



Participant Profile

for the
Turkish-German Strategy Workshop 2006
TÜBİTAK Marmara Research Center,
Istanbul- Gebze Turkey
13 – 15 December 2006



International Bureau (IB)
of the Federal Ministry of
Education and Research
(BMBF)

1. Contact details and personal information

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¹ **Role/function** e.g. working group leader, managing director, postdoc, PhD etc.

² **Organisation type** e.g. university, research institution, small and medium enterprise (SME), industry etc.

Working Group:	<input type="checkbox"/> 1 Material Technologies <input checked="" type="checkbox"/> 2 Biotechnology, Genomics and Food <input type="checkbox"/> 3 Energy <input type="checkbox"/> 4 Information and Communication Technologies <input type="checkbox"/> 5 Environmental Protection, Climate Change and Sustainable Development
Areas of activity:	<input checked="" type="checkbox"/> research <input type="checkbox"/> technology development <input type="checkbox"/> demonstration <input type="checkbox"/> training <input type="checkbox"/> dissemination <input type="checkbox"/> other:
Keywords characterising your area of research:	Please choose the appropriate key words (max. 5) from the following list: http://www.cordis.lu/fp6/keywords 06.03.01.00.00.00.00 Biotechnology 06.03.02.03.00.00.00 Polymer technology
Expertise, technologies and infrastructures available in your institution:	Research activities / expertise: The Use of Biopolymers of an Artificial Liver for utilization in Liver Failure Polymers Suitable for drug Carriers and scaffolds for Tissue Engineering:Synthesis and Characterization Methods: Key technologies: Infrastructures: Key publications: 1. Porjazoska,A., Kayaman-Apohan,N., Karal-Yılmaz,O. , Cvetkovska,M., Baysal, K. and Baysal, B.M. “Synthesis and Characterization of Glycolide, L-Lactide and PDMS based Terpolymers and Their Interaction with Cells”, J.of Biomaterials Science, Polymer Edition , 13, 1119-1134(2002). 2. Porjazoska,A., Grchev,T., Cvetkovska,M., Karal-Yılmaz,O. , Baysal,B.M., “Thermal Aging of Poly(D,L-Lactide-co-Glycolide) Films Followed by Impedance Spectroscopy and Dielectric Thermal Analyses”, Bulletin of Chemists and Technologists of Macedonia , Vol:21,199-206(2002).



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3.Korkmaz,M., Güvenç, B.H., Bilir, A., **Karal-Yılmaz,O.**, Kumbasar,A., Caferler,J., Baysal,K. “Isolation and Culture of Adult and Fetal Rabbit Bladder Smooth Muscle Cells and Their Interaction with Biopolymers”, **Jornal of Pediatric Surgery**, 38(1), 21-24 (2003).

4.Porjazoska, A., **Karal-Yılmaz, O.**, Kayaman-Apohan, N., Cvetkovska, M., Baysal, B.M. “Biocompatible Polymer Blends of Poly(D,L-lactic acid-co-glycolic acid) and triblock PCL-PDMS-PCL Copolymers: Their Characterizations and degradations” **Croatica Chemica Acta**, 77(4), 545-551 (2004).

5. Porjazoska, A., Cvetkovska, M., **Karal Yılmaz, O.**,Baysal, K., Kayaman-Apohan, N., Baysal, B.M. “Synthesis and Characterization of biocompatible multicomponent polymer systems as supports for cell cultures, **Bulletin of the Chemists and Technologists of Macedonia**, 23(2),147-1562 (2004).

6. Porjazoska, A., **Karal-Yılmaz, O.**, Kayaman-Apohan, N., Baysal, K., Cvetk. ovska, M.,Baysal, B.M. “Synthesis of an ABA triblock copolymer of poly(DL-lactide) and polyethylene glycol and blends with poly(ϵ -caprolactone) as a promising material for biomedical application, **New Polymeric Materials, ACS Symposium Series 916**, Chapter 10, 119-135(2005).

7.**Karal Yılmaz,O.**, Kayaman-Apohan, N., Mısırlı, Z., Baysal, K., Baysal, B.M. “Synthesis and Characterization of Poly(L-lactic acid-co-ethylene oxide-co-aspartic acid) and Its Interaction with Cells”, **J.Mater.Sci:Materials in Medicine**, 17, 213-227(2006).

8. Porjazoska, A., **Karal Yılmaz,O.**, Baysal, K., Cvetkovska,M., Şirvancı, S., Ercan, F.,Baysal, B.M. Synthesis and characterization of poly(ethylene glycol)-poly(D,L-lactide-co-glycolide)-poly(ethylene glycol) triblock copolymers modified with collagen:cell growth on the surfaces, **J.of Biomaterials Science, Polymer Edition**, 17(3), 323-340(2006).



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2. Past and present research collaborations

Are you familiar
with the European
Framework
Programme?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> with Framework Programme 5	
<input checked="" type="checkbox"/> with Framework Programme 6	
<input type="checkbox"/> with Framework Programme 7	

EU-projects you are
involved in:
Past projects

Programme title / contract number / title / acronym / your function
(coordinator / partner / contractor)

Present projects

Other international
collaborations:

Name(s) and
contact details of
potential partners:

If you would like to suggest the participation of particular partners from the partner country based on existing contacts or collaboration experience, you are welcome to indicate their names and contact details below:

3. Presentation at the Workshop

I will give a presentation at the workshop (approx. 10 min.) to present my institution, my expertise, and my collaboration interests. The contents of my presentations is summarised below (max. 1 page).

Tissue Engineering, is a rapidly advancing area of study that resides in the intersection of biology and chemistry. To this aim, two strategic project has been carried out.

In the first project, we synthesized two copolymers seems to be promising for medical applications. (1) A terpolymer of poly(L-lactic-co-ethylene oxide-co-aspartic acid) PLLA/PEO/PLLA.(2) A triblock copolymer of poly(ethylene glycol)-poly(D,L-lactide-co-glycolide)-poly(ethylene glycol) modified with collagen. The chemical and morphological characterizations of these polymers were performed. The hydrolytical degradation of polymeric materials were also studied. The porous sponges were prepared to perform cell seeding experiments and to follow cell growth. The cell adhesion onto copolymeric scaffolds was improved remarkably after modification of copolymeric films with type I collagen.

In the second project, interaction of primary liver cells (hepatocytes) with biodegradable biopolymers will be investigated *in vitro*. In addition , biodegradable vascular endothelial growth factor(VEGF) loaded microspheres were prepared and controlled release of VEGF protein from PLGA microspheres were investigated.

I agree with the publication of my data on the Workshop website!

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