

Ayşegül Kavas, Ph.D. Instructor Dr.

Atılım University Department of Chemical Engineering 06830 İncek, Gölbaşı, Ankara/TURKEY aysegul.kavas@atilim.edu.tr

Tel: +90 312 586 8947

EDUCATION

| 2007 - 2014 Middle East Technical University, Department of Engineering Science | | |
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| 2005 - 2007 | Middle East Technical University, Department of Engineering Sciences, M.Sc. | |
| 1999 - 2003 | Middle East Technical University, Department of Chemical Engineering, B.Sc. | |

ACADEMIC POSITIONS

| Oct 2020 - present Instructor Dr., Department of Chemical Engineering, Atılım University Ankara, Turkey | |
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| Sept 2019 - Feb 2020 Part-time Instructor Dr., Department of Chemical Engineering and App Chemistry, Atılım University, Ankara, Turkey | |
| Feb 2018 - Jun 2018 | Part-time Instructor Dr., Department of Materials Science and Engineering, Çankaya University, Ankara, Turkey |
| Oct 2015 - Jan 2016 | Part-time Instructor Dr., Faculty of Engineering, Başkent University, Ankara, Turkey |
| Jan 2005 - Dec 2013 | Teaching Assistant, Department of Engineering Sciences, Middle East Technical University, Ankara, Turkey |

OCCUPATIONAL EXPERIENCES

| Feb 2018 - Apr 2019 | R&D | Engineer, | Bimetron | Biotechnology | Medical | Electronic | Engineering |
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| | R&D Engineer, Bimetron Biotechnology Medical Electronic Engineering Industry & Commerce Ltd. Company, Ankara, Turkey | | | | | | |

RESEARCH INTERESTS

| 1 | Controlled release systems |
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| 2 | Biomaterials |
| 3 | Biomechanics (osteoarthritis) |
| 4 | Stem cells and chondrocytes |

HONORS & AWARDS

1 International Scientific Meetings Fellowship Award from The Scientific and Technological Research Council of Turkey (TUBITAK), June 2011.

PUBLICATIONS (SCI & SCIE)

- **Kavas A.**, Keskin D., Altunbaş K., Tezcaner A. Raloxifene-/raloxifene-poly(ethylene glycol) conjugate-loaded microspheres: A novel strategy for drug delivery to bone forming cells. *International Journal of Pharmaceutics*. 2016; 510(1): 168-183.
- **Kavas A.**, Cagatay S.T., Banerjee S., Keskin D., Tezcaner A. Potential of Raloxifene in reversing osteoarthritis-like alterations in rat chondrocytes: an *in vitro* model study. *Journal of Biosciences*. 2013; 38(1): 135-147.
- **Kavas A.**, Özdemir M., Gürses S., Keskin D., Tezcaner A. *In vitro* investigation and biomechanical modeling of the effects of PLF-68 on osteoarthritis in a three-dimensional model. *Biomechanics and modeling in mechanobiology*. 2011; 10(5): 641-650.
- Akpinar O., Ak O., **Kavas A.**, Bakir U., Yilmaz L. Enzymatic production of xylooligosaccharides from cotton stalks. *Journal of Agricultural and Food Chemistry*. 2007; 55: 5544-5551.

CONFERENCE PRESENTATIONS (International)

- Kavas A., Özdemir M., Erdemli Ö., Gürses S., Keskin D., Tezcaner A. Combinational effects of BMP9, Raloxifene and Pluronic F-68 on OA-like chondrocytes. 3rd TERMIS (Tissue Engineering and Regenerative Medicine International Society) World Congress 2012, Vienna-Austria, September 5-8, 2012 (Abstract was also published in Journal of Tissue Engineering and Regenerative Medicine (SCIE) (2012; 6(Suppl. s1): 73)).
- Kavas A., Tuncay S., Keskin D., Banerjee S., Tezcaner A. Effects of Raloxifene on matrix synthesis of osteoarthritis-like chondrocytes. *Pharmaceutical Sciences for the Future of Medicines*, Prague-Czech Republic, June 13-17, 2011.
- **Kavas A.**, Özdemir M., Gürses S., Keskin D., Tezcaner A. Investigation of effect of PLF-68 on osteoarthritic chondrocytes embedded in agarose and Kelvin model development for further analysis. *International Symposium on Biotechnology: Developments and Trends*, Ankara-Turkey, September 27-30, 2009.
- Kavas A., Tezcaner A., Keskin D. Investigation of Raloxifene effects on osteoarthritic chondrocytes in a three dimensional *in vitro* model. 15th Cirmib Biomaterials School and Expertissues School & Workshop, Ischia Porto (NA)-Italy, July 7-11, 2008 (The presentation was also performed orally in Turkish at 13. Biyomedikal Mühendisliği Ulusal Toplantısı (13. National Meeting of Biomedical Engineering), Ankara-Turkey, May 29-31, 2008).
- **Kavas A.**, Tezcaner A., Gürses S., Keskin D. Therapeutic potential of PLF-68 on osteoarthritis. 14th Biomedical Science & Technology Symposium, Muğla-Turkey, May 3-7, 2008.

