

Curriculum Vitae

Valentina Strusi

Born: December 20, 1985, Taranto

Social: Single

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Working experience:

September 2014 – present

- Marie Curie Post Doctoral Fellowship, eXcor Lab GmbH, Obernburg (Germany)

Main projects developed:

- BioArt FP7, establishment of a bioreactor based in vitro model of atherosclerotic and diabetic vascular disease

January 2014 – July 2014

- Post Doctoral Fellowship, Laboratory of *Tissue Engineering* (Tutor Prof. Ivan Martin), ICFS (Institute für chirurgische Forschung und Spitalmanagement) Universitätsspital Basel, Switzerland.

Main projects developed:

- An in vitro 3D model to culture Thymic Epithelial Cells (adult and fetal) on decellularized scaffolds in static and/or dynamic conditions under perfusion in bioreactor.
- Engineering bone tissue from adult mouse MSC isolated from long bones by an endochondral ossification program in line with the so-called “developmental engineering paradigm”. Project developed in collaboration with Manz’s group Zurich

Education and academic formation:

January 2011 – December 2013

- **PhD in Biomedical Science, curriculum Human, Molecular and Morphological Science**, University of Bologna, Italy.

January 2013 – December 2013

- Fellowship abroad, Laboratory of Tissue Engineering (Tutor Prof. Ivan Martin), ICFS (Institute für chirurgische Forschung und Spitalmanagement) Universitätsspital Basel, Switzerland supported by Marco Polo Grant.

Main project developed: Production of a scaffold, through the decellularization technique, starting from the mouse thymus to obtain an in vitro 3D model to culture adult Thymic Epithelial Cells.

January 2011 – December 2012

- Laboratory of Regenerative Morphology and Bioartificial Structures (Tutor. Prof. R. Toni), Section of Human Anatomy, Department of Biomedicine, Biotechnologies and Translational Research (S.BI.BI.T), University of Parma School of Medicine, Italy.

Main project developed: Production of a scaffold, through the decellularization technique, for the regeneration of the thyroid gland in animal models (rats and swine)

September 2008 – September 2010

- ***Degree in Medical, Veterinary and Pharmaceutical Biotechnology University of Parma, Parma, Italy (105/110).***
- Internship, Laboratories of Cell and Molecular Biology (Prof. Marco Vitale and Prisco Mirandola) following a project based on the involvement of TRAIL in regulation of PKC ϵ in Human Colon Carcinoma in the Department of Human Anatomy, Pharmacology and Forensic Medicine, University of Parma School of Medicine, Italy.

September 2004 – April 2008

- ***Degree in Biotechnology***, Faculty of Mathematical, Physical and Natural Sciences, University of Salento, Lecce, Italy, (100/110)
- Internship, Laboratory of Organic Chemistry (Prof. L. Troisi), following a project based on synthesis of 3,4- diaryl β -lactams in the Department of Biological and Environmental Sciences and Technologies, Faculty of Mathematical, Physical and Natural Sciences, University of Salento, Lecce, Italy

September 1999 – July 2004

Scientific Lyceum “G.Battaglini” in Taranto, Italy (Certificate in 2004)

Competences and experiences

- ***Primary cell culture:*** from the isolation to the culture of cells from lungs, thyroid and hypophysis in adult rats; from the isolation to the culture of cells from thymus of embryos and adult mice; from the digestion to the culture of human nasal chondrocytes; culture of murine MSC
- Culture of ***cell lines*** in suspension or adherent
- ***Cell culture in 2D and 3D:*** culture with synthetic and bio-derived scaffolds, fibrin gels and ECM derived scaffolds
- ***Cell culture in static and dynamic condition:*** culture under perfusion in bioreactors
- Development of protocols for decellularization of different organs in rodents
- ***Microscopy:*** confocal, fluorescence, optical and scanning electron microscopy
- Histology, immunohistochemistry, immunofluorescence
- ***Molecular biology:*** protein purification, western blotting, gel electrophoresis, PCR, infection with plasmid of cells inducing specific proteins expression
- ***Biochemistry:*** DNA and GAG quantification and analysis

- Flow cytometry

Language

Italian native

English fluent

German A2

Bibliography

Awards and honors

1. Second price for best proposal for innovative project.
Strusi V., Piccinini E., Heiler S., Berkemeier C., Wendt D., Barthlott T., Toni R., Hollander G., Martin I. An in vitro 3D model to culture Thymic Epithelial Cells. Abstracts 1th International Conference MiMe-Materials in Medicine, Faenza, ITALY October 8-11, 2013.

