun, O. Yesil-Celiktas, "An alginate-poly(acrylamide) hydrogel with TGF-β3 loaded nanoparticles for cartilage repair:

biodegradability, biocompatibility and protein adsorption," Int. J. Biol. Macromol.,172, 38, (2021), doi:10.1016/j.ijbiomac.2021.01.069.

- **E. Saygili**, A.A. Dogan-Gurbuz, O. Yesil-Celiktas, and M.S. Draz, "3D bioprinting: A powerful tool to leverage tissue engineering and microbial systems," Bioprinting vol .18, e00071 (2020), doi: 10.1016/j.bprint.2019.e00071.
- **E. Saygili**, B. Orakci, M. Koprulu, A. Demirhan, E. Ilhan-Ayisigi, Y. Kilic, and O. Yesil-Celiktas, "Quantitative determination of H2O2 for detection of alanine aminotransferase using thin film electrodes," Anal. Biochem., vol. 591, p. 113538, Feb. 2020, doi: 10.1016/j.ab.2019.113538.
- E. Ilhan-Ayisigi, F. Ulucan, **E. Saygili**, P. Saglam-Metiner, S. Gulce-Iz, and O. Yesil-Celiktas, "Nano-vesicular formulation of propolis and cytotoxic effects in a 3D spheroid model of lung cancer," J. Sci.Food Agric., vol. 100, no. 8, pp. 3525–3535, 2020, doi: 10.1002/jsfa.10400.
- M.S. Draz, M. Moazeni, M. Venkataramani, H. Lakshminarayanan, **E. Saygili**, N.K. Lakshminaraasimulu, K.M. Kochehbyoki, M.K. Kanakasabapathy, S. Shabahang, A. Vasan, M.A. Bijarchi, A. Memic, and H. Shafiee, "Hybrid Paper–Plastic Microchip for Flexible and High-Performance Point-of-Care Diagnostics," Adv. Funct. Mater., vol. 28, no. 26, pp. 1–8, 2018, doi: 10.1002/adfm.201707161.
- M.S. Draz, M. Venkataramani, H. Lakshminarayanan, **E. Saygili**, M. Moazeni, A. Vasan, Y. Li, X. Sun, S. Hua, X.G. Yu, and H. Shafiee, "Nanoparticle-enhanced electrical detection of Zika virus on paper microchips," Nanoscale, vol. 10, no. 25, pp. 11841–11849, 2018, doi: 10.1039/c8nr01646a.

BOOK CHAPTERS

- **E. Saygili**, M.S. Draz (2021). "3D printable Gel-inks for Tissue Engineering" in "3D Printable Gel-Inks for Microbes and Microbial Structures", Kumar A., Voicu S.I., Thakur V.K. (Eds.): 333-353, ISBN: 978-981-16-4667-6, Springer, Sin-gapore. https://doi.org/10.1007/978-981-16-4667-6_10
- **E. Saygili** (2016). "Mikroakışkan Teknolojilerin Temelleri Ve Uygulamaları" in "Mikrosistem Elemanları", Yesil-Celiktas O. (Ed.): 57 - 76, ISBN: 978-605-338-195-2, Ege Üniversitesi Basımevi.

PROJECTS

- **Project Title:** Small airway-on-chip platform (National)
  Role: Researcher
  Project Period: 11.05.2020-13.03.2022
  Funding Agency: Ege University Research Fund (FGA-2020-21686)

- **Project Title:** Mimicking idiopathic pulmonary fibrosis via small airway-on-chip
  Role: Principal Investigator
  Project Period: 16.08.2021-16.02.2022
  Funding Agency: TUBITAK- 2214 International Doctoral Research Fellowship Programme

- **Project Title:** Synthesis of a novel stiff hydrogel for cartilage tissue engineering functionalized with nanoparticles fabricated by using a microfluidic platform along with in vivo studies (International)
  Role: Researcher-Scholarship holder
  Project Period: 08.05.2018 - 15.07.2020
  Funding Agency: TUBITAK- NRF (South Korea) Bilateral Cooperation Project

- **Project Title:** Protein analysis in microfluidic chips for diagnostic purposes (National)
  Role: Researcher-Scholarship holder
  Project Period: 2016 - 2019
  Funding Agency: Ege University Research Fund (16MUH109)

- **Project Title :** Natural antimicrobial agent properties of lignin aerogels in topical cream formulations (National)
  Role: Principal Investigator
  Project Period: 2015-2016
  Funding Agency: TUBITAK 2209-B Industrial Undergraduate Research Projects Program

SCHOLARSHIPS

- TUBITAK 2214- International Doctoral Research Scholarship
- TUBITAK 2211-National Ph.D. Scholarship
- Turkey's Council of Higher Education (CoHE) 100/2000 Ph.D .Scholarship

PRESENTATIONS

- **E. Saygili**, E. Girgic, O. Yesil-Celiktas,"Double network hydrogel formulations for engineering applications" MicroNanoConference 2019, Utrecht, Netherlands (Poster Presentation, December 2019)

- **E. Saygili**, E. Kaya, E. Ilhan-Ayisigi, P. Saglam-Metiner, O. Yesil-Celiktas, "Microfluidic particle synthesis as a tool to leverage tissue engineering" MicroNanoConference 2019, Utrecht, Netherlands (Poster Presentation, December 2019)
- **E. Saygili**, O. Yesil-Celiktas, "Elicitation of biomaterials for mimicking microphysiological sytems-on-a-chip, International at International Conference on Engineering Technologies, Konya, Turkey, pp. 9-11 (Conference Paper & Oral Presentation, September 2018)
- **E. Saygili**, O. Yesil-Celiktas, "3D Microfabrication and mixing phenomena in microchannels", International at Congress on Entrepreneurship, Technology, Innovation and Design, Kirklareli, Turkey (Conference Paper & Oral Presentation, September 2018)
- **E. Saygili**, O. Yesil-Celiktas, "Protein analysis in microfluidic chips for diagnostic purposes", Basel Life Science 2018, Basel, Switzerland (Poster Presentation, September 2018)
- **E. Saygili**, B. Karabey, F. Karabey, O. Yesil-Celiktas, "Natural antimicrobial agent properties of lignin aerogels in topical cream formulations," Poster Presentation at 1st Cosmetic Congress with International Participation, Antalya, Turkey (Poster Presentation, October 2017)
- **E. Saygili,** L. Perez-Cantu, I. Smirnova, O. Yesil-Celiktas, "Functionalization of the surface of a microfluidic device with lignin sol-gel," Lab-on-a-Chip and Microfluidics Conference, Madrid, Spain (Poster Presentation, March 2016)
- C. Muderrisoglu, S. Akay, A. Kazan, R. Onbas, **E. Saygili**, O. Yesil-Celiktas, "Immobilisation of β-glucuronidase in silica-polymer based monolithi carriers", Basel Life Science Week, Basel, Switzerland (Poster Presentation, September 2016)