CONFERENCE PRESENTATIONS (National)

- Özden Akkaya Ö., Altunbaş K., Yağcı A., Yaprakçı M.V., Kibria A.S.M.G., **Kavas A.**, Kayabölen A. Sığır yağ doku kaynaklı kök hücreler ile hücreleri uzaklaştırılmış yağ dokusu ve fibroini içine alan hidrojel doku iskelesi (Hydrogel scaffolds incorporating decellularized adipose tissue and fibroin with bovine adipose derived stem cells). *Uluslararası Katılımlı XIII. Ulusal Histoloji ve Embriyoloji Kongresi (XIII. National Congress of Histology and Embryology with International Participation*), Izmir-Turkey, April 30-May 3, 2016.
- Akpınar Ö., Erdoğan K., Ak Ö., **Kavas A.**, Bakır U., Yılmaz L. Lignoselülozik materyallerden kontrollü asit hidrolizi ile ksilooligosakkarit üretimi (Xylooligosaccharide production from lignocellulosic materials by controlled acid hydrolysis). *XV. Ulusal Biyoteknoloji Kongresi (XV. National Congress of Biotechnology*), Antalya-Turkey, October 28-31, 2007.

OTHER SCIENTIFIC MEETINGS ATTENDED

| 1 | 21. Biyomedikal Mühendisliği Ulusal Toplantısı (21. National Meeting of Biomedical Engineering), Istanbul-Turkey, November 24-26, 2017. | | |
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| 2 | 3D Tasarım ve Basım Teknikleri Çalıştayı (3D Design and Printing Techniques Workshop), Istanbul-Turkey, November 24, 2017. | | |
| 3 | Biyotasarım Çalıştayı (Biodesign Workshop), Istanbul-Turkey, November 24, 2017. | | |
| 4 | 3D Biyoarayüzler & Biyoterapötikler Çalıştayı (3D BioInterfaces & BioTherapeutics Workshop), Izmir-Turkey, October 26-27, 2017. | | |
| 5 | 11 th Nanoscience and Nanotechnology Conference, Ankara-Turkey, June 22-25, 2015. | | |
| 6 | "Tasarımdan Üretime Biyomalzemenin Öyküsü" Çalıştayı ("Biomaterial Story from Design to Production" Workshop), Ankara-Turkey, December 16, 2013. | | |
| 7 | "Biyomalzemelerin Medikal Alanda Kullanımı" Çalıştayı ("Usage of Biomaterials in the Medical Field" Workshop), Ankara-Turkey, March 19, 2013. | | |
| 8 | 17 th International Biomedical Science & Technology Symposium, Ankara-Turkey, November 23-25, 2011. | | |
| 9 | II. Kök Hücre Kursu ve VI. Kök Hücre Sempozyumu (II. Stem Cell Course and VI. Stem Cell Symposium), Ankara-Turkey, June 24-25, 2011. | | |
| 10 | 3 rd Summer School on "Advanced Topics in Cell Model Systems", Tor Vergata Research Establishment of National Research Council of Italy, Rome-Italy, June 5-10, 2011. | | |

CITATIONS

| Sum of times cited without self-citations (ISI Web of Science): | 118 |
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| h-index (ISI Web of Science): | 3 |

PROJECTS

| 1 | Preparation and Characterization of PLGA-PCL Nanospheres Targeted to Bone for Osteoporosis Treatment, Middle East Technical University-BAP, researcher, 2011-2012. |
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| 2 | Effect of Raloxifene on Gene Expression of Matrix Proteins in Osteoarthritis, Middle East Technical University-BAP, researcher, 2009-2010. |
| 3 | Evaluation of Effects of Different Agents on Osteoarthritis Treatment under Stimulation of Dynamic-Static Loading in Cell Culture, The Scientific and Technological Research Council of Turkey (TUBITAK), researcher, 2005-2007. |

COURSES TAUGHT

| 1 | Chemical Engineering Design I | |
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| 2 | Chemical Engineering Laboratory I | |
| 3 | Process Modeling, Dynamics and Control | |
| 4 | Chemical Process Calculations | |
| 5 | Materials for Biomedical Applications | |
| 6 | General Chemistry | |
| 7 | General Chemistry Laboratory | |