Abstracts selected for international congress

1. *Strusi V.*, Zini, D. Dallatana, A. Parrilli, R. Giardino, G. Lippi, G. Spaletta, E. Bassoli, A. Gatto, M. Iafisco, M. Sandri, A. Tampieri, R. Toni. Ex situ bioengineering of the rat thyroid using as a scaffold the three-dimensional (3D) decellularized matrix of the glandular lobe: clues to the organomorphic principle. *It. J. Anat. Embryol.* 116 (supplement), 180, 2011. *Selected for oral presentation*
2. Bassoli E., Denti L. , Paderno A. , *Strusi V.* Additive layer manufacturing for prototyping 3D scaffolds with vascular-like architecture; an experimental perspective. 5th International Conference on Advanced Research and Rapyd Prototyping, Leiria, Pourtugal, September 28 - October 1, 2011 *Selected for oral presentation.*
3. *Strusi V.*, Zini N., Dallatana D., Mastrogiacomo S., Parrilli A., Giardino R., Lippi G., Spaletta G., Bassoli E., Gatto A., Iafisco M , Sandri M.,Tampieri A., Toni R. Endocrine bioengineering: reconstruction of a bioartificial thyroid lobe using its three-dimensional (3D) stromal/ vascular matrix as a scaffold. *End. Abst.* 29, P1586, 2012.
4. Toni R., *Strusi V.*, Zini N., Dallatana D., Mastrogiacomo S. , Parrilli A., Giardino R., Lippi G., Spaletta G., Bassoli E., Gatto A.,Iafisco M. Sandri M., Tampieri A. Bioengineering of the thyroid lobe: use of its stromal / vascular matrix as a scaffold for ex situ reconstruction. Abstracts 94th Annual Meeting of the Endocrine Society, Houston, TX, June 23-26, 2012. *Selected for oral presentation*
5. *Strusi V.*, Zini N., Mastrogiacomo S.,Zamparelli A., Barbaro F., Dallatana D., Parrilli A., Giardino R., Toni R. Identification of putative adult stem cells in the rat thyroid and their use in ex situ bioengeneering. *It. J. Anat. Embryol.* 117 n°2 (supplement), 184,2012. *Selected for oral presentation*

6. Mastrogiacomo S., *Strusi V.*, Dallatana D., Barbaro F., Zini N., Zamparelli A., Iafisco M., Parrilli A., Giardino R., Lippi G., Spaletta G., Bassoli E., Gatto A., Sprio S., Sandri M., Tampieri A. Toni R. Poly-L-lactic acid and poly-ε-caprolactone as biomaterials for ex-situ bioengineering of the rat thyroid tissue. *It. J. Anat. Embryol.* 117 n°2 (supplement), 120, 2012. *Selected for oral presentation*
7. *Strusi V.*, Piccinini E., Heiler S., Berkemeier C., Wendt D., Barthlott T., Toni R., Hollander G., Martin I. An in vitro 3D model to culture Thymic Epithelial Cells. Abstracts 1th International Conference MiMe-Materials in Medicine, Faenza, ITALY October 8-11, 2013. *Selected for oral presentatioos*

Invited lectures

- “Ex situ bioengineering of the rat thyroid using as a scaffold the three-dimensional (3D) decellularized matrix of the glandular lobe”. PhD Program in Biomedical Sciences, University of Bologna, Italy, December 19, 2011.
- “Identification of putative adult stem cells in the rat thyroid and their use in ex situ bioengineering.” PhD Program in Biomedical Sciences, University of Bologna, Italy, November 9, 2012

Full papers / chapters in monographs

1. Troisi L., Pindinelli E., *Strusi V.*, Trinchera P. Stereoselective synthesis of 3,4-diaryl β-lactams. *Tetrahedron: Asymmetry* 20, 368-374, 2009.
2. Toni R, Tampieri A, Zini N, *Strusi V.*, Sandri M, Dallatana D, Spaletta G, Bassoli E, Gatto A, Ferrari A, Martin I. Ex situ bioengineering of bioartificial endocrine glands: a new frontier in regenerative medicine of soft tissue organs. *Ann Anat.* 193; 381-394,2011.
3. Bassoli E., Denti L., Gatto A., Paderno A., Spaletta G., Zini N., *Strusi V.*, Dallatana D., Toni R. New approaches to prototype 3D vascular-like structures by additive layer manufacturing. In: P. Bartolo et al. (eds), *Innovative Developments in Virtual and Physical Prototyping*. London, CRC Press, Taylor & Francis, 35-42, 2011.
4. Bassoli E., Denti L., Gatto A., Spaletta G., Paderno A., Zini N., Parrilli A., Giardino R., *Strusi V.*, Dallatana D., Mastrogiacomo S., Zamparelli A., Iafisco M., Toni R. A combined additive layer manufacturing / indirect replication method to prototype 3D vascular-like structures of soft tissue and endocrine organs. *Virt. Phys Prototyp.* 7, 3 -11, 2012
5. *Strusi V.*, Mastrogiacomo S., Zini N., Dallatana D., Spaletta G., Paderno A., Bassoli E., Gatto A., Zamparelli A., Iafisco M., Sandri M. Tampieri A., Toni R. Gli organi endocrini bioartificiali: prospettive della ricerca traslazionale applicata alla medicina rigenerativa in endocrinologia. *L'Endocrinologo* 12, 2